Enclude
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Report: The Missing Link

Connecting international capital markets with sustainable landscape investments

Platform Biodiversity, Ecosystems and Economy (Platform BEE)
IUCN NL- VNO-NCW - RVO

www.encludecapital.com

1331 PENNSYLVANIA AVE., NW
SUITE 600, WASHINGTON, DC 20004
UNITED STATES OF AMERICA
+1 202 775 9680

48 Charlotte Street
London W1T 2NS
United Kingdom
+44 207 636 4352

Driebergseweg 2, 3708 JB
P.O. Box 55, 3700 AB
Zeist, The Netherlands
+31 0 30 693 37 66

www.encludecapital.com

Zeist, The Netherlands
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Authors: Carolijn Gommans, Alexandra Korijn, Rebecca Marx and Steven van Weede (all Enclude);
Cora van Oosten (Wageningen Centre for Development Innovation)

Photo's (cover page): Cora van Oosten

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List of Acronyms

AATIF	Africa Agriculture Trade and Investment Fund
AAF	African Agriculture Fund
BEE	Biodiversity, Ecosystems and Economy
BMZ	Germany's Federal Ministry for Economic Cooperation and Development
CCB	Carbon, Community and Biodiversity Standard
CEO	Chief Executive Officer
CFC	Common Fund for Commodities
COMESA	Common Market for Eastern and Southern Africa
DFI	Development Finance Institution
EIB	European Investment Bank
EIP	Ecosystem Investment Partners
ESG	Environmental and Social Governance
FMO	Netherlands Development Finance Company
FPIC	Free, Prior and Informed Consent
IFC	International Finance Corporation
IIGCC	Institutional Investors Group on Climate Change
ILO	International Labour Organisation
IUCN NL	International Union for the Conservation of Nature National Committee of the Netherlands
KfW	German Development Bank
LEO markets	Land-based environmental offset markets
MIGA	Multilateral Insurance Guarantee Agency
NGOs	Non-Governmental Organisations
NWB	Netherlands Water Board Bank
OPIC	Overseas Private Investment Company
PES	Payment for Ecosystem Services
PRI	Principles of Responsible Investment
REDD+	Reducing Emissions from Deforestation and forest Degradation as well as Conservation and Sustainable Development
RVO	Rijksdienst voor Ondernemend Nederland
SEMS	Social and Environmental Assessment and Management System
SICAV - SIF	Société d'investissement à capital variable – fonds d'investissement spécialisé
SMEs	Small and Medium Enterprises
SPV	Special Purpose Vehicle
TA	Technical Assistance
TAF	Technical Assistance Facility
TAFF	Tropical Asia Forest Fund
UNEP	United Nations Environment Programme
USD	United States Dollar
USAID	United States Agency for International Development
VCS	Verified Carbon Standards
VNO-NCW	Confederation of Netherlands Industry and Employers
WBCSD	World Business Council for Sustainable Development

Executive Summary

Why is the capital available not flowing at scale to sustainable landscape investments? What is 'the missing link' between institutional capital and landscape projects in emerging markets? Enclude was asked this question by Platform Biodiversity, Ecosystems and Economy (BEE) a public-private partnership with the aim of greening the Dutch economy, initiated by the Confederation of Netherlands Industry and Employers (VNO-NCW) and the Dutch Committee of the International Union for the Conservation of Nature (IUCN NL), and funded by the 'Rijksdienst voor Ondernemend Nederland' (RVO) of the Dutch Ministry of Economic Affairs.

The objective of this study is to build the business case for (institutional) investors to allocate more funding to benefit the landscape in emerging markets. The study also outlines roles that the government and non-profits can play to catalyse these types of investments, and provides practical examples of investment vehicles that adhere to the landscape approach for (new) investment managers and investors.

Landscapes worldwide are providers of a range of products (e.g. water, timber, minerals, food and fuel) and services (e.g. recreation, tourism and carbon sequestration). The landscape approach is increasingly considered to be an effective way to balance competing demands for space in the landscape and strive for smart integration of agricultural production, nature conservation and livelihood enhancement at the landscape level. It also offers a new approach for investors to combine economic interests with social and environmental responsibility in a more holistic way, by considering all elements of the landscape rather than just one (e.g. solely the harvesting of tropical wood). Investors have realised that competition for, and overexploitation of, landscape resources leads to deterioration of resources and shortage of supply, hence increased production costs and reduced profits. Alignment of investments with social and environmental context can strengthen an investor's reputation, reduce risks, and increase financial, social and environmental performance.[1,2]

Blended finance is becoming a popular tool in development globally and particularly in landscape finance. It refers to the strategic use of public and philanthropic funds to mobilize private capital flows for projects the private sector would usually shun. Since many landscape projects are innovative and thus still need to build evidence of success, a guarantee from a development finance organization could cover some of the (perceived) risks of an investment, and thereby attract capital from investors (e.g. funds, institutional investors and high net worth individuals). Some of the project risks can also be reduced by having a dedicated technical assistance facility, also often funded by foundations or development finance organizations, which provide hands-on support to landscape investments during the design as well as the implementation phase. Through participation in a blended finance structure or a technical assistance facility, governments and non-profits are able to reduce some of the (perceived) risks, and help catalyse more private sector investment in projects with a landscape approach.

To gain a thorough understanding of the investment opportunities available in landscape finance currently, and identify four investment opportunities to be analysed in-depth, Enclude created a database of 87 investment opportunities across landscape-focused sectors (e.g. agriculture, forestry and renewable energy) and analysed them according to the appeal to institutional investors, as well as adherence to the landscape approach. Key criteria used to analyse the opportunities' attractiveness to institutional investors were size of the opportunity, track record of the investment manager, risk/ return profile and appeal of the opportunity's structure. To assess the adherence to the landscape approach, we analysed the investor's presence in the landscape, the investor's level of engagement in stakeholder processes, the variety of revenue streams derived from the landscape, and the adoption of a verifiable measurement system that measures all returns - financial, social and environmental - derived from the landscape.

[1] Claasen, F. (2016). Finance of Land and Water - The Investment Case of Natural Resources. AidEnvironment and The Wash Alliance International, Netherlands

[2] Kissinger,G. A. Brasser (2013). Financing strategies for integrated landscape investment. Integrated landscape initiative analysis. Landscapes for People, Food and Nature network, United States.

There are not many investment opportunities that both adhere to the landscape approach and are commercially appealing to institutional investors. A key constraint for many landscape investment opportunities is that they must fit a certain asset class or sector to be able to attract institutional capital. By their very nature, projects that adhere to a landscape approach often cut across sectors and asset classes, meaning that these opportunities don't fit in institutional investors' traditional categories. There are a few notable exceptions of funds that have been able to overcome such obstacles and attract institutional capital, such as the Africa Agriculture Trade and Investment Fund, Althelia Climate Fund, Ecosystem Investment Partners II and New Forests' Tropical Asia Forest Fund.

The Africa Agriculture Trade and Investment Fund is an open-ended private debt fund of USD 138 million, initiated by KfW (Germany's Development Bank) on behalf of BMZ (Germany's Federal Ministry for Economic Cooperation and Development). Deutsche Asset Management manages the investments of the fund, the International Labor Organization (ILO) in collaboration with the UN Environment Programme (UNEP) advises the fund on social and environmental compliance, and the Common Fund for Commodities (CFC) manages the technical assistance facility of the fund. The fund is one of the few private debt funds active in landscape finance in emerging markets. It has been able to attract private institutional capital for landscape initiatives in Africa through a blended finance structure, where BMZ invested in the first-loss tranche, KfW and Deutsche Bank invested in the mezzanine tranche, and private investors came in at the most senior tranche. The combination of the reputation of the fund manager and the blended finance structure makes the fund an attractive proposition for investors.

The Althelia Climate Fund is an eight-year specialized investment fund of EUR 101 million, launched by Althelia Ecosphere. It invests in projects that adhere to a landscape approach across Africa, Asia, and Latin America. It is unique in that it derives revenues from both sustainable commodities (e.g. deforestation free agroforestry cocoa) and ecosystem services (e.g. carbon) from most of the underlying investments; most funds are only focused on one revenue stream from the landscape. To cover some of the (perceived) risks of this new strategy, the fund has a 50% portfolio guarantee from USAID. It has attracted investments from AXA, Church of Sweden, and several Development Finance Institutions (DFIs), amongst others.

Ecosystem Investment Partners II is a 12-year real assets fund of USD 181 million that delivers restoration and conservation at scale by capitalizing on the "no net loss" regulations for wetlands in the United States. Those "no net loss" regulations require negative impacts of development projects to be offset. As such, Ecosystem Investment Partners acquires and restores ecologically significant land with important conservation potential, and sells the credits it generates to developers. The fund has received investment from several endowments, pension plans and other (institutional) investors. In February 2016, Ecosystem Investment Partners closed its most recent fund at USD 303 million, demonstrating that with the right regulations in place, large scale financing can be raised for ecosystem restoration projects.

New Forests' Tropical Asia Forest Fund is a 10-year real assets fund of USD 170.7 million, launched by New Forests in 2012. It was the first institutional timberland fund in Southeast Asia. The fund manager takes an active stake in its investees – in Asia predominantly through joint venture partnerships – and uses its ownership to enhance all elements of the landscape, such as biodiversity, conservation and livelihood enhancement. It works together with all key stakeholders, such local non-profits, the government and communities, to ensure that all voices are heard and incorporated. With USD 2.6 billion under management spread across Australia, New Zealand, Southeast Asia and the United States, New Forests demonstrates that a landscape approach can be applied at scale in developed and emerging markets.

Some key factors that make these investment opportunities successful at applying the landscape approach at scale is aggregation, risk mitigation and constructive role of the government.

- *Aggregation:* Many landscape projects are small in scale and must therefore be bundled with other investments in order to make the potential returns match the transaction and monitoring costs associated with executing an investment. The flipside to this is that institutional investors are often uncomfortable with an additional layer of management and associated costs. In some cases, fund managers rely on local (non-profit) partners to assess projects, tailor financial supply and funnel financial resources to end-users, ensuring that even at an aggregated level, the needs of the underlying investees and communities are tailored to, and their activities are monitored.

- *Risk mitigation:* Due to the early stages of development of landscape investments, the most common forms of risk mitigation are blended finance and technical assistance. In addition, we argue that landscape projects, by design, address risk through their holistic approach.

- *Constructive role of the government*: Governments are increasingly searching for ways to build the capacity of landscape initiatives to absorb private capital. This includes (international) support for programmes in spatial planning and technical assistance for the design and implementation of landscape initiatives. Furthermore governments are increasingly playing an important role in providing catalytic funding for newly developed initiatives in which investors are reluctant to invest. Finally our case studies show that policies that incentivize investors to commit capital to landscape-related markets can be very effective.

In summary, the field of landscape finance is still in its early stages of development. The four highlighted initiatives, as well as some other notable opportunities, managed to bridge the missing link and convince (institutional) investors on the business case of the landscape approach. At the same time, the number of successful investment opportunities at scale that adhere to the landscape approach is still limited. There is a need for more evidence of success before private capital will flow into this space at scale. To build this track record, governments can play a catalysing role through regulation, participation in blended finance structures, financing of technical assistance and partnerships with the private sector. Non-profits, who are often in closest contact with local communities, can play an intermediating role to ensure that the voices of these local stakeholders are heard and taken into account. They can also help build the strength of many of these initiatives.

Impact-oriented investors, such as foundations, development finance institutions and high net worth individuals, can put capital to work that is more flexible and risk-taking to support the proof of concept of smaller scale landscape initiatives. Once there are more successful examples, institutional investors can responsibly step into such investments, similar to what they did in the microfinance sector. At the same time, if institutional investors want to become more active in landscape finance, they might need to provide some flexibility in terms of asset class, sector focus and minimum size of investment to be able to participate in this more holistic way of investing in the landscape.

1 Introduction

1.1 Background

In April 2016, Enclude was commissioned by the Platform Biodiversity, Ecosystems and Economy (BEE) to study the 'missing link' between institutional investors and project-level landscape initiatives in emerging markets. Whilst the latter often struggle to access capital to scale, the former have sufficient capital available to invest, but are often reluctant or unable to do so because of a mismatch in terms of investment size and risk. As new investment vehicles have been emerging, Enclude was asked to survey the array of investment opportunities in landscape finance and highlight four detailed examples of investment vehicles that address the 'missing link' between capital markets and local sustainable landscape investments.

Platform BEE is a public-private partnership with the aim of greening the Dutch economy and was initiated by the Confederation of Netherlands Industry and Employers (VNO-NCW) and the Dutch Committee of the International Union for the Conservation of Nature (IUCN NL). Business representatives, scientific institutions, and conservation and social organizations take part in the initiative to preserve and restore biodiversity and ecosystems. Platform BEE is funded by the 'Rijksdienst voor Ondernemend Nederland' (RVO) of the Dutch Ministry of Economic Affairs and aims to advise the Dutch government on mainstreaming biodiversity in the economy.

The objective of this report is to build the business case for (institutional) investors to allocate more funding to benefit the landscape in emerging markets. Promising and interesting vehicles have emerged to enable larger investors to allocate capital to projects that embody the landscape approach across various sectors, including agriculture, forestry, renewable energy and water. Enclude identified 87 investment opportunities within these sectors, and analysed them based on the appeal to institutional investors as well as the adherence to the landscape approach. Based on this analysis as well as our wish to represent a diversity of asset classes, geographies and sectors, we selected four cases to be highlighted in further detail, namely Africa Agriculture and Trade Investment Fund (AATIF), Althelia Climate Fund, Ecosystem Investment Partners (EIP) II and New Forests' Tropical Asia Forest Fund (TAFF). The full list of investment opportunities identified can be found in Annex I.

In the remaining part of this introductory chapter, we elaborate on our definition of the landscape approach. The second chapter highlights the specific finance aspects inherent to the landscape approach. The third chapter discusses blended finance as a tool to attract private sector capital for landscape opportunities and the role of and requirements for effective technical assistance. In the fourth chapter, we discuss landscape investment opportunities, starting with our asset allocation framework, and then diving into the breadth of opportunities that we came across in each asset class. We also point out some highlights in terms of aggregation, risk mitigation and the role of key stakeholders. In chapter five, we study the four selected investment opportunities in depth. Chapter six provides the main conclusions.

1.2 Integrated Landscape Approach

Landscapes worldwide are providers of a range of products (e.g. water, timber, minerals, food, fibre and fuel) as well as services (e.g. recreation, tourism, landscape restoration and carbon sequestration). Increasing global demand for these products and services offers great opportunities for landscapes to economically develop. Yet without proper spatial planning, increasing demand also leads to competing claims and conflict at the landscape level. Well-known are the problems related to over-exploitation and environmental degradation, as well as social conflict with regard to land use choices and spatial decision making. Especially in developing countries and emerging markets, problems with environmental degradation, fire and haze, and "land-grab" are frequently featured in the news.

The integrated landscape approach is increasingly considered to be a practical way to reconcile the increased competition for space, through balancing competing demands and striving for smart integration of agricultural production, nature conservation and livelihood options at the landscape level. It actively promotes to combine private and public interests, and stakeholder collaboration within sourcing areas and commodity chains, highlighting the importance of placing value chain performance within a geographically defined area or landscape.[3, 4]

According to the Little Sustainable Landscapes Book, 'a sustainable landscape aims to simultaneously meet a full range of local needs (e.g. ensuring water availability for households, farms, businesses and wildlife; biodiversity for crop pollination and local wildlife tourism; local food security and income), while also contributing to national commitments and global targets (e.g. net reductions in land-based greenhouse gas emissions; the Aichi targets for biodiversity conservation; providing rural employment; generating power from renewable resources; supplying surplus agricultural production to feed urban dwellers).[5]

The landscape approach is increasingly embraced by large public and private companies relying on landscapes as providers of their resource base. It provides companies with practical tools to secure their resource supply through the sustainable management of their sourcing areas, while minimising ecological damage, and reducing social conflict. It allows them to combine economic returns with equitable and sustainable land use, not only to secure the future of their resource supply, but also to comply with increasingly stringent international standards and consumer demand, and optimize stakeholder collaboration within their sourcing areas. In this way, the landscape approach allows for win-win solutions, satisfying both the market as well as the environment. That is why the World Business Council for Sustainable Development (WBCSD) states that a landscape approach makes perfect business sense, as sustainable business goes beyond the boundaries of a single supply chain. Peter Bakker, CEO of the WBCSD, states that "Business activities and communities are not isolated but part of a wider landscape in which they rely on the same resources for their activities. A landscape approach is a multi-stakeholder and cross-sectoral process that helps businesses and communities achieve sustainability goals." [6]

According to the Little Sustainable Landscape Book, integrated landscape management is a term used to describe multi-stakeholder approaches to landscape management. The level of cooperation within integrated landscape management varies from information sharing and consultation to more formal models, with shared decision-making and joint implementation. Finding the most appropriate level of cooperation is an important part of integrated landscape management. The governance structure, size and scope, and the number and type of stakeholders involved (e.g. private sector, civil society and government) in integrated landscape management vary.[7]

For private companies in the agri-food sector, integrated landscape management implies that reliance on single commodities produced under monotonous mono-cropping regimes is no longer desirable, and that striving for agro-ecological diversity within sourcing areas is of utmost importance. Diversification of a company's product base as well as collaboration with companies and smallholder farmers deriving alternative products from the same landscape is currently being experimented with and incentive mechanisms are being developed across the globe.

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[3] Van Oosten, C., P. Gunarso, I. Koesoetjahjo, F. Wiersum (2014). Governing Forest Landscape Restoration: Cases from Indonesia. Forests 2014, *5*, 1143-1162; doi:10.3390/f5061143

[4] Ros-Tonen, M., Y. P. Benoit van Leynseele, A. Laven, T. Sunderland (2015). Landscapes of Social Inclusion: Inclusive Value-Chain Collaboration Through the Lenses of Food Sovereignty and Landscape Governance. European Journal of Development Research 27, 523–540. doi:10.1057/ejdr.2015.50

[5] Global Canopy Programme, WWF, Ecoagriculture Partners, The Nature Conservancy, IDH The Sustainable Trade Initiative (2015). The Little Sustainable Landscapes Book. The Global Canopy Programme, United States.

[6] Peter Bakker, see website World Business Council for Sustainable Development, 2016 at http://www.wbcsd.org/work-program/focus-areas/ecosystems/landscapeapproach.aspx

[7] Global Canopy Programme, WWF, Ecoagriculture Partners, The Nature Conservancy, IDH The Sustainable Trade Initiative (2015). The Little Sustainable Landscapes Book. The Global Canopy Programme, United States.

2 Landscape Finance

While agri-food and other resource-based companies have started to become more sustainable and inclusive, so also has the financial world started to transition towards a more values-based approach to investing. Landscapes offer new opportunities for investors to combine economic interests with social and environmental responsibility. Investors have realised that competition for, and overexploitation of, landscape resources leads to deterioration of resources and shortage of supply, hence increased production costs and reduced profits. Taking into account the environmental boundaries as well as the social support within landscapes is therefore increasingly seen as a necessity to safeguard production and increase profits. Alignment with environmental and social context as well as compliance with voluntary set standards equally strengthens a company's or an investor's reputation and its licence to operate.[8,9]

Landscape investment differs from other kinds of sustainable investment in the sense that ideally, landscape investment is not focused on investments in one land management unit (e.g. farm or concession) managed by one landowner or manager. Rather, it is focused on larger spatial units, with recognition of a variety of land uses carried out by multiple stakeholder groups. However, this is not always possible, so there is an increasing number of investors that provide capital to companies that focus on a single product yet are conscious of the landscape, seriously considering the spatial implications of their production models, and actively engaging in stakeholder dialogues at the landscape level. An interesting example of such a landscape initiative is described in the box below.

VERACEL is an agro-industrial company in Brazil that produces highly qualified pulp fibre, which is supplied to leading companies in the international pulp and paper sector. VERACEL is increasingly involved in multi-stakeholder dialogue and spatial planning at the landscape level. VERACEL invest in landscape restoration by restoring old production sites, protecting riparian zones, and creating ecological corridors within and between their production areas. VERACEL actively involves smallholder farmers in its production chain, by sourcing timber directly from the farmers. It no longer aims to purchase more land, but rather aims to work with smallholders, to enhance their production, and contribute to the creation of multifunctional land use under multiple ownership arrangements.

There are many different models for investing in the landscape, but the bottom line is that investors that embrace a landscape approach feel a sense of responsibility towards the landscape and its stakeholders.[10, 11] This requires active participation in multi-stakeholder dialogue at the landscape level, which may raise transaction costs and be difficult to manage from a distance. On the other hand, it reduces the risk of unsustainable environmental practices and social unrest. If investors are not directly represented in a landscape, it may be easier for them to partner with a non-profit organisation with expertise in the facilitation of multi-stakeholder processes within the landscape. This increases investors' credibility and legitimacy—and ultimately reduces risk—which can compensate for the extra transaction costs.

Another basic characteristic of landscape finance is that it operates in a rather new and innovative environment. Financial institutions don't have the mandate, structure or capacity to directly engage with landscape-level initiatives. This means that they often invest in specialised investment vehicles with management that supports the underlying process in terms of multi-stakeholder dialogue, improved governance mechanisms and policy integration. Management teams of the vehicle often doesn't go about this alone; the need for broader investment in the landscape and its stakeholders often requires

[8] Claasen, F. (2016). Finance of Land and Water - The Investment Case of Natural Resources. AidEnvironment and The Wash Alliance International, Netherlands

[9] Kissinger,G. A. Brasser (2013). Financing strategies for integrated landscape investment. Integrated landscape initiative analysis. Landscapes for People, Food and Nature network, United States.

[10] Shames S. and S. Scherr (2015): Scaling up investment and finance for integrated landscape management: challenges and innovations. A white paper from the Landscapes for People, Food and Nature Initiative

[11] Claasen, F. (2016). Finance of Land and Water - The Investment Case of Natural Resources. AidEnvironment and The Wash Alliance International, Netherlands

productive private-public collaboration.[12, 13] A good example of such multi-stakeholder dialogue, initiated by the investment manager, is given in the box below.[14]

In October 2015, the private equity fund manager New Forests convened a collaborative landscape-planning meeting in the Green Triangle of Australia. It brought together the property managers of its investments in the region, representatives of the local Catchment Management Authority, and representatives of the non-profit Greening Australia. During the meeting, each organization shared its environmental objectives in the region, and where these objectives were relevant to New Forests' estates, it developed priorities for stewardship activities, such as pest control and biodiversity corridors.

In order to understand if these investment opportunities adhere to the integrated landscape approach, we developed a working definition of the concept, based on four criteria. First, we assessed whether investment managers have a strong presence within the landscape, i.e. whether they are known stakeholders within the landscape; secondly, we assessed whether the investment managers or their representatives are truly engaged with the landscape, and play an active role in its development process. Thirdly, we considered whether the investment entails a variety of productive activities within the landscape, leading to multiple revenue streams derived from the landscape. Finally, we considered whether there is a verifiable measurement system in place, that not only measures the investors' financial return, but also but also the positive impacts on the landscape in economic, social and environmental terms (i.e. a triple-bottom-line).

Landscape finance is still a new and developing field. We found a good number of investment opportunities that adhered to the criteria mentioned above, although not many of them were operating commercially and at scale, able to absorb larger capital from institutional investors. We did find much innovation happening at a smaller scale, providing comfort that more investment models are being developed, and as those models gain more track record of success, these models will be able to scale and attract larger size capital. There are also a few examples of investment opportunities that are actively engaging with the landscape approach at scale. Some of these opportunities have used innovative structures to attract larger, private capital sources, and/or developed unique partnerships with the government and non-profit organizations to engage at the landscape level, while still being able to manage a larger investment vehicle for institutional investors.

[12] Shames S. and S. Scherr (2015): Scaling up investment and finance for integrated landscape management: challenges and innovations. A white paper from the Landscapes for People, Food and Nature Initiative
[13] Global Canopy Programme, WWF, Ecoagriculture Partners, The Nature Conservancy, IDH The Sustainable Trade Initiative (2015). The Little Sustainable Landscapes Book. The Global Canopy Programme, United States.
[14] 2015 Sustainability Report. New Forests.

3 Blended Finance and Finance for Pipeline & Acceleration

Blended finance is becoming a popular tool in development globally. It refers to the strategic use of development finance and philanthropic funds to mobilize private capital flows for projects the private sector would usually shun. For instance, when a project's returns are hard to monetise or the risks are too great for the private sector to tolerate, a guarantee from a development finance organization could cover some of the (perceived) risks of an investment, and thereby attract capital from investors. Some of the risks from a project can also be reduced by having a dedicated technical assistance facility, also often funded by foundations or development finance organizations, which provide hands-on support to landscape investments during the design phase as well as during the implementation in terms of strategy, finance, human resources, environmental and social impact measurement, and other areas of relevance for organizational strength and growth.

In this chapter we first look into structures where a range of risk profiles of capital can flow into investment vehicles to encourage an increased flow of private sector capital into development. Subsequently, we explore the use of technical assistance in reducing risks for private sector capital.

3.1 Blended Finance

Blended finance has the potential to be a catalyst in the field of landscape finance, where there is a strong need for more private capital, at scale, to flow to landscape projects in emerging markets. Before we dive into some examples of blended finance in landscape finance, we highlight the signature markings of a blended finance deal:[15]

- The transaction – project, company, fund or structured offering – is intended to yield a financial return (i.e. is a for-profit initiative).
- The venture contributes toward meeting the Sustainable Development Goals in an emerging or frontier market.
- Public and/or philanthropic capital is involved in a catalytic capacity, making a deal possible that also attracts private sector capital, which would otherwise not be available.

The field of landscape finance has two characteristics that make it very conducive to the use of blended finance. First of all, the overall risk/ return profile of the organization using the landscape approach is not always in line with market expectations. Secondly, it is a sector where private investors don't have a strong track record of investing, so there are 'unknown' or 'perceived' risks that keep them from investing. Both of these concerns can be addressed with blended capital.

Public and/or philanthropic parties can provide this catalytic capital in various forms. Some may provide a first-loss guarantee, as in the case with USAID for Althelia Climate Fund, whereas others may provide subordinated financing, as in the case with BMZ for AATIF. Whichever type of instrument used, the goal is to reduce specific downside risks or provide incremental upside yield for private investors.

A first-loss guarantee is the promise of an investor to cover the financial obligation of an entity if that entity is unable to meet its obligation. In most cases, the guarantee covers up to either a set principal amount or a specified percentage of losses, as seen in the case of The Althelia Climate Fund. The Althelia Climate Fund seeks to make investments in projects that generate income from both sustainable commodities and ecosystem services. While the risk/return profile is quite appealing to investors, the approach is considered to be innovative and unproven. Additionally, Althelia Ecosphere was a first time fund manager at the time. As such, USAID provided the fund with a USD 133.8 million, 10-year loan portfolio guarantee, through which USAID assumes 50% of the risk in Althelia's investments and reduces other risks, ranging from carbon price fluctuations to challenges in project implementation.[16] The USAID

[15] Larrea, Joan. Sizing Up 'Blended Finance': A Guide to a New Financing Approach to Fuel Sustainable Development. July 27, 2016.
[16] Partnering for Impact: USAID and the Private Sector. Link: https://www.usaid.gov/sites/default/files/documents/15396/usaid_partnership%20report_FINAL3.pdf

funding helped catalyse investments from AXA Impact Management and the Church of Sweden, amongst others. USAID's Development Credit Authority uses these partial guarantees to mobilise financing in developing countries. It has also provided a similar first-loss guarantee to Althelia Ecosphere for its upcoming Sustainable Oceans Fund. The cumulative default rate of all loans supported by USAID guarantees is only 1.85%, while having mobilised up to USD 3.1 billion in private, local funds to finance development.[17]

Subordinated debt financing is financing that ranks behind other lenders, meaning that they get paid back after the other lenders are repaid. This can be an effective way of leveraging debt capital at more senior layers, as some of the risk is borne by the subordinated layer(s). For instance, when BMZ sought to attract private sector capital for financing of projects across the agricultural value chain in Africa, it found that most of the target projects did not have risk/return profiles in line with market expectations. As such, BMZ in partnership with KfW and Deutsche Asset Management structured the fund in three layers: BMZ provided financing for the most sub-ordinated layer (c-shares), KfW and Deutsche Bank provided financing at the mezzanine layer (b-shares), and private sector investors provided financing at the most senior layer (a-shares). With AATIF's c-shares baring most of the risk of the investments, private capital that usually would not be invested in such projects was effectively catalysed for higher-risk landscape projects in Africa.

Another way for public and/or philanthropic parties to catalyse private capital is through insurance products. Insurance can be provided to cover a variety of investment risks, ranging from currency risk to political risk. For example, the Silverlands Fund investing in agriculture in Southern Africa has investments insured by the Multilateral Insurance Guarantee Agency (MIGA) of the World Bank Group for political risk, currency inconvertibility and transferability, expropriation, war and terrorism, and non-honouring sovereign rights. In combination with a guarantee from OPIC, the insurance has helped attract capital from a number of large European pension funds.

It is important to keep in mind that in all cases described above – AATIF, Althelia Climate Fund and the Silverlands Fund – the private investors would not have provided capital for the emerging/ frontier market projects if it were not for the catalytic capital of development finance organizations. With the help of their instruments, the private sector investors project a market-rate return, and more capital is fuelling important development and innovation in the landscape where the largest funding gap exists – emerging and frontier markets.

3.2 Role of Technical Assistance

Technical assistance, if designed well, functions as an important risk mitigant for investments. A recent DFID survey of impact investment showed that the majority of impact funds use technical assistance alongside financial investment, with 64% saying they often or nearly always use technical assistance.[18]

Different models can be used as illustrated in the figure on the next page and range from an integrated provision of technical assistance – funded by investors – to the independent provision of technical assistance not linked to a specific investment. Occupying the middle ground are technical assistance facilities that are closely linked to an investment fund, but separately funded.[19]

[17] U.S. Government, Althelia Climate Fund Mobilise $133.8 million for Forest Conservation and Alternative Livelihoods. USAID Website. May 28, 2014. Link: https://www.usaid.gov/news-information/press-releases/may-28-2014-us-government-althelia-climate-fund-mobilize-1338-million-forest-conservation

[18] DFID, Survey of the Impact Investment markets 2014, August 2015, file:///C:/Users/cg/Downloads/DFID%20Impact%20Market%20Survey%202015_Web.pdf

[19] TechnoServe (A. Thomson and S. Marchand), Reflections on the effectiveness of TA facilities linked with investment funds, based on four years of implementation of the TA facility (TAF) of the African Agriculture Fund.

1. INTEGRATED	2. LINKED	3. INDEPENDENT
• **Funded by Fund Investors** • **Managed by Fund Manager within regular portfolio management**	• **Separate grant funding** • **Some separation of TA vs. Fund management** • **Strong coordination between Fund and TA facility**	• **Separate grant funding** • **Not linked to specific investment Fund**
Examples: • Private equity portfolio management • Investment Fund providing light in-house TA	**Examples:** • TA facility managed by Fund Manager • TA facility managed by 3rd party but linked to single Fund • TA facility linked to several Funds	**Examples:** • NGO provision of TA

Which model is used depends on the need for technical assistance as well as the average investment size. For landscape finance opportunities, a technical assistance facility that is closely linked to an investment vehicle seems most appropriate due to relatively small investment sizes in combination with the need for technical assistance in developing economies in general, and in landscape finance in particular, especially as presence in the landscape is crucial to truly involve local communities. The Tropical Asia Forest Fund is an example of an integrated technical assistance model, as the team members of New Forests are leveraged for the investee support. AATIF and the African Agriculture Fund (AAF), on the other hand, are examples of a linked technical assistance facility, as they have a separate facility that is linked to its investments.

African Agriculture Fund

The African Agriculture Fund (AAF), an agri- and food focused fund and invests in businesses throughout the food value chain, has a well-defined Technical Assistance Facility (TAF). TAF aims to enhance the developmental impact of AAF's investments by building the capacity of its target groups (e.g. SMEs, smallholder farmers, farmer groups supplying portfolio companies, and entrepreneurs distributing AAF portfolio company products) as well as improving their access to markets and finance to enhance their productivity and income. This can include the following:

SME component	*Out-grower component*
• Developing growth strategies	• Designing out-grower schemes
	• Organising/Building the capacity of smallholder farmers and BoP distributors
• Improving accounting standards and financial controls	
• Supporting SMEs to overcome deficiencies that would otherwise preclude capital investment	• Providing technical assistance to farmer organisations
• Obtaining quality certifications	• Training farm service providers
• Conducting market research and improving market linkages	• Facilitating third party input finance

TAF is grant-based and funded primarily by the European Commission and managed by the International Fund for Agricultural Development. It is co-sponsored by the Italian Development Cooperation, United Nations Industrial Development Organisation, and the Alliance for a Green Revolution in Africa, and implemented by TechnoServe. An amount of up to USD 500,000 is available per portfolio company. [20]

For example, TAF supports Goldtree Palm Oil mill in Sierra Leone to strengthen oil palm grower organisations through extension services, facilitate access to finance for out-growers, demonstrate a replanting scheme, and monitor and evaluate performance from a financial, social and environmental perspective whereby the socio-economic status of farmers, agricultural practices and access to and use of financial services are monitored.

Technical assistance comes into play at different phases in landscape finance:

1. The stage of *project development* usually needs intense multi-stakeholder dialogue, participatory spatial planning, conflict mediation and collaborative decision-making. Public and private partners often have to get used to each other's modes of operation, understand each other's motives, and

[20] http://www.aaftaf.org/en/about-us/#technical

develop a joint vision. Solution design is an important component of the project development stage. Though it is one of the key determinants for success of an investment on both the return side as well as cost side to address challenges and weaknesses of partners, it is still too often based on preconceived ideas and not adapted to the specific context. Furthermore the solution should be based on a deep understanding of the rationale and motives for all stakeholders to maintain the existing situation as well as incentives for change. In sum, solid partnerships require time and need careful process facilitation, adaptive planning and continuous support.[21]

2. Companies and key stakeholders often need further assistance during the *implementation phase*. Governments could receive technical support to implement a policy. Another category of technical assistance during implementation is inclusive and green business support to improve companies' out-grower schemes, or training of the farmers (who are part of the out-grower scheme) to increase productivity and introduce climate smart technologies. Sometimes core business development support is also required for small and growing companies as management structures heavily rely on founding shareholders and basic systems (strategy, finance, marketing, human resource and legal), are not strong enough to meet the needs of growing businesses.[20]

3. Finally, support to measure impact is crucial. A verifiable *monitoring and evaluation system* that measures the investors' financial return, as well as the positive impacts on the landscape in economic, social and environmental terms (i.e. a triple-bottom-line) ensures that desired results are attained and accurate information on achievements and challenges can be shared with all stakeholders. Accurately measuring impact is generally complex and costly due to the impact of external factors and requires baseline and end line surveys as well as control groups. [20] It is therefore advisable to leverage the experience of specialized technical assistance providers to do this effectively and efficiently.

It is important that the type of technical assistance that will be provided is flexible. The donor should not prescribe the solution at the start, nor along the way, in order for the landscape investment to be context specific, provide the right incentives and allow for adaptive programming to enable appropriate responses to the current state of change.

Below we provide a number of lessons learned from the field in providing effective technical assistance to organizations and entrepreneurs to ensure risk is adequately mitigated and the development impact of the investments is enhanced.

Do's and Don'ts of Technical Assistance

- Do not come with a pre-defined solution. The best working solution is context specific.
- Don't create a Technical Assistance vehicle before you define the need.
- Don't provide technical assistance without understanding the root cause of the problem.
- Don't define social and environmental benefits too narrow. Donors sometimes tend to prescribe environmental and social benefits using very specific and measurable indicators. This is often based on one particular solution that might not make most business sense and is sometimes also not the best solution from an environmental and/or social perspective.
- Make sure the political economy, including the different interests of the stakeholders involved, are sufficiently understood, and incorporated in the landscape business/financial model.
- Provide incentives to get key stakeholders on board. This requires a certain size of technical assistance as well as relevant technical assistance.
- Keep the number of social and environmental objectives simple. Bringing too many factors in the equation increases the universe of possible solutions and is too complex.
- Make sure that services that need to be provided on a continuous basis are set-up in such a way that the costs can be financed out of revenues once the concept is proven.

[21] Shames et al., 2013; The Global Canopy et al., 2016

4 Investment Opportunities in Landscape Finance

As the field of landscape finance is further evolving and developing, there is need for larger scale capital from institutional investors. While there is definite interest from institutional investors to allocate more funding towards investment opportunities that are aligned with environmental and social impact goals, these opportunities must adhere to a certain set of criteria.

To begin with, the opportunity must be of a certain scale. Institutional investors are typically limited in the proportion contribution to a vehicle (often up to 15 – 20%). At the same time, they have a minimum contribution size for their transaction costs to make sense (for large institutions, the minimum is often in the range of USD 25 – 50 million). Thus, for example, if the minimum proportion contribution for institutional investor X is 15% and the minimum investment size for that institution is USD 25 million, the vehicle in which they invest must be at least USD 167 million.

Institutional investors also look for structures that are familiar. As such, structures that are highly innovative and/ or complex, often don't make it through their due diligence process. Similarly, they have a set of risk/ return expectations with each type of investment opportunity, and they often look for opportunities that match these expectations.

Additionally, institutional investors want to see a solid track record of the fund/ vehicle manager, as they see past performance as a key indicator of future performance. It gives them comfort that the fund/ vehicle manager is capable of both raising capital and deploying it successfully in its target sector and geography. First-time fund managers have a hard time even getting a meeting with institutional investors, and are usually encouraged to first raise capital from other sources, and then come back once they are raising capital for their second or third fund.

The risk/ return profile is also key in institutional investor's decision. Each asset class has a different risk/ return profile, and as such, investors often build a diversified portfolio with a particular allocation to each asset class. In the table below, you will find the asset classes that are applicable for landscape finance investment opportunities.

Asset class	Examples
Public debt	Opportunities such as green bonds, high-ESG sovereign bonds, and asset-backed securities
Private debt	Opportunities such as private debt funds that provide loans to landscape-focused businesses
Public equity	Equity securities that are listed on a stock exchange, issued directly by a (forestry) company
Private equity	Equity securities issued directly by (forestry) companies that are privately-owned, and thus not listed on any stock exchange
Real assets	Investments in real assets such as timber fields or farmland, either directly or through a dedicated vehicle

Typically, institutions have a similar categorization of investment opportunities, and will have a specialized department for each asset class. Depending on the size of the institution, these are further broken down in sectors and size of investment opportunities. For instance, if an institution also looks at smaller investments in early-stage businesses within private equity, there would be a separate desk for venture capital within this asset class.

As each department handles investment opportunities in its own asset class, it becomes challenging when investment opportunities have a mix of the various asset classes (e.g. have both a private equity and debt element to it). Historically, these opportunities have failed to generate traction with institutional investors.

Similarly, an institution often has a dedicated department for each sector, and investment opportunities are analysed according to the expectations of that specific sector. Landscape finance investment opportunities often don't fit neatly into any sector, as one opportunity could have elements of forestry, agriculture and renewable energy. This often poses another hurdle for companies or funds seeking capital from large investors, as it takes them a while to find the department that would be most appropriate.

In section 4.1, we provide an analysis of the investment opportunities per asset class, as categorized in the table above. In section 4.2, we discuss the unique aspects of landscape investment opportunities, in terms of aggregation, risk mitigation and alternative revenue streams. In the last section of chapter 4, we discuss the various stakeholders and their roles in the investment opportunities, such as the government, non-profits, banks and corporates.

4.1 Analysis of the Universe of Investment Opportunities

Enclude analysed 87 investment opportunities using both qualitative and quantitative information. We only included funds that are for-profit and provide investors with some rate of return on their investment, with a bias towards funds that provide 'market rate returns' as institutional investors will typically only consider those types of opportunities. We focused our attention on the investment opportunities that are operating at scale (> USD 100 million), and only included smaller size opportunities if they were really innovative, or provided some interesting lessons learned.

The set of opportunities analysed are diverse in terms of geography, asset class, sector focus, and adherence to the landscape approach. For instance, it includes (i) funds that meet basic requirements in terms of compliance and sustainability; (ii) those that have strong ESG principals embedded throughout their firm; and (iii) funds that go above and beyond the principals of ESG and have a strong element of the 'landscape approach' embedded throughout their firm and fund.

The chart below summarizes expectations related to each asset class, based on the opportunities identified in this study. The full list with investment opportunities can be found in Annex 1.

Asset class	Scale			Investment Size	Performance	Duration
	Average size (USD)	Min. size (USD)	Max. size (USD)	Investment size range (USD)	IRR range	Term range (yrs)
Public debt [22]	5.0 bn.	1.1 bn.	14.6 bn.			
Private debt	89.4 mm.	16.0 mm.	146.0 mm.	40 k. - 30 mm.	< 3%	1 – 20
Private equity	291.0 mm.	10.0 mm.	3.0 bn.	200k – 265 mm.	8.3% - 20%	7.5 – 15
Real assets	563.0 mm.	50.0 mm.	3.0 bn.	20mm. – 60mm.	9% - 15%	10 – 30

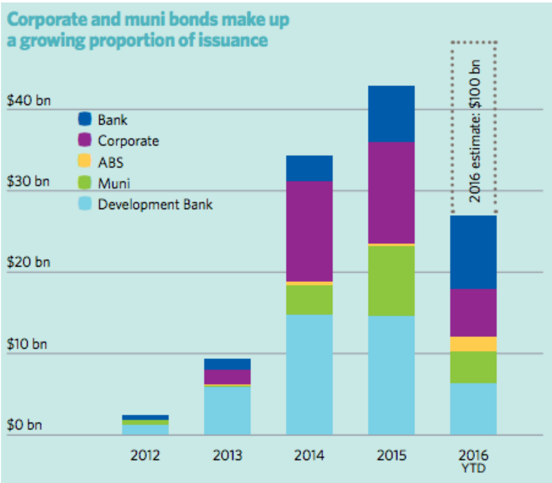
4.1.1 Public debt

As the desire of institutional investors to move capital into impact-oriented investments continues to increase, so does the demand for climate-aligned bonds and green bonds. In 2015, green bonds worth USD 42 billion were issued, which is almost four times the amount issued in 2013 (USD 11 billion).[23] It is estimated that there is currently USD 694 billion outstanding of climate-aligned bonds, of which USD 118 billion is labelled as green bonds.[24] The growth in bonds is reflected in Figure 2 below.

22 Limited information was available on the investment size, IRR and term range. Therefore this information has not been included.
[23] https://www.climatebonds.net/market/explaining-green-bonds
[24] Bonds and Climate Change, State of the Market in 2016 by the Climate Bonds Initiative

Climate-aligned bonds and green bonds are attractive to institutional investors, because the structure and risk/return profile is familiar to them. These bonds are just like conventional bonds, with the key difference that their proceeds are used to fund sustainable projects. While climate-aligned bonds do have environmental benefits, green bonds have the additional benefit that they adhere to strict criteria on what they can invest in and what they have to report on. Through labelled green bonds, institutional investors can thus invest in sustainable projects without taking any additional risk or due diligence cost, while having greater transparency into the bond's use of proceeds. These investments help institutional investors come closer to their Principles of Responsible Investment (PRI) and Institutional Investors Group on Climate Change (IIGCC) commitments, and help them report on climate impact of their fixed income investments.[25]

The demand for green bonds by institutional investors has been so large that many of them are sold out in under an hour, and most are oversubscribed. Several institutional investors interviewed for this report commented that they wish the issuances of green bonds would be larger, so that they would be able to invest more capital in one transaction, and come closer to their sustainability goals and commitments.



Graph source: *Bonds and Climate Change, State of the Market in 2016 by the Climate Bonds Initiative*

The first green bond was issued in 2007 by the European Investment Bank (EIB) and the World Bank. While the proportion of development banks as a percentage of the market has decreased since the first corporate green bonds were issued, development banks remain large issuers and are important in meeting demand for AAA-rated bonds. The EIB remains the leader in green bonds, with over USD 17 billion issued. At the same time, corporate and bank issuers continue to grow, with over 45 corporates and banks issuing green bonds in 2015, from just over 30 in 2013.[26] The shift from more development-oriented issuers to more commercial issuers shows how the green bond market is becoming increasingly mainstream.

While there are many climate-aligned and green bonds, there are not many bonds that specifically employ a landscape approach. For example, while EIB, KfW and FMO have each issued green bonds, these bonds tend to provide more standalone finance to renewable energy and energy efficiency companies and projects, as opposed to financing a whole ecosystem of activities as done with a landscape approach. Of notable adherence to the landscape approach is the Netherlands Water Board Bank Water Bonds, issued by the Netherlands Water Board Bank to mitigate and adapt to climate change and protect diversity through water management.

4.1.2 Private debt

There are not many investment opportunities in private debt that have an explicit landscape approach. More broadly, there is a gap in the market when it comes to providing debt for smaller scale businesses in emerging markets. One of the reasons is the miss-alignment in terms of risk taken by investors, and return that these businesses can provide the investors in terms of interest and downside protection.

Root Capital Social Impact Funds

Focused on Latin America, Africa, and Indonesia, the Root Capital Social Impact Funds are investing USD 130 million in smallholder agriculture and small and growing businesses. The fund offers flexible lines of credit for working capital loans, and some longer-term capex. It has strong collaborations with local cooperatives, and is itself a non-profit.

[25] https://www.climatebonds.net/market/investor-appetite

[26] https://www.climatebonds.net/files/files/CBI%20State%20of%20the%20Market%202016%20A4.pdf

There is one notable opportunity though that offers an attractive risk/ return profile, while taking all aspects of the landscape into consideration. AATIF, a private debt fund, has a strong development policy, as well as social and environmental safeguard guidelines that are applied to analyse the effect of its investment on all aspects of the landscape. It also has a layered capital structure, with first loss capital provided by BMZ, to create a more attractive risk/ return profile for private sector investors. Root Capital Social Impact Funds, another example of a private debt fund, is an outstanding aggregator of opportunities that touch smallholder farmers and their communities.

Debt fund opportunities tend to be smaller than bond investment opportunities. The average debt fund identified in this study was USD 89.4 million, ranging in size from USD 16 million to USD 146 million. Investments attracted to these funds have been sourced from a variety of investor types, including development finance institutions, foundations, banks, and corporate investors. Typical rates of return for debt funds (that report return projections) do not exceed 3%. For the larger debt funds, investment sizes range between USD 5 million and 30 million. One debt fund makes loans as small as USD 40,000.

4.1.3 Public equity

Currently, there aren't any public equity investment opportunities that adhere to the landscape approach. There are publicly listed corporations that have supported landscape projects, either through their corporate social responsibility activities, or by participating in third party investment funds, but none have embedded the landscape approach in the overall corporate strategy.

Livelihoods Fund for Family Farming

Launched in February 2015, Livelihoods Fund for Family Farming is a USD 120 million closed ended (10-year) debt fund that focuses on sustainable supply chains. Financial return for the fund is provided by a coalition of private and public off-takers that pay a fee for the raw materials, public goods and environmental services, generated by the underlying projects. A project developer aggregates the smallholder farmers and provides them with the training, equipment and technical assistance to implement the project. Any financial return is used to repay debt, with the remainder going towards future projects. In some cases, private investors also gain carbon credits.

The Livelihoods Fund for Family Farming is an example of an independent private debt fund that has attracted investments from companies such as Danone and Mars to invest in projects that help companies sustainably transform their supply chains.

Similarly, Starbucks has invested USD 9 million through its social responsibility program called Starbucks Shared Planet into Root Capital. As highlighted by Ben Packard, Starbuck's Vice President, Global Responsibility: "Our partnership with Root Capital and our growing investment in their fund will help to strengthen and stabilize our supply chain and ultimately help improve farmer livelihoods."[27]

In addition to a desire to make supply chains more sustainable, publicly traded companies are also increasingly looking to offset their carbon emissions. The Livelihoods Carbon Fund raised USD 40 million from ten large companies, including Danone and Mars, and provides investors with carbon offsets rather than financial returns. These offsets can be used towards companies' carbon strategy or can be sold on the carbon market.[28]

Thus, although landscape projects are supported by publicly listed companies, these companies themselves don't qualify as landscape investment opportunities, as many of their other activities don't align with the landscape approach. Responsible investors usually adhere to a negative-screening approach when it comes to public equities, meaning they don't invest in companies that have (severe) negative impacts on the landscape, as opposed to a pro-active approach that creates positive impacts on the landscape. It is likely going to be many years until publicly listed equity opportunities use a landscape approach at the company-level, making the company itself a landscape investment.

[27] Starbucks to Invest Additional $2 Million in Root Capital. 1 September 2009. Link: https://www.rootcapital.org/about-us/press-releases/starbucks-invest-additional-2-million-root-capital

[28] http://www.livelihoods.eu/livelihoods-carbon-fund/

4.1.4 Private equity

The majority of landscape investment opportunities identified in our study falls in the private equity asset class. This is not a big surprise, as a certain scale of projects is necessary for the public equity and public debt asset classes. Since many landscape businesses in emerging markets are still small-scale they require equity and debt from the private market. There were many small-scale private equity funds identified in the study that functioned as an aggregated vehicle for investing in small-scale landscape projects in emerging markets. Seen the small scale of many private landscape companies, we saw more innovation happening in this asset class compared to the other asset classes.

The size of private equity funds identified in the study covered the range of USD 10 million to USD 3 billion, and an average size of USD 291 million, skewed by a few very large funds; only seven of the 50 identified private equity funds being larger than the average. The average IRR quoted for the private equity funds identified in the study was just below 15%, while some funds simply stated that “market rates” or “below-risk-adjusted market rate of return” are expected.

Silverlands Fund

SilverStreet Private Equities Strategies’ USD 450 million fund invests in companies along the agriculture value chain in Sub-Saharan Africa with a core focus on farmland/primary production businesses. While the core target of the fund is commercial farms, the Silverlands Fund may also back businesses in the value-chain. The fund contributes to ecosystem preservation by teaching conservation farming techniques, and to community livelihoods by creating markets for smallholder farmers. A guarantee from OPIC and insurance from MIGA covering currency inconvertibility and transferability, among other risks helps make the opportunity attractive for European pension funds. The fund expects to generate returns of 15 – 20%.

Although the standard duration of a traditional private equity fund is 10 years, many of the funds identified in the study had a lifetime in excess of 10 years, with the longest duration being 15 years. The exception to this rule is the open-ended fund structure, which doesn’t have a set expiry date. The longer duration of the funds is not surprising, seen that for instance timber investment funds often have a duration of 12 years, and the complexity of the landscape approach might call for an even longer gestation period. This is in line with a larger trend in the world of finance towards longer duration funds and open-ended funds.

The sector foci of the collection of private equity funds identified includes sustainable agriculture, aquaculture and forestry, clean and renewable energy, natural resource efficiency, sustainable consumer products, food production value chains, and infrastructure sectors. Many of the funds identified with a number of these sectors, rather than just one. The two sectors that represented the most investment ready landscape opportunities tended to be sustainable agriculture and forestry, which are amongst the more mature industries.

Some landscape-related investment opportunities tend to be quite commercial and vague in their identification of benefits to the landscape. Many invest in companies along the value-chain of sustainable agriculture, forestry or clean energy, but do not necessary report on landscape specific impacts.

4.1.5 Real assets

While investors in landscape focused private equity funds tend to invest in companies and projects that focus on the their value chains and their impact on its wider sourcing areas or landscapes, investors in real assets invest directly in farmland, forests, wetlands, and other landscapes. Real asset investment opportunities tend to offer the broadest set of revenue generating activities. In addition to realized returns from increased output and productivity of land, the sale of credits for environmental services, the selling of conservation easements that permanently protect land, and granting leases for recreation are all ways in which landowners have attained value.

By way of statistics, the average amount of capital raised for funds investing in real assets is USD 563 million, ranging from USD 50 million to USD 3 billion. Funds projecting returns stated an average of 12% IRR, and the average term of the funds was 20 years. Investors include DFIs, Pension Funds, and, in some cases, an amalgamation of high-net-worth investors. Timberland and Farmland investments, discussed below, are the most common real asset investments.

Timberland

Conservation Forestry

Investing in natural resource management and conservation in the United States, Conservation Forestry generates market rate returns through the sustainable management of acquired timberlands. The fund enhances both the timber cash flow and the conservation values of the forest while permanently protecting land and waterways. Its second fund has USD 358.1 million under management, sourced from 109 institutional and individual investors.

Those managing forestry funds argue that timberland is a smart investment because investments in timber offer portfolio diversification. Timberland investments are also considered good investments due to their inflation hedging characteristics, given that supply contracts are usually made at pre-negotiated prices, allowing manufacturers to hedge movements and volatility in timber prices in instances when agreed prices are indexed. Furthermore, there are three drivers of return on timberland investments, namely timber value (conventional harvest and sale); land value; and biological transformation. While timber value and land value have mainstream real estate investment equivalents, biological transformation sets timber apart from other investments. "Timber assets literally grow", thus have relatively low volatility of returns and are considered to be a counter-cyclical investment. Though timber prices are cyclical, when log prices dip, timber can be 'stored on the stump' where it will grow and increase in value until timber prices bounce back.[29]

Farmland

By directly investing in farmland, many funds investing in real assets foster sustainable land use, land restoration and, in some instances, conservation. Farmland investments also allow the opportunity for funds to positively impact the livelihoods of those in local communities beyond the impacts of basic farm operations, such as employment and increased output. For example, certain funds have required health care and education programmes for the local communities as a pre-requisite for investment, where usually a certain percentage of investment can be allocated to healthcare and educational programmes.

Old Mutual African Agricultural Fund (SICAV)

Beyond investment to create more arable land, the fund's investments support extensive health care and education programs for farm workers. The fund requires a solid health-care programme and skills transfer program for investment. Up to 6% of lease income can be spent on healthcare and educational programmes for farm workers.

Diversified land use

In cases that best mirror the landscape approach of investing in diversified land use, forestry and agricultural functions are combined to enhance landscape restoration. Investments should not be made in landscapes for the exclusive purpose of agricultural versus forestry development; rather, the two types of land uses should be combined for a more diversified and thus more sustainable use of land. This is reflected in the approach taken by Moringa, a fund that simultaneously invests in forestry and agriculture, generating a diversity of export crops, biomass and timber for local and international markets, in addition to credits for the carbon and PES markets.

Moringa

Moringa, a private equity fund investing in sustainable land use in Africa and South America, offers a diversified revenue stream of permanent food, export crops, and biomass, as well as carbon and PES credits. The fund encourages reforestation, biodiversity, and preservation, and explicitly tracks its performance in these areas.

As one would expect, although there are many investment opportunities available globally that meet basic requirements in terms of compliance and sustainability, a much more select sub-set embeds ESG principles throughout their firm and fund, and only a handful that excel in applying the landscape approach at scale, such as Moringa. A few opportunities identified do not necessarily use the words 'landscape approach', but have those same principles embedded in their firm's sustainability approach.

There is a high level of innovation taking place in landscape finance at the concept stage (e.g. D.C. Green Infrastructure Fund and Unlocking Forest Finance). Although these are interesting to keep an eye on, the impact on the landscape and financial return is not yet demonstrated.

[29] Suckling & Knight, 2010

4.1.6 Mix of Asset Classes

Certain funds embody characteristics of multiple classes, given the nature of their underlying investments. For example, an investment in Ecosystem Investment Partners Funds would typically be pinned as being a real assets investment, though you could also call it a private equity investment and growth in the space could someday justify the creation of a dedicated environmental investment asset class in which it would fall. The inability to clearly bucket opportunities poses some difficulty to traditional institutional investors who have a predilection for investing in assets that fit neatly in a box. Recognition that some investment opportunities cut across asset classes and stages of development is very much needed to increase the flow of institutional capital to landscape investments, which are by definition are made to serve diverse purposes across landscapes. More and more fund managers are taking a wider view of what can be achieved by their funds, as is the case for Climate Investor One, a fund that supports renewable energy projects in multiple stages of growth.

Climate Investor One: Supporting renewable energy projects as they grow

In December 2015, Climate Investor One launched a facility in which 3 funds are combined under one roof to finance renewable energy projects at specific stages of the project lifecycle. The three funds of the facility focus on:

1) Early stage development using donor financing
2) Equity financing for growth-stage enterprises
3) Refinancing at the later stage

The fund has an ambition to have over USD 1 billion in commitments by 2020. Its early commitments include USD 5 million from Power Africa and EUR 7 million from the Dutch Government, as well as an expression of interest from FMO who is considering investing up to EUR 75m from its balance sheet.

4.2 Unique Aspects of Landscape Investment Opportunities

4.2.1 Aggregation

By nature, many landscape related investment opportunities are too small scale for investors. The transaction and monitoring costs associated with executing small investments tend to heavily outweigh the potential returns, while investors deploying large amounts of capital furthermore lack the capacity to manage the number of small investments it would take to invest their full fund. Aggregation of investment opportunities is important for matching the cash-flow requirement and management capacity of investors. For example, The Landscape Fund, still in a concept phase, bundles loans into securities that can be tailored to provide income streams as required by investor demand. The bundled loans are less time consuming to administer and monitor than individual loans. The flipside to this is the additional management layer, and associated costs, with which institutional investors are not typically comfortable.

The Landscape Fund

The Landscape Fund, still in a concept phase, is attempting to transform landscapes by creating a diversified portfolio of long maturity, low interest loans to small-scale borrowers for sustainable agriculture and forestry. The loans are bundled into securities that can be tailored to provide income streams as required by investor demand. A tight network of intermediaries stands between investors and producers.

An important aspect of the landscape approach is having close proximity to the landscape in order to effectively coordinate with and manage stakeholders. In instances where the fund manager is managing at a distance, other players in the ecosystem can serve as partners in assessing projects, tailoring financial supply, and funnelling financial resources to end users. For example, non-governmental organisations (NGOs), farmers' organisations or cooperatives, and increasingly professional financial intermediary organisations may operate between large financial institutions and landscape investment opportunities. Building relationships with local partners for more intimate knowledge of investees is a pre-cursor for tackling the challenge of investing in smaller-scale investment opportunities.

In many cases, fund managers do not aggregate investees, but rather investees aggregate end beneficiaries. For instance, when a fund invests in an agricultural project, the project is able to serve groups of smallholder farmers a fund does not have the capacity to lend to directly, as illustrated by the example of Livelihoods Ventures, manager of the Livelihoods Fund for Family Farming. The Livelihoods Fund for Family Farming forms partnerships with NGOs to implement projects in countries where it is investing debt in agricultural development projects. In Kenya, Livelihoods Investment Fund has joined with Vi Agroforestry, a Swedish NGO, to train farmers on sustainable farming practices. The farmers are organized in 1,200 groups through 15 existing cooperatives. Limited investment is expected to increase crop yields by 30% and double the production of milk. In addition to securing an implementation partner, the Fund has partnered with an off-taker—Brookside Dairy—a leading dairy player in East Africa that is committed to purchasing farmers' milk over a 10-year period. Other public and private institutions pay for environmental services generated. For some investors, and particularly for impact-focused investors, the ability to site the specific, aggregated impact on beneficiaries is becoming increasingly important. [30]

4.2.2 Risk Mitigation

The presence of blended finance, explored in chapter 3, serves as a form of risk mitigation in many of the funds in the investment opportunity landscape. Layered funds allow for a first loss layer provided by investors who are willing to bear more of the investment risk. Such structures incentivize commitments from more risk-averse investors who would not otherwise have invested. For example, the first loss layer of capital provided by KfW and BMZ in the AATIF fund de-risks the investment opportunity for more commercial investors. The same holds for the Althelia Climate Fund for which USAID provided a guarantee for 50% of the portfolio.

Chapter 3 also elaborated further on the role technical assistance can play to reduce the risk by building strong partnership that involve all stakeholders, a careful designed solution taking into account the incentives of all key stakeholders as well as strengthening the capacity of stakeholders and measuring the social and environmental returns.

There are other approaches to risk mitigation such as credit enhancement, for example, through default insurance, a debt service coverage ratio guarantee, or weather indexed insurance. In addition, some funds have attained insurance for expropriation, currency inconvertibility and transfer restrictions by the World Bank's MIGA insurance.

Another approach to reducing perceived risk to investors is the application of ESG management framework as criteria for investment screening and ongoing monitoring. Requirements to adhere to

CERTIFICATIONS / ESG STANDARDS	
Certification	Relevance to landscape investment / risk mitigation
Certified B Corporation	Must perform minimum verified score to meet rigorous standards of social and environmental performance
Committee on World Food Security	Principles for Responsible Agricultural Investment that Respects Rights, Livelihoods and Resources
Forest Stewardship Council Certification	Ensures that products come from responsibly managed forests
Global Good Agriculture Certified	Demonstrative of commitment to advancing Good Agricultural Practice in 3 scopes of production: Crops, Livestock, Aquaculture
Global Standards Certified	Guarantees standardisation of quality, safety and operational criteria; Ensures that manufacturers fulfil legal obligations and provide protection for the end consumer
OPIC/IFC ESG frameworks	Environmental Social Governance by which OPIC and IFC operate
Organic Certification	Signals validity of organic practices in agricultural production
Sustainable Forest Initiative Certification	The world's largest forest certification standard by area requiring third-party audits, and covering protection of biodiversity, at risk species, and wildlife habitat
UN Principles for Responsible Investment	An internationally recognised Principles that demonstrate commitment to building a more sustainable financial system
Voluntary Guidelines on the Responsible Governance of Tenure	Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security

[30] An innovative partnership to improve the livelihood of 30,000 smallholder farmers in Kenya. 11 October, 2016. Link: http://www.livelihoods.eu/an-innovative-partnership-to-improve-the-livelihood-of-30000-smallholder-farmers-in-kenya/

explicit standards tend to reduce the amount of risk fund managers are willing and able to take. Similarly, fund managers sometimes require investees to attain respected certifications in the realms of agriculture, forestry, and sustainability more broadly, which signal socially and environmentally responsible management at the investee level.

As will be expounded on in section 4.3, origination of deals through local partners that may shed light on the intimate details of an investment opportunity is an additional way in which landscape-focused funds tend to mitigate risk.

4.2.3 Alternative Revenue Streams

Several payment for ecosystem services (PES) schemes have been utilized by projects and fund managers to generate multiple revenue streams and improve the risk/return profile of investment opportunities. By providing investors with more immediate, annual fixed income returns, in addition to the returns upon exit from the business, the overall risk of return goes down and the IRR profile becomes more attractive.

The most widely recognized credits are carbon credits, whereby an entity can earn tradable credits (often called carbon offsets) for reducing carbon emissions. Generation of carbon credits may come from carbon sequestration (e.g. farmers are paid for planting and maintaining additional trees) or through energy efficiency projects. PES credits can also be generated through biodiversity protection, watershed protection and landscape beauty.

The database of landscape investment opportunities includes revenue generating schemes derived from a diverse set of ecological phenomenon. Of note are the Stormwater Retention Credits generated by the DC Green Infrastructure Fund, and mitigation credits generated by Ecosystem Investment Partners II. Althelia also generates revenues from environmental services and often sells those credits to corporates.

While the use of alternative revenue models certainly has potential, the ability to generate revenue from carbon (or other) credit has a lot to do with local and country policy, and the terms by which PES markets operate. For example, the generation of credits by Ecosystem Investment Partners II would arguably not be as successful if it were not for the "no net loss" of wetlands policy that drives the purchase of carbon credits. As such, regional or local regulations are key to success of these alternative revenue streams.

DC Green Infrastructure Fund

Funds green infrastructure projects in urban areas that reduce the storm water run-off through the sale of Stormwater Retention Credits. The USD 1.7 million pilot has been funded by Prudential Capital, a US insurance company with a commitment to having a USD 1 billion impact investing portfolio by 2020.

4.3 Role of Key Landscape Stakeholders

4.3.1 Government

Both local, regional as well international governments can play an important role to support landscape initiatives. Over the years the role of governments has transformed to a more facilitative role.

Policy development is an important example of this facilitative role. Our case studies clearly illustrate that innovative policies can play a key role in triggering large-scale landscape finance. Apart from the No Net Loss Policy for Wetlands from the United States, Costa Rica established a PES through its Forestry Law. Below some examples of policies that have had an integral role in the success of landscape funding initiatives.

Policy	Relevance to landscape investment
Forestry Law No. 7575, 1996 (Costa Rica)	This law recognises four critical services provided by forest ecosystems (carbon sequestration, hydrological services, biodiversity protection and scenic beauty for recreation and tourism. This law also established a framework for payments to landowners for these ecosystem services via a national PES scheme.
No Net Loss Policy, 1989	Policy that calls for "no net loss" of wetlands implemented under President George

(USA)	Bush meaning damage to wetlands must be offset by either restoring an equivalent amount of wetlands or by buying credits from the restoration work done by others.
The Federal Water Pollution Act of 1948, amended in 1972 (USA)	Known as the Clean Water Act, the law amended in 1972 established the structure for regulating pollutant discharges into the waters of the United States.
Endangered Species Act of 1973 (USA)	Calls for the conservation of species that are endangered or threatened, and the conservation of the ecosystems on which they depend

International governments also often work with local governments by supporting policy development and technical assistance to promising spatial planning initiatives, A good example is the IDH/ Sustainable Trade Initiative, in which the Dutch government has invested in the establishment of multi-stakeholder platforms, the development of landscape level business and investment models, and the promotion of public-private collaboration in six key landscapes where Dutch companies are playing an important role in sustainable economic development (e.g. Indonesia's West Kalimantan, Vietnam's Central Highlands, and Kenya's Mau Forest). Emphasis has been on the creation of an enabling environment for investors, by investing in solid regulatory frameworks and supportive policies.

Finally, governments are increasingly playing an important role in providing catalytic funding for newly developed and risky initiatives, in which investors are reluctant to invest. Apart from governments incentivizing investors to commit capital to landscape-related markets as highlighted above, governments can also provide catalytic funding in the form of first-loss guarantees that lead to larger private sector commitment and investment.

Another interesting (non-blended finance) example of government support to mobilise private investment is that of the Dutch Water Board Bank (NWB). The NWB is entirely owned by a diverse set of Dutch government entities and only the Dutch state and local entities may be shareholders in the bank. The NWB is a leading financial services provider for the public sector, arranging short-term and long-term loans for water authorities, municipalities, and provinces in the field of water management through public-private partnerships. Particularly successful are the NWB water bonds. Drawing on this experience, Kiffwa (Kenya Innovative Finance Facility for Water) and the Kenyan government are setting up the Kenya Pooled Water Fund (combining donor guarantees and bonds that will be floated on the local capital market) that will provide long term loans to water utilities.

Netherlands Water Board Bank's Water Bonds

NWB Bank has successfully issued three Green Bonds totaling USD 2.7 billion proceeds of which are earmarked to an internal account at NWB Bank to fund Water Authorities projects. The de-centralised Water Boards have close proximity to the landscape with strong environmental awareness at the local level. They mitigate environmental conflicts and balance interests between nature, agriculture and housing. Government cooperation has been central to the success of this initiative as Water Authority income is continuous due to their ability to levy taxes, the importance of which is not questioned by citizens.

4.3.2 Non-Profit Organizations

In landscape finance, there is an important role to be played by non-profit organisations, which have been frontrunners of operationalizing the integrated landscape approach in the field. Many of such non-profit organisations have developed and supported landscape initiatives at the local level, have a strong local presence, and a vast amount of local content knowledge. They are therefore trusted landscape partners in their ability to localize and operationalize some of the social and environmental initiatives that the fund managers are looking to implement.

Non-profit organisations can play an important role of convening local stakeholders and facilitating multi-stakeholder dialogue. Another role of non-profit organisations is that of provider of technical assistance, both to local actors to develop financeable landscape initiatives at scale, as well as to private parties to engage in multi-stakeholder dialogue and landscape finance. Many non-profit organisations have more recently developed relevant financial knowledge and experience to play this role of convener and provider of technical assistance effectively.

For example, in the case of Conservation Forestry Fund, the fund manager actively collaborates with conservation groups to agree upon specific conservation interests for each of their investments. The fund relies on partners to help identify investment opportunities and implement conservation outcomes. The Nature Conservancy contributed to the purchase of 69,000 acres of Wisconsin forest from International Paper, and Conservation Forestry Fund worked with partners to implement a conservation easement closing on approximately 59,000 acres.

4.3.3 Banks

Both large banks and smaller regional banks have a role to play in the development of the ecosystem for investing in landscapes. Some large banks, such as Bank of America, a Root Capital Social Impact Funds investor, have moved investment capital to the agricultural sector. Deutsche Bank has had a strong showing in the sector through the sponsorship of the Africa Agriculture and Trade Investment Fund. JP Morgan Chase & Co. has also been active in supporting landscape investments with investments in the EcoEnterprises Funds, and the African Agricultural Capital Fund. Still, investments made by large banks in funds operating with a landscape approach are few and far between.

A handful of funds including the Triodos' Fair Share Fund invest in financial institutions that offer specialized financial services to promote sustainable energy and agriculture. Regional banks receiving capital from landscape-focused funds can play a role in funnelling institutional capital to local projects and businesses that support the impact goals of the overarching fund. For example, AATIF not only invests directly in local agribusinesses but also in local intermediaries such as banks that direct financing toward the agricultural sector in the communities in which they operate, including SMEs.

4.3.4 Corporates

As highlighted in the public equities section of investment opportunities, corporates are increasingly looking at ways to support landscape projects through their corporate social responsibility activities and through investments in independent investment funds. Un-listed, private companies are similarly looking for such opportunities to strengthen the sustainability of their supply chain and off-set carbon emissions, amongst others.

The growth of "green investment in innovative models" by corporate funders is evidenced by the 2015 launch of the Livelihoods Fund for Family Farming by two corporate founders, Danone and Mars. Both are global actors in the food industry that saw the need to help companies sustainably source natural materials from smallholder farmers while also positively impacting the livelihoods of farmers. Firmenich, the largest privately owned company in the fragrance and flavor business, and Veolia, a global leader in resource management, joined the movement to invest in sustainable agricultural value chains in January 2016 by investing in the Livelihoods Fund. As displayed in this example, corporates investing in landscapes tend to make investments that correlate with the focus of their business and long-term viability of its operations. For instance, the success of Firmenich's sale of perfumes strongly depends on its ability to sustainably source inputs from nature, like vanilla or mint. Other corporations who recognize the importance of supporting the sustainability of value-chains on which they rely include Starbucks, an investor and retail partner of Root Capital's agricultural focused funds, and General Mills, also a Root Capital investor.[31]

A private company that has taken a more proactive approach to investing in landscape projects is Louis Dreyfus. The company has partnered with Bamboo Finance, a leading impact-focused private equity fund manager, to launch a USD 50 million fund specifically focused on agribusiness in Sub-Saharan Africa. Louis Dreyfus will contribute both its expertise in agribusiness and USD 10 million in capital to seed the

Nisaba Impact Investing Fund

Louis Dreyfus and Bamboo Finance are currently raising capital for a USD 50 million fund that will invest in agribusinesses in Sub-Saharan Africa. The fund will combine company expertise with long-term capital to increase capacity, promote more equitable value chain development, foster innovation and streamline distribution for smallholder farmers and their communities.

[31] Momentum from the COP21 continues: Firminech and Veolia to join Danone and Mars in a new fund that created mutual benefits for smallholder farmers, business and the environment. 21 January, 2016. Link: http://www.livelihoods.eu/press-release-firmenich-and-veolia-join-the-livelihoods-fund-for-family-farming/

fund. As highlighted by the Chairperson of Louis Dreyfus Holding: "Agribusiness development is at the crossroads of major challenges for Africa. With an estimated population of 2 billion by 2050, and 330 million young Africans expected to enter the labor market by 2025, global agricultural production is not keeping pace with population growth. We believe that through appropriate financing tools like impact investing, the private sector must take an active role in addressing such challenges."[32]

[32] Bamboo Finance and Louis Dreyfus Holding Launch Impact Investment Fund NISABA, Focusing on Agribusiness in Sub-Saharan Africa. Link: http://www.bamboofinance.com/wp-content/uploads/NISABA-PR-FINAL-28102015.pdf

5 Selected investment opportunities in-depth

The key factors that RVO have asked us to take into consideration in the selection of the case studies is the appeal to institutional investors in the Netherlands and globally and the adherence to the landscape approach at the local level. To evaluate each of the investment opportunities according to these two factors, Enclude developed four criteria for both the appeal to commercial investors and the adherence to the landscape approach, which have been described in chapter 4 and 2 respectively. They are summarized in the figure below.

Appeal to institutional investors

1) Current scale (capital raised to date)
2) Appealing structure for institutional investors
3) Good risk/return profile for institutional investors
4) Track record (evidence of success of fund manager and/or fund itself)

Adherence to the landscape approach

1) Presence within the landscape
2) Engagement with landscape stakeholders
3) Multiple revenue streams derived from the landscape
4) Measurable positive impacts on the landscape, in economic, social and environmental terms

Based on this analysis, and with the further objective to present opportunities in different asset classes, AATIF, Althelia Climate Fund, Ecosystem Investment Partners II and Tropical Asia Forest Fund have been selected.

Opportunity	Asset class	Sources of funding	Target Geography	Target Sector
Africa Agriculture and Trade Investment Fund (AATIF)	Private debt	KfW, BMZ, Deutsche Bank, Austrian Development Bank, CFC, and private investors	Africa	Agriculture
Althelia Climate Fund	Private debt and real assets	EIB, Finnfund, FMO, Church of Sweden, Credit Suisse, AXA Impact Management, and others	Africa, Asia and Latin America	Agroforestry and sustainable land use
Ecosystem Investment Partners II	Real assets	New Mexico Educational Retirement Fund, Lincoln Institute of Land Policy Endowment, KL Felicitas Foundation, family offices, high net worth individuals, and European and United States pension plans	United States	Wetland, streams, and habitat restoration
New Forests' Tropical Asia Forest Fund	Real assets and Private Equity	FMO, Finnfund, IFU, several European pension funds, one European and one American fund of funds	Southeast Asia with a primary focus on Malaysia, Indonesia and Indochina	Forestry

5.1 Africa Agriculture and Trade Investment Fund

OPPORTUNITY OVERVIEW

AATIF is an open-ended investment fund launched in 2011 to invest along the agriculture value chain. KfW, the German Development Finance Institution, initiated the creation of the fund on behalf of BMZ with the aim to eradicate extreme poverty and hunger in Africa while improving agricultural practices and increasing crop yields.

In order to drive local value addition and achieve economic sustainability, AATIF directly finances economically sound agribusinesses and provides indirect financing to the agricultural sector by refinancing financial intermediaries, such as banks and other intermediary companies like aggregators. This is important in a market where there is high risk-aversion toward the agricultural sector, and the financial sector provides only limited capital.

As of Q1 2016, AATIF had nine underlying investments, with USD 132.6 million in investment outstanding. 49% of this funding was outstanding to financial institutions, 38% to intermediaries, and 13% to direct investees.

AATIF is managed by Deutsche Bank, an established asset manager with a strong track record. The fund has an innovative public-private partnership structure, where there are three tranches of financing, with the first-loss tranche (c-shares) provided by BMZ and CFC, and the mezzanine tranche (b-shares) provided by KfW, Deutsche Bank and the Austrian Development Bank. This then allows for private sector investors to come in at the senior level (a-shares) with appropriate risk/ return levels for private debt in Africa.

AATIF ensures compliance with environmental and social guidelines that are part of every financing agreement, and monitored on an ongoing basis. In fact, the International Labor Organization (ILO) and UNEP act as compliance advisor to the fund assessing social and environmental risks and impacts during due diligence (including an onsite visit) and later monitoring of the investments according the fund's Social and Environmental Safeguard Guidelines.

TRANSACTION SUMMARY

Opportunity Type	Fund – SICAV-SIF
Asset Class	Private debt
Investment Manager	Deutsche Bank
Location of Manager	Germany
Opportunity Launch	2011
Target Sector	Agriculture
Target Geography	Africa
Opportunity Duration	Open-ended
Fee Structure	<2% management fee, plus a capped performance-based fee
Assets Under Management	USD 133,000,000 (USD 172 million in commitments)
Assets Deployed	USD 132.6 million
Target Investment Size	USD 5 - 30 million
Instruments	Senior debt, mezzanine, equity, guarantees, and risk sharing arrangements
Target IRR	Not disclosed
Investors in the Fund	KfW, BMZ, Deutsche Bank, Austrian Development Bank, CFC, and private investors
Other Features	Strong presence of blended finance
Fundraising Status	Ongoing capital raise, both for public and private capital

RELEVANCE TO THE LANDSCAPE APPROACH[33]

AATIF adheres to a regional approach to landscape finance. Although it does not explicitly use the 'landscape approach' terminology, it has a solid foundation of environmentally sustainable and socially just investments within a spatial context. AATIF's aim is to directly contribute to the Sustainable Development Goals, in particular Goal 1 to 'end poverty in all its forms everywhere' and Goal 2 to 'end hunger, achieve food security and improved nutrition, and promote sustainable agriculture,' through the mobilisation of private capital. The two core objectives of the fund are to enhance food security through investing in small and medium enterprises, and contribute to quality employment creation and income increases for local farmers. AATIF considers product chains as being part of their wider landscape, and it capitalizes on the variety of product chains within one landscape, which offers opportunities for building place-based and multiple-product investment portfolios to reduce the risks of fluctuating prices and volatile market conditions.

AATIF provides resources in specific areas that experience a lack of appropriate financial service, to bridge the gap between development assistance programmes and private sector actors. All AATIF's investments are built on innovative loan structures, which are embedded in strong social and environmental governance structures, guaranteeing not only productive employment and healthy working environments, but also the sustainable management of land and water, sustainable production patterns and sustainable use of terrestrial ecosystems. Whenever possible, AATIF invests in cooperatives, commercial farms and processing companies that envisage product diversification within the landscape as an instrument to diversify risks for both the investor, as well as the landscape. Particularly well developed are AATIF's Social and Environmental Safeguard Guidelines with regard to land acquisition and involuntary resettlement, biodiversity conservation and sustainable natural resource management, protecting the territorial rights of indigenous peoples, and safeguarding cultural heritage within landscapes. Social and environmental monitoring is carried out in collaboration with local project stakeholders, and is accompanied with capacity development in terms of local organisational capacity, and stakeholders' roles, rights and responsibilities within the investment areas. This makes AATIF an active and conscious stakeholder within the landscapes where they invest. Public-private collaboration is crucial in this approach.

ABC Holdings Ltd.

AATIF has invested in ABC Holdings Ltd., which operates in five countries in Southern Africa under the BancABC brand. In Mozambique, BancABC provides financial services in an environment where the agricultural sector continues to dominate the economy, yet a significant share of its food is still imported (e.g. 20% of rice and 15% of wheat). Despite regional market potential, Mozambique remains mostly subsistence-based, with growth in the smallholder sector limited by farmers' lacking access to financing and technology. BancABC's strategy for sustainable development includes strong spatialisation of agricultural development, through the identification of agricultural development corridors (Beira, Nacala, Zambezi), which have a significant production potential and favorable location within domestic, regional and international markets. Within these corridors, spatial plans have indicated which are the areas to be invested in, and which are the areas to be protected, conserved or restored. BancABC has provided the financing for processing equipment and inputs for smallholder farming schemes in specific areas and for a variety of crops, thus building up a diversified portfolio of product-market combinations (cash crops as well as food crops) which not only aim to regional economic growth, but also to enhance regional food security as well as environmental protection within a rapidly developing region.

Particularly interesting from a landscape perspective are AATIF's investments related to the development of a Common Market for Eastern and Southern Africa (COMESA), which is a strong driver for regional integration, and regional spatial planning. As agriculture plays a crucial role in the COMESA region, AATIF adopted a holistic approach to solve regional food shortage through sustainable production models, and take advantage of the increased opportunities to shift commodities from surplus areas to deficit areas within the region. By investing in regional banks such as the Southern African Trade and Development

[33] Sources: Africa Agriculture and Trade Investment Fund - Preface to the Social & Environmental Safeguard Guidelines, 2013; Increasing Income - Improving Food Security, AATIF Annual Report 2014; both available at AATIF website at https://www.aatif.lu/; and the COMESA website at http://programmes.comesa.int/

Bank, AATIF aims to contribute to raising agricultural productivity within the COMESA region, while reducing regional food insecurity, enhancing economic growth and safeguarding fragile ecosystems within the region.

INVESTMENT MANAGER

The G8 Summit in 2008 resulted in the renewed focus by the German government on investing in sustainable agriculture in Sub-Saharan Africa. Key to this initiative was the German government's intention to use its funding to attract more private capital towards agriculture in that region.

KfW soon thereafter issued a tender for a co-creator and investment manager, and selected Deutsche Asset Management, part of the Deutsche Bank Group. Before launching the fund, Deutsche Asset Management had the opportunity to help structure the fund. It also came in as one of the anchor investors in the fund, with a EUR 20 million investment in b-shares (10-year maturity).

Deutsche Asset Management then played an essential role in attracting private investment for the a-shares, 18 months after the launch, when there was proof of concept. These private investors were particularly from the wealth management side of the bank, and were looking to create social and environmental impact, while gaining market rate returns.[34]

Deutsche Asset Management has a team of over 500 investment professionals, and has over EUR 700 billion in assets under management, including several sustainability-focused funds, such as the European Energy Efficiency Fund. Deutsche Asset Management's strong track record has created comfort amongst private sector investors, especially in the early years.

STRUCTURE OF THE OPPORTUNITY

AATIF is an open-ended investment company organised under Luxembourg law in the form of a public limited liability company qualifying as a société d'investissement à capital variable – fonds d'investissement spécialisé ("SICAV - SIF"). The fund was structured as a SICAV – SIF because it allowed for the fund to be open-ended, and to have a unique tired structure.

AATIF allows investments at three different levels, each with a different risk/return profile, with dividends being paid following a waterfall principle. The fund is open-ended, and is continually looking to raise more capital and grow the fund. To ensure the right risk-profile for the a-share investors, AATIF must have at least 33% of capital in the form of c-shares, and at least 50% of capital in the form of b- and c-shares.

A-Shares are the most senior with maturities between 3 and 15 years, carrying a coupon that is calculated on a 3m Euribor + spread basis, plus potentially dividends (depending on the fund's financial performance) and capital gains (distributed in the form of D-shares). As of Q2 2016, AATIF had USD 28 million of a-share subscriptions from private sector investors (names undisclosed). It had an additional in USD 14 million in a-share commitments.

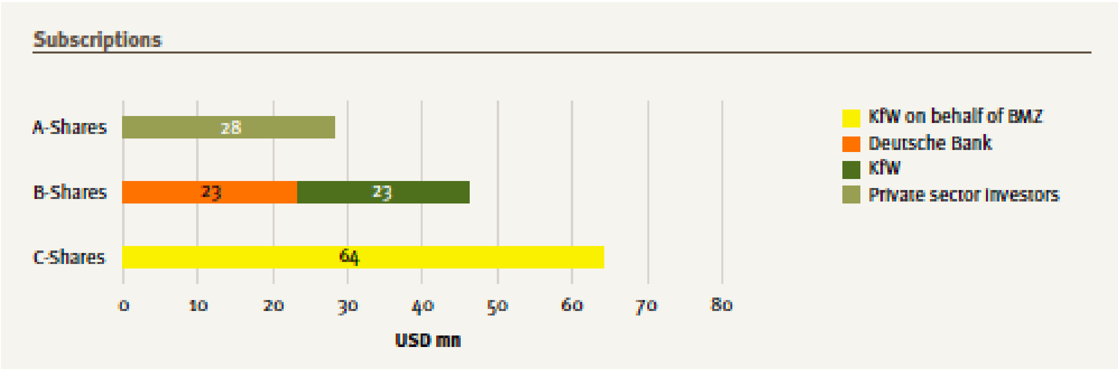
B-Shares have maturities between 5 and 15 years rank junior to the A-Shares and provide a higher target coupon calculated on a 3m Euribor + spread basis, plus potentially dividends (depending on the fund's financial performance) and capital gains (distributed in the form of D-shares). As of Q1 2016, AATIF had USD 23 million in b-share subscriptions from Deutsche Bank (from its balance sheet), and another USD 23 million in b-share subscriptions from KfW. In addition, it had another USD 18 million in commitments.

C-Shares usually have unlimited maturities and bear the highest risk (the first loss capital). These shares offer a comparably lower return and serve as a risk buffer for the more senior share classes with target dividends ranking junior to A and B shareholders. As of Q1 2016, AATIF had USD 64 million in c-share subscriptions from KfW (financed through its Official Development Assistance allocation) and another USD 2 million in c-share commitments.

[34] Case Study: Africa Agriculture and Trade Investment Fund (AATIF). Convergence. November 2015

D-Shares: In addition to complementary dividends, A, B and C shareholders may benefit from capital gains generated by the fund's investments, attributed free of charge to the funds' shareholders by the issuance of d-Shares. No d-shares have been issued to date. If d-Shares are issued, they protect all other share classes and serve as a first buffer for any net capital losses of the fund up to their own value.

There is no liquidity facility in the fund or a market to trade the shares. As such, investors hold the shares until maturity, at which point they can be redeemed.

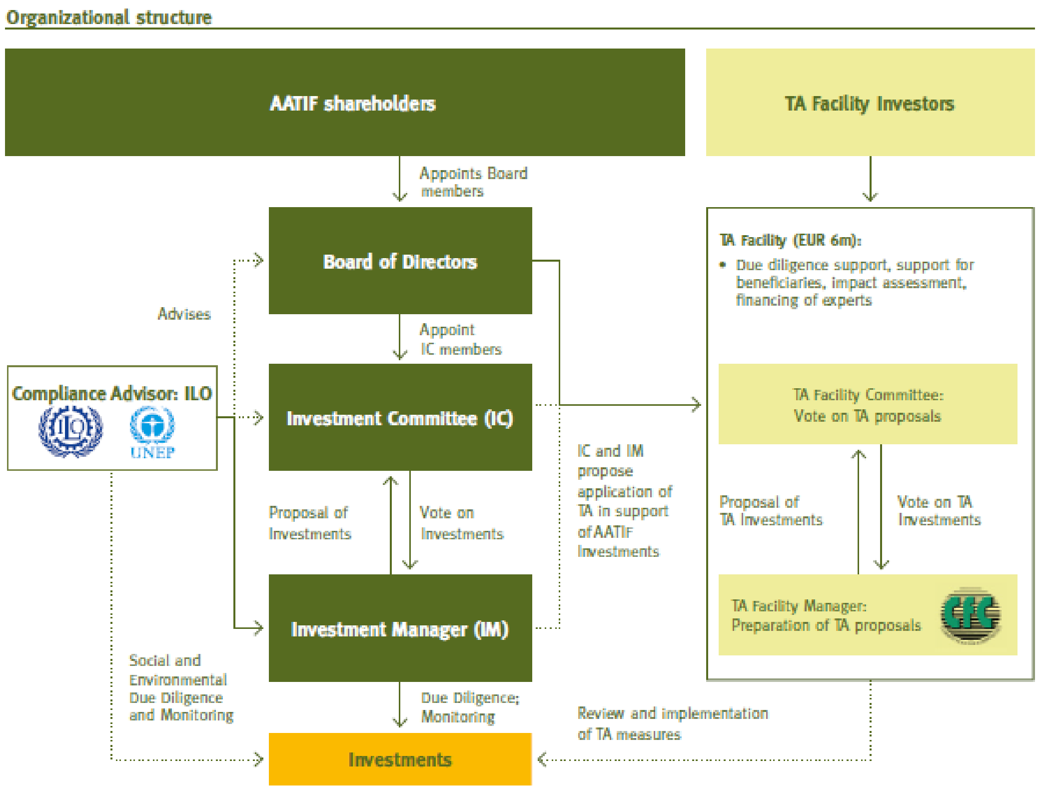


Source: Quarterly Report (Q1 2016), AATIF.

The AATIF shareholders are represented by the Board of Directors. The Board of Directors administers and manages the fund, and can propose changes to the fund's investment objective and investment policy. The board decides on the investment restrictions and the course of conduct of management and business affairs of the fund. Importantly, the Board of Directors elects the Investment Committee, which is the main body for approving investment decisions, proposed by the Investment Manager, Deutsche Bank.

Parallel to the fund there is a technical assistance facility of EUR 6 million that provides due diligence support, support for beneficiaries, impact assessment and financing of experts. The technical assistance facility also pursues research and development activities to promote agri-finance in Africa. The facility is managed by the Common Fund for Commodities (CFC), an intergovernmental financial institution established within the framework of the United Nations, and is funded by the c-share providers. Additionally, the Board of Directors can add a certain portion of the fund towards the TA facility so that new funding can be made available on an on-going basis.

The ILO in collaboration with UNEP acts as AATIF's compliance advisor for social, environmental and developmental impact. They are engaged during the screening, due diligence and monitoring stages of the investment process to ensure that investees adhere to the strict social and environmental guidelines set by the fund and support related technical assistance measures as well as the implementation of the fund's development impact measurement framework.



Source: AATIF website (https://www.aatif.lu/organizational-setup.html)

REVENUE MODEL

AATIF makes both direct investments in agriculture projects as well as indirect investments to support the growth of agricultural loans through local financial institutions and corporate intermediaries. Its revenues are roughly evenly split between revenues from its direct investments and its in-direct investments.

By financing sound investments, AATIF allows for the revolving use of its capital, meaning the capital plus interest that is returned can be re-invested in future projects. AATIF complements earlier stage development assistance programs (often funded by grants or concessional financing) with financing at market-based terms. AATIF does not, however, provide financing in the areas where the private sector already satisfies demand. This "crowding-in" of private capital can also be achieved by scaling-up existing development assistance programs, and thereby bridging the gap between the development programs and private sector players.

AATIF approaches agricultural lending in Africa with innovation in terms of loan structures and collateral requirements, risk sharing with industry partners or the combination of loan products with insurance mechanisms. AATIF has a special focus on connecting African farmers (particularly smallholders) to global markets, aggregating sustainable agriculture investment opportunities for institutional investors.

The range of investments is from USD 5,000,000 – USD 30,000,000:

- USD 5 mil – USD 15 mil for direct investments
- USD 10 mil – USD 30 mil for investments in financial intermediaries
- USD10 mil – USD 30 mil for non-financial intermediaries

Deutsche Asset Management sources its investments both passively and actively. There is a portal on the AATIF website which allows all projects to apply for financing of the fund, which is a passive source of investment opportunities. The active sources include AATIF local pipeline managers who are based in Nairobi and Dhakar, Deutsche Bank's network, funding and investment partners of the fund, Fair Trade events and conferences, and workshops and events that AATIF hosts itself, amongst others.

IMPACT TARGETS

AATIF is guided by principles of sustainability and additionality (i.e. being able to provide funding that would otherwise not be provided). To assess an Investment's compliance with the fund's Social & Environmental Safeguard Guidelines, the fund has partnered with ILO who, in collaboration with UNEP, acts as the fund's compliance advisor. The Guidelines call for assessment of eight areas of influence[35]:

1. Social and environmental assessment and management system: In addition to an assessment and monitoring plan, the fund engages with local communities affected by risks or adverse impacts from an investment
2. Labor and working conditions
3. Pollution prevention and abatement
4. Community health, safety and security
5. Land acquisition and involuntary resettlement
6. Biodiversity conservation and sustainable natural resource management
7. Indigenous peoples
8. Cultural heritage

1) Social and environmental assessment and management system

Each investee is required to establish a Social and Environmental Assessment and Management System (SEMS), tailored to the nature and scale of the investment and commensurate with the level of social and environmental risks and impacts. The goal is three-fold:

- Identify and assess social and environmental impacts in the investee's area of influence
- Avoid, or where avoidance is not possible, minimize, mitigate or compensate for adverse impacts on workers, communities and the environment
- Ensure that affected communities are appropriately engaged on issues that could potentially affect them

2) Labor and working conditions

AATIF recognizes that the pursuit of economic growth through employment creation and income generation should be balanced with protection for basic rights of workers. Key to this is the respect for workers' right, good worker-management relationships, fair treatment of workers, avoidance of child or forced labor, and safe and healthy working conditions.

AATIF promotes that through a constructive worker-management relationship, and by treating the workers fairly and providing them with safe and healthy working conditions, investees can create tangible benefits, such as enhancement of the efficiency and productivity of their operations.

3) Pollution prevention and abatement

AATIF requires and works with investees to avoid or minimize adverse impacts on human health and the environment by avoiding or minimizing pollution from investment activities. Additionally, it promotes the reduction of emissions that contribute to climate change.

4) Community health, safety and security

AATIF requires investees to avoid or minimize risks to and impacts on the health and safety of the local community during the investment life. Additionally, the fund requires that the safeguarding of personnel and property be carried out in a legitimate manner that avoids or minimizes risks to community's safety and security.

5) Land acquisition and involuntary resettlement

AATIF recognizes that unless properly managed, involuntary resettlement may result in long-term hardship and impoverishment for affected people and communities, as well as environmental damage and social stress in areas to which they have been displaced. As such, AATIF will:

- Avoid involuntary resettlement by exploring alternative investment designs.
- Mitigate adverse social and economic impacts from land acquisition or restrictions on affected persons' use of land by: (i) providing compensation for loss of assets at replacement cost; and (ii)

[35] Africa Agriculture and Trade Investment Fund: Social and Environmental Safeguard Guidelines

ensuring that resettlement activities are implemented with appropriate disclosure of information, consultation, and the informed participation of those affected.

- To at least restore the livelihoods and standards of living of displaced persons.
- To improve living conditions among displaced persons through provision of adequate housing with security of tenure at resettlement sites.

6) Biodiversity conservation and sustainable natural resource management

AATIF is focused on protecting and conserving biodiversity – the variety of life in all its forms, including genetic, species and ecosystem diversity. The components of biodiversity, as defined in the Convention on Biological Diversity, include ecosystems and habitats, species and communities, and genes and genomes, all of which have social, economic, cultural and scientific importance. AATIF requires investees to avoid or mitigate threats to biodiversity arising from their operations, as well as sustainably manage renewable natural resources.

7) Indigenous peoples

AATIF recognizes that indigenous peoples, social groups with identities that are distinct from dominant groups in national societies, are often among the most marginalized and vulnerable segments of the population. They are particularly vulnerable if their lands and resources are transformed, encroached upon by outsiders, or significantly degraded. Thus, AATIF encourages its investees to create opportunities for indigenous peoples to participate in, and benefit from investment-related activities that may help them fulfill their aspiration for economic and social development. Additionally, AATIF encourages its investees to consider indigenous people as partners in development.

8) Cultural heritage

Finally, AATIF aims to protect irreplaceable cultural heritage from the adverse impacts of investment activities and supports its preservation. It also promotes the equitable sharing of benefits from the use of cultural heritage in business activities.

PERFORMANCE

Not disclosed.

UNDERLYING INVESTMENTS

As of Q1 2016, AATIF's portfolio included nine investments: four direct investments and five indirect investments, including three investments in financial institutions and two non-financial intermediaries. The investments cover the entire value chain from primary agriculture, to processing and ready to buy products. Assets deployed total USD 132.6 million in the organizations listed on the next page.

Name of Investment	Location of Investment	Size of Investment	Main focus of Investee
Chobe Agrivision Company	Zambia	USD 10 million (USD 7 million of loan outstanding)	Wheat and soy farm: the investment helped increase operational capacities of the maize, wheat and soya bean farming, enabling it to contribute to regional food security.
Global Agri-Development Company (GADCO)	Ghana	USD 1.3 million of loan outstanding	Rice farm: the investment helped finance a rice mill as a first step for GADCO to develop an integrated value chain.
Balmed Holdings Ltd.	Sierra Leone	USD 1 million trade finance agreement (USD 0.3 million outstanding)	Coffee and cocoa trader: the investment was used to help strengthen the trading business.
Wienco	Ghana	EUR 11 million and USD 6 million outstanding of senior debt loan	Intermediary input supplier: the investment helped significantly expand the scope of the company's smallholder operations.

Name of Investment	Location of Investment	Size of Investment	Main focus of Investee
Cape Concentrate Ltd.	South Africa	USD 8 million facility agreement	Tomato processing: the investment was made to finance a business rescue plan, which foresaw the complete restructuring of the business including new management.
Eastern and Southern African Trade and Development Bank (PTA Bank)	Supranational	USD 30 million facility agreement	Financial institution: the investment was used to expand agricultural lending activities.
Chase Bank	Kenya	USD 10 million outstanding in a senior loan facility	Financial institution: the investment was used for on-lending activities along the entire agricultural value chain including input providers, farmers and off-takers. (Under receivership since April 2016)
BancABC	Mozambique, Tanzania, Zambia, Zimbabwe, Botswana	USD 25 million risk sharing agreement	Financial institution: the facility helped the bank to increasingly step into transactions along the entire agricultural value chain and extend their maturities.
Export Trading Group (ETG)	Pan Africa (26 African countries)	USD 30 million facility agreement	Intermediary: the facility was used as long-term working capital for the export of crops and import of fertilizers as well as the financing of capital expenditure related to processing plants and warehouses.

LESSONS LEARNED

Lesson for Entrepreneurs / Fund Initiators

Blended finance can be used to attract new sources of private capital: AATIF provides a unique example of how private capital can be attracted to finance businesses across the agricultural value chain in Sub-Saharan Africa that usually would not even attract the attention of private sector investors. Because of the unique structure, where KfW, BMZ and Deutsche Bank take on most of the risk, the risk/return profile for private investors to come into the senior tranche (a-shares) becomes more attractive.

Securing a strong investment manager has a positive signalling effect: Having a strong investment manager, such as Deutsche Asset Management, provides additional comfort to private investors that the fund will be professionally run and underlying investments will go through a thorough due diligence process.

Strategic partnerships can strengthen adherence to the landscape approach: While Deutsche Asset Management is a strong commercial investment manager; it does not have strong social, environmental and developmental expertise for agricultural projects in Sub-Saharan Africa. As such, AATIF has engaged with ILO to provide, in collaboration with UNEP, the necessary expertise during the due diligence process and monitoring process.

Lessons for Investors

There are well-managed, commercially attractive opportunities to invest in landscape initiatives: Because of the fund's distinct risk-sharing structure and partnership model, investors can gain exposure to the agricultural value chain in Africa without taking undue risk. Most of the downside risk is covered by BMZ through the c-shares. Investors can be sure that thorough commercial due diligence will be executed by Deutsche Asset Management, and thorough social and environmental due diligence will be advised by the ILO and UNEP.

Lessons for Government

Official Development Assistance can be effectively used to leverage private capital: As the funding available for Official Development Assistance is drying up globally, it is important for Government to think about how the funding that is still available can be used most effectively. AATIF has successfully shown how BMZ and KfW used its Official Development Assistance to finance the agricultural value chain in Sub-Saharan Africa, and leverage its funding to attract private capital that would otherwise not have invested, due to the risk/ return profile of such projects. It is through such blended finance structures that additional capital can be put at use to further development in key target geographies and sectors.

5.2 Althelia Climate Fund

OPPORTUNITY OVERVIEW

Founded in 2011, Althelia Ecosphere is an impact fund management firm that specializes in sustainable agriculture and performance-based conservation. Its first fund, Althelia Climate Fund, was launched in November 2013 and is focused on investing (mostly through debt) in agroforestry and other sustainable land use projects in Africa, Latin America and Asia.

Althelia Climate Fund was launched with the support of Conservation International, which provided a bridge loan of USD 1.35 million to help jump-start the fund. The first close came in June 2013 at EUR 60 million with the support of the EIB, Finnfund, FMO, and the Church of Sweden.[36] After the first close, USAID provided a portfolio guarantee, which covers 50% of any losses at the portfolio level for a fund size of up to USD 133.8 million, to attract additional private capital to the fund. The fund had its final close in December 2015 at EUR 101 million, which included AXA Impact Management, and Credit Suisse (through a note issued to its private wealth clients).

At the time of writing, about two-thirds of the capital raised has been committed through seven investments. Investments are predominantly in the form of debt (through profit participating loans), although equity participation through warrants is considered on a case-by-case basis as well. Often, when the debt instrument is used, it contains an equity-like risk, due to the nature of the underlying investments and their exposure to performance risks of underlying activities; the debt features help to instill repayment discipline on investees and ensure that Althelia ranks ahead of founders in the case of liquidation.

TRANSACTION SUMMARY

Opportunity Type	Fund
Asset Class	Private debt and real assets
Investment Manager	Althelia Ecosphere
Location of Manager	Luxembourg and London
Opportunity Launch	2011 (1st close in 2013)
Target Sector	Agroforestry and sustainable land use
Target Geography	Africa, Asia and Latin America
Opportunity Duration	Closed-ended fund; 8 years with possible extension of 2 years
Fee Structure	Management fee and carried interest
Assets Under Management	EUR 101 million
Assets Deployed	~ EUR 70 million
Target Investment Size	USD 5 – 10 million
Instruments	Profit participating loan
Target IRR	In line with market rates
Investors in the Fund	EIB, Finnfund, FMO, Church of Sweden, Credit Suisse, AXA Impact Management, and others
Other Features	50% guarantee on a portfolio level
Fundraising Status	Opportunity closed, but likely the 2nd Climate Fund to be launched in 2017

[36] *Althelia Ecosphere Completes First Closing for Althelia Climate Fund with over EUR 60 million Raised*. FMO website. 12 June 2013.

One of the elements that make the Althelia Climate Fund unique is that most of its investees aim to generate returns from both agri-commodities (e.g. sustainable cocoa, beef, and coffee) and environmental services (e.g. carbon), with a balanced target on the portfolio level. This sets it apart from many other landscape investment funds that are either focused on the carbon aspect, or more commonly, the commodity aspect of the landscape.

RELEVANCE TO THE LANDSCAPE APPROACH[37]

Althelia's approach is a truly spatial or 'place-based' landscape approach, which perceives a landscape as a multi-functional spatial unit and capitalizes on this multi-functionality, that is, on the various goods and services that it provides. Althelia focuses on achieving complementarity between production and protection, and regards these as leverage points for investments. For each of its landscapes, Althelia designs an integrated investment model, based on a combination of goods (e.g. cocoa and coffee), and services (e.g. carbon sequestration and water retention). In this way, it combines the conservation of natural ecosystems with sustainable commercial activities, whilst supporting the livelihoods of traditional and migrant communities. Althelia's mission is to begin to reflect the value of natural capital, which can create new environmental assets, leading to more sustainable land use where production does not have to be at the expense of natural ecosystems. Althelia's investments therefore target the reduction of deforestation or degradation of natural habitats, the mitigation of climate change, the protection of biodiversity and the provision of a fair and sustainable living to rural communities simultaneously. Investing in sustainable land use generates the real assets with environmental assets, thus building multiple revenue streams which together generate positive social and environmental impacts.

Protection and production in and around Peru's national parks

An example of Althelia's work is its participation in a EUR 9.15 million investment programme in Madre de Dios, Peru, in the national reserves of Tambopata and Bahuaja-Sonene. Here, Althelia has not only invested in the long-term conservation of 570,000 hectares of natural forest in the two parks, but also in the improvement of land use in the 4,000 hectares of degraded land surrounding the parks. These areas are under threat of unsustainable agro-pastoral practices as well as illegal gold mining. Althelia provides financial resources to farmers to develop the sustainable use of these buffer zones through a transition from unsustainable agro-pastoralism to sustainable agroforestry. It also supports smallholder cooperatives to optimise harvesting, processing and commercialisation of cocoa, with the aim to produce at least 3,200 tonnes of certified deforestation-free organic and Fairtrade cocoa every year. Moreover, the project will result in avoiding the emission of 4 million tonnes of carbon over the seven year investment period validated under the Verified Carbon Standard (VCS) and the Carbon, Community and Biodiversity (CCB) Standards at the Gold level. Combining protection of pristine forest in combination with optimising sustainable production in its surrounding buffer zone will ensure the long-term financial and environmental sustainability of the landscape, its ecosystems and its population. The project is carried out in partnership with a Peruvian NGO Asociacion para la Investigacion y el Desarrollo Integral (AIDER) and the Peruvian government through SERNANP, the Peruvian Ministry of Environment's National Service for Natural Protected Areas.

Core to Althelia's model is the building of public-private partnerships, in which partners share responsibilities and benefits. To this end, collaboration with local governments is crucial to secure institutional support and allow for up-scaling of the lessons learned to higher levels of environmental policy making. Collaboration with local non-profit organizations is indispensable for having a direct presence in the landscape to ensure that projects are well aligned with a landscape's inhabitants, which are integral part of a project's activities. Working with local public and private parties enables Althelia to be actively involved in local processes of stakeholder engagement and spatial planning, and evidence-based measurement of social, environmental and economic impacts on the landscape. And finally, it allows Althelia to provide direct assistance to local stakeholders, to optimize its investments, and aggregate smaller local projects into a fund that can attract larger institutional capital.

[37] Sources: Althelia website www.althelia.com; interview with Edit Kiss, Global Landscape Forum 2014, available at https://www.youtube.com/watch?v=8VBFunicpE8; presentation of Sylvain Coupille, at Nijenrode Business School

Althelia can be considered a front-runner in landscape finance, as it actively participates in global networks such as the Global Landscape Forum and the Netherlands based BEE Platform, in their collective search to connect capital markets with sustainable landscape investments at scale.

INVESTMENT MANAGER

Althelia Ecosphere was co-founded by Sylvain Goupille and Christian del Valle, who are currently the Managing Partners of the firm. Although Althelia Ecosphere does not have a fund management track record prior to the Althelia Climate Fund, the co-founders and their team have significant expertise in the area of environmental finance and markets, carbon and conservation.

Sylvain Goupille has been involved in carbon finance since 1997 when he helped start the Climate Change advisory practice of PricewaterhouseCoopers. While at PricewaterhouseCoopers, he structured the European Carbon Fund, designed the European carbon registry Seringas, and organized one of the first emission trading simulations, amongst others. In 2005, he joined BNP Paribas Corporate and Investment Banking as Head of Carbon Finance, where he successfully developed the carbon business of the bank.

Christian del Valle also joined BNP Paribas in 2005, where he served as a Director of Environmental Markets and Forestry within the Corporate and Investment Banking division. Christian led BNP Paribas' movement into the Forest Carbon space. Amongst his achievements there was the execution of one of the first large private sector interventions in REDD+, through a project with Wildlife Works LLC that led to the creation of the Kasigau Corridor REDD+ Project in Kenya.

After a successful launch of its first fund in 2013, Althelia Ecosphere announced this year that it is launching the Sustainable Ocean Fund, which will focus on integrated coastal sustainability and near-shore fisheries in places like Belize, Bangladesh and Madagascar, as well as infrastructure and market access investments. Conservation International has again provided initial bridge funding in the form of a loan to launch the fund and, along with the Environmental Defense Fund, will provide scientific and technical expertise as strategic partners.[38] Althelia Ecosphere is also launching the Madagascar Sustainable Landscape Fund with the support of the Green Climate Fund, EIB and Conservation International, which will focus on renewable energy, access to energy, and sustainable agriculture investments in Madagascar.

STRUCTURE OF THE OPPORTUNITY

The Althelia Climate Fund is an 8-year closed-ended fund, and is structured as a Luxembourg SICAV-SIF. It is managed by its Luxembourg-based General Partner, Althelia Climate Fund GP s.ar.l, and advised by its London-based subsidiary, Ecosphere Capital Partners LLP.

In May 2014, Althelia secured a portfolio guarantee of up to USD 133.8 million from USAID.[39] Under this agreement, USAID guarantees 50% of the loans outstanding to borrowers. The 50% guarantee is at the portfolio level, and only kicks in if the portfolio looses money. Investors are, therefore, guaranteed the payback of at least half of their money. Given the nature of the investments, the loss of over 50% of the value of the fund is deemed unlikely, but is does have value from the point of view of marketing the fund. In addition, going through the USAID due diligence process gives investor comfort.

Althelia has also developed strong partnerships for generation of deal flow and capacity building support on the ground. This includes links with non-profit organizations such as Conservation International and the Netherlands Development Organization SNV.

[38] Bank, David. *Is the Recovery of Wild Fisheries the New 'J-Curve' for Impact Investors?* The Huffington Post. 2 January 2016.
[39] *U.S. Government, Althelia Climate Fund mobilize $133.8 million for forest conservation and alternative livelihoods.* USAID website. 28 May 2014.

REVENUE MODEL

The goal is a roughly equal split between two revenue streams – sustainable commodities and environmental assets – but, in the early years, carbon credits may dominate, as organic and fair trade production systems are ramped up in and around the projects.

Sale of these carbon credits enables the fund to make an annual payout to investors and generate benefits for communities living nearby before the crops are ready for harvesting. Whilst performance of the wider carbon market has been disappointing, there is an international market for voluntary carbon credits, which allow companies to purchase carbon credits for various reasons, such as offsetting their carbon footprint and creating green products for their customers. Whilst this market is not very deep or liquid, it does provide an opportunity to monetize carbon assets.

Althelia has also developed mechanisms to reduce the risks associated with the revenue. Firstly, the fund operates a 'payment for performance' approach, so less than 30% of the total investment is allocated upfront to cover capital expenditure and initial operating costs. The balance is disbursed year-by-year, provided the projects' performance has been according to plans. Secondly, Althelia has launched Ecosphere+, which aims to build scale in the marketplace for environmental assets.[40] This initiative may reduce some of the risks related to the off-take of carbon from Althelia Climate Fund's other investments.

IMPACT

Althelia has seven impact themes for which it will track impact over the course of the fund's life, which are: climate, species, ecosystems, livelihoods, inclusiveness, sustainable enterprise and fair economic return.[41]

As an expression of its commitment to environmental, social and governance (ESG) standards and portfolio performance, Althelia has worked with investors and non-profit partners to design a proprietary ESG policy and management system, incorporating the IFC's Performance Standards on Environmental and Social Sustainability and the EIB Statement of Environmental and Social Principles and Standards. Landuse-based emissions reductions financed by the fund will also be validated and verified to the Climate Community and Biodiversity Standards, using the Gold Level of the Standards for projects delivering smallholder/community-led equitable benefits and exceptional biodiversity benefits, as appropriate.

Althelia investments are tailored to meet the requirements of corporate partners seeking to address sustainability of their supply chains through the utilization of agricultural produce and other natural resources that are certified as high ESG and 'zero-deforestation'. Althelia also employs the most rigorous carbon accounting standards, utilizing the Verified Carbon Standard's protocols for Agriculture, Forestry and Other Land Use sectors, and works to ensure that its investments are developed in such a way as to be eligible for recognition within jurisdictional (subnational and national) REDD+ programs that are under development, and where appropriate.[42]

FINANCIAL PERFORMANCE

The fund is expected to make market-rate returns, meaning there should be no compromise on financial performance in return for the social and environmental benefits delivered.[43]

[40] Senior Oil & Gas Executive Lisa Walker joins Althelia Ecosphere to head up new environment and climate venture. Press release from Althelia Ecosphere and Ecosphere+. 12 September 2016.
[41] Althelia website. Link: https://althelia.com/
[42] *Althelia Ecosphere Completes First Closing for Althelia Climate Fund with over EUR 60 million Raised*. FMO website. 12 June 2013.
[43] *Sustainable Forestry: Credit Suisse/ Althelia Ecosphere's Nature Conservancy* Notes. Environmental Finance. 1 April 2015.

UNDERLYING INVESTMENTS

Name of Investment	Location of Investment	Size of Investment commitment	Main focus of Investee
Taita Hills Conservation & Sustainable Land Use Project	Taita Hills, South East Kenya	USD 10 million	Production and sale of sustainable charcoal, and related carbon offsets
Tambopata – Bahuaja REDD+ and Agroforestry Project	Madre de Dios, Peru	EUR 5million	Production of certified, zero-deforestation, organic and Fair trade cocoa
Cordillera Azul National Park REDD+ Project	Cordilera National Park, Peru	EUR 8.5 million	Sustainable agriculture and stabilization of land use in the buffer zone in partnership with farmers' cocoa and coffee cooperatives
Guatemalan Caribbean	Izabal, Guatemalan Caribbean	EUR 10.2 million	Reduce deforestation and improve livelihoods across the region
Novo Campo Programme for Sustainable Cattle Ranching in the Amazon	Alta Forest, Brazil	EUR 11.5 million	Improve agricultural practices, and help produce traceable zero-deforestation beef

LESSONS LEARNED

Lessons for Entrepreneurs / Fund Initiators

Blended structures can be used to attract private capital: The Althelia Climate Fund demonstrates how a 50% portfolio guarantee from USAID can be used as an effective tool to attract additional private, impact-oriented capital from private institutions, such as AXA Impact Management and the Church of Sweden. While there is only a small chance that the portfolio guarantee will be called upon, it does provide some measure of confidence to investors that at least half of their capital will be returned in the worst-case scenario. Especially for a first-time fund manager, a portfolio guarantee can be effective to reduce some of the perceived risks. A more tailored instrument could be a guarantee that is structured as a first loss guarantee, which could reduce the risk on the return profile of the fund and therefore could be more attractive for private investors than a pure downside protection.

Lessons for Investors

Multiple revenue streams can be generated from the landscape: Althelia Ecosphere is a pioneer in landscape finance, aiming to prove that the carbon markets provide an under-tapped revenue source for landscape investments and that carbon finance can be catalytic in land use investment decisions. The fund manager aims to launch multiple similar funds in the near future and position itself as one of the leading financiers of businesses with a landscape approach, whether on land or in the sea. Some flexibility around asset classes and sectors may be required to finance such crosscutting fund models.

Lessons for Government

Incentives to develop environmental credit markets could enhance the success of landscape initiatives: The further development of carbon markets can significantly enhance the return potential of landscape projects and funds. Currently, it is difficult for investors and fund managers to rely on such returns, but with government support to enhance such markets, investors can start to gain more confidence that such returns can be realized. Althelia is developing its own activity to support the market and to develop potential buyers of the credits, but further support from the government could be very beneficial for their and others' investment activities in the landscape.

5.3 Ecosystem Investment Partners II

OPPORTUNITY OVERVIEW

Ecosystem Investment Partners (EIP) II is a closed-ended private equity fund that delivers restoration and conservation at scale by capitalizing on land-based environmental offset markets.

"No net loss" regulations, specific to the United States, require negative impacts of development projects to be offset. Development companies have little experience in, or appetite for, offsetting these negative impacts through their own restoration activities, and thus they can buy mitigation credits from specialized firms such as EIP. EIP II acquires ecologically significant land, in the range of 1,000 – 30,000 acres, with important conservation potential to carry out restoration of wetlands, streams and habitats.

Founded in 2006, EIP raised its first USD 26 million fund in 2008. In July 2012, EIP was successful in closing its second fund at USD 181 million, more than USD 30 million above its target of USD 150 million.[44] Its most recent fund closed in February 2016 with commitments of USD 303 million, by far exceeding its target of USD 200 million.[45]

The fund manager has been successful in attracting institutional investors, such as pension funds and endowments, with what the fund's Managing Partner refers to as "risk-adjusted, competitive returns."[46] This comes after many years of awareness building and education amongst institutional investors about the potential of mitigation banking and conservation. It is a great example of how environmental markets, created and enabled by government policy, can offer attractive investment opportunities at scale.

TRANSACTION SUMMARY

Opportunity Type	Fund
Asset Class	Real assets
Investment Manager	Ecosystem Investment Partners
Location of Manager	United States
Opportunity Launch	2012
Target Sector	Wetlands and stream restoration
Target Geography	United States
Opportunity Duration	12 years
Fee Structure	Not disclosed
Assets Under Management	USD 181 million
Assets Deployed	USD 181 million
Target Investment Size	USD 10 - 30 million
Instruments	Environmental restoration credits, mitigation banks
Target IRR	Risk-adjusted, competitive returns
Investors in the Fund	New Mexico Educational Retirement Fund, Lincoln Institute of Land Policy Endowment, KL Felicitas Foundation, family offices, high net worth individuals, and European and United States pension plans
Other Features	N/A
Fundraising Status	Opportunity closed

44 Merchant, Swamp. *Well Deserved: Ecosystem Investment Partners raises $180 million for banking mitigation.* Restoration Systems. 18 July, 2012.
45 *Ecosystem Investment Partners Closes Fund III Above $200 Million Target.* Venture Capital Post. 22 February, 2016.
46 Schwartz, John. *Envisioning Profit in Environmental Good Works.* The New York Times. 12 July, 2014

RELEVANCE TO THE LANDSCAPE [47]

EIP adheres to an ecosystem-based approach to landscape finance. Managing 12 mitigation banks throughout the United States (from its first two funds), it has a geographically and ecologically diversified portfolio. EIP works closely with public agencies, non-profit organizations and the landscape's inhabitants to ensure responsible stewardship of a landscape's resource base, as well as its people.

Mitigation banking is accomplished through restoration and protection of wetlands, streams and habitat that offset the negative impacts of a particular development in an area nearby (e.g. the same watershed). Wetland mitigation banking has been particularly successful in the United States, where it has been around for over 30 years as a result of the Clean Water Act (1972).

Mitigation banking is often quoted as an effective vehicle for landscape finance. Over time, its emphasis shifted from predominantly wetlands restoration to more general ecosystem and landscape restoration. It offers the opportunity for a landscape to be subject to a mechanism where buyers and sellers exchange credits within the boundaries of the landscape. A 'credit' equates to a unit of functioning (wet)land, to be determined by the area, its location, and its functional value. Putting a price to the ecosystem services provided by (wet)lands has created an effective way to internalize what previously were considered economic externalities. To earn a credit, a company or state entity must provide demonstrable ecological uplift, permanent protection (for example through a conservation easement) and financial assurances. Mitigation banking can be considered one of the most mature ecosystem markets, as it demonstrates how government policy can effectively mobilise private capital at scale to meet environmental, social and economic demands. It is a market of growing significance, as the asset class has increased by over 1,000% in the United States since 1995.

Collectively restoring the Sax-Zim Bog landscape in Minnesota

Minnesota is a wet state, with over 10,000 lakes and millions of acres of wetlands. The Sax-Zim Bog landscape in particular contains large areas of degraded wetlands, held under fragmented and legally complex land tenure arrangements, leading to a landscape with highly fragmented ecosystems. But altogether, the area is of high ecosystem value, as Sax-Zim Bog is one of the great bird habitats in North America. This is why EIP set up the Sax-Zim Bog Mitigation Bank, which is one of the largest mitigation banks in the United States. Demand for mitigation for infrastructure, road, mining and energy development is now paying for the restoration of over 25,000 acres of the Sax-Zim Bog through EIP's mitigation bank. Currently, EIP is working with counties and communities to increase their role in the long-term management of the Sax-Zim Bog, showing that a large landscape can be protected and restored without any public money.

Mitigation banks usually provide greater benefits than on-site or small parcel mitigation efforts, as they are able to restore larger landscapes, and can thus provide superior ecosystem services at a reduced cost. EIP has strong expertise in site selection and financial management, which allows for effective restoration at a meaningful scale.

INVESTMENT MANAGER

EIP is a Baltimore-based firm founded in 2006 by Nick Dilks and the late Fred Danforth. After retiring from Capital Resource Partners, an investment firm he helped found, Fred Danforth purchased and restored a Montana ranch. The ranch restoration kick-started his fascination with business models that could generate conservation and restoration at scale, recognizing a missing link between investors and land conservation. He was committed to showing that investment in land restoration and conservation can generate market rate returns, and believed that if you could show good returns, the availability of capital would be limitless.

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[47] Sources: New Forests Sustainability Report 2014-2015, and New forests – Investing in Forest Restoration and Conservation in Tropical Asia 1, 2016, and New Forests Briefing note for forestry investors based on the proceedings of the 2nd Asia-Pacific Rainforest Summit 2016 , all available at https://www.newforests.com.au/; Environmental Finance, 18 December 2015 and Environmental Finance, 23 March 2016, available at https://www.environmental-finance.com/content/deals-of-the-year/sustainable-forestry-2016-new-forests-and-sampoerna-agro.html; Source: Interview with Steve Hobbs, Minnesota State Director, Conservation Acquisition, at http://www.conservationfund.org/face-of-this-place/steve-hobbs

EIP is managed by a dedicated team of financial and environmental professionals with a strong track record in both conservation and finance. Nick Dilks, Managing Partner, worked for 10 years for The Conservation Fund, an organization that was whole dependent on philanthropic funding, and was attracted to Danforth's vision of "limitless capital". Heath Rushing, Managing Director, has over 20 years of experience investing in natural resource real estate and conservation. As a whole, the ecologically-minded team offers over 96 years of experience in private equity fund management, mitigation banking, rural real estate investing, ecosystem restoration, environmental policy, regulatory permitting and land-based environmental offset (LEO) markets. Additionally, EIP has assembled an independent advisory board that is made up of professionals with strong conservation and business backgrounds.

EIP works closely with key government natural resource agencies and non-profit organizations to oversee responsible stewardship of land and water resources, and incorporates an array of stakeholders in its design and implementation of conservation projects.

STRUCTURE OF THE OPPORTUNITY

EIP II is a closed-ended private equity fund with a 12-year duration. Its structure is typical of a traditional private equity fund with Limited and General Partners. The fund structure was purposefully simple so as not to make the work of EIP seem esoteric. While the free structure and minimum investment size are not disclosed, they is said to be typical of other mainstream private investment funds.

Investors in the second fund represent a wide range of types of organizations, from foundations, family offices and high net worth individuals to large endowments and pension plans.

REVENUE MODEL

With USD 181 million of private equity raised for Fund II, EIP is generating revenue for its investors through four steps:

1. **EIP acquires land** with degraded resources or habitats having exceptional conservation significance with potential to generate mitigation credits and environmental offsets. Value is created through restoration and mitigation bank entitlement, and land is permanently protected.
2. **EIP secures mitigation bank approval** efficiently and cost-effectively through expertise in site selection and bank entitlement.
3. **EIP restores properties** and permanently protects properties through perpetual conservation easements and deed restrictions. "Environmental restoration credits" are generated through the revival of degraded swamps, bogs, marshes or other habitat that has been acquired.
4. **EIP sells credits** including stream, endangered species and wetland banking credits that are generated through restoration projects to private permittees who must offset negative ecological impacts of development projects.

Targeted geographies for acquisitions tend to have extensive, significant and regulated natural resources, such as wetland, stream or endangered species. They are also typically in areas of active land development where demand for environmental offsets such as wetlands credits are higher and in areas where environmental laws are enforced, requiring that unavoidable ecological impacts are offset through high-quality mitigation.

The business model that makes use of mitigation credits to generate revenues hinges on the United States regulatory environment, specifically on the Clean Water Act of 1972, the Endangered Species Act of 1973, and the "No net loss" policy that became effective in 1989. The regulations provide incentives for developers to buy mitigation credits, which create the revenue streams that can attract institutional investors. Purchasers of credits include private developers and government agencies, like the Army Corps of Engineers. Projects for which offsets are required to touch many sectors, such as the transportation, real estate development, energy, and public infrastructure sectors.

As there is no price setting involved in the market for offsets, it is 100% market driven, meaning that negotiations occur for every credit sale. Negotiations may differ depending on the market; considerations during price negotiation include the availability of other projects in the same area and the ability of the potential buyer to do its own mitigation projects. A small percentage of the credits generated by restoration activities may become available upfront for having at least protected an area and committed to the restoration work. However, the majority of credits do not become accessible until the project has been completed and has proven successful over a period of five to ten years. Past "permit and impact" schemes involved a promise that the permittee would undertake restoration later, but this has a mixed track record and as of 2008 is the least-preferred mitigation option by federal resource agencies. Advanced mitigation credit is preferred because you can see the offset has already taken place. Investors see returns from the revenue generated by the sale of credits.

IMPACT

EIP delivers clear, measurable positive impacts to the environment, in addition to positively impacting the economies and societies where its mitigation banks operate. In terms of its primary impact focus — the environment — EIP has restored numerous acres of wetlands and streams, in addition to permanently protecting vulnerable areas and planting trees. The fund's activities are also important in recognizing the value of wetlands and swamps, which were previously seen having little to no economic value. Wetlands play a role in recharging aquifers, filters for polluted storm water and collection basins for floods, among other important ecological uses. In the table below you will find the EIP II track record of wetlands and streams restored and protected.

Wetlands	
Acres restored	30,667
Acres under construction	1,345
Additional acres to be restored	11,930
Streams	
Linear Feet Restored	293,215
Linear Feet Under Construction	194,251
Additional Linear Feet to be Restored	147,675

Aside from its environmental contributions, EIP generates social benefits such as job creation. Large-scale restoration projects require many laborers for tasks such as earth moving, tree planting, and wildlife management, particularly in areas where there has been a lot of displacement from other industries, such as mining. For example, a stream restoration project in Southern West Virginia hired community members coming out of the coalmines for long-term monitoring and management jobs who could apply their mining skills to restoration.

PERFORMANCE

EIP generates risk-adjusted, competitive returns which Managing Partner Nick Dilks states "are attractive given the need for what we generate." There are no implicit financial return sacrifices made in EIP's generation of environmental assets.

In terms of capital raising, EIP has over-performed, exceeding its target of USD 150 million for Fund II. While Nick Dilks cited 270 meetings in 2.5 years to raise Fund II, the raise for Fund III that closed four years later was faster and oversubscribed by USD 103 million.

"I think we're probably at a breakaway point, if you will, in terms of institutional capital understanding of this space" – Late Managing Partner, Fred Danforth.

UNDERLYING INVESTMENT[5]

Name of Investment	Location of Investment	Size of Investment	Key partner(s)	Main focus of Investment
Restoration of land bridge in Louisiana Marshland	Chef Menteur Pass property near New Orleans, Louisiana, USA	16,000 acres	Not disclosed	Restoration of the land bridge whose wetlands separate Lake Pontchartrain and the Gulf of Mexico in order to provide a haven for wildlife, prevent the lake from becoming too salty, and protect residents from hurricanes
Watershed restoration in West Virginia	Tug Fork and Guyandotte River in West Virginia, USA	10,000 acres	Canaan Valley Institute (CVI); State of West Virginia	Restore watersheds in West Virginia along 50 miles of streams to reduce storm run-off and reconnect stream channels to their headheadwaters

LESSONS LEARNED

Lessons for Investors

Untapped investment opportunities: LEO markets can offer attractive investment opportunities. While government policy needs to be further developed globally to enable such markets, EIP demonstrates that once policy is in place, the investment opportunity can be very attractive at an institutional scale. As the global push for more environmental protection and restoration increases in strength, the amount of such opportunities are likely to increase.

Lessons for Entrepreneurs / Fund Initiators

Community partnerships are needed for successful landscape investments: Working with non-profit organizations such as the Conservation Fund and the Nature Conservancy offers a good division of labor, as the fund can bring in the capital, while partners are able to find the best sites and help the fund realize the full value of their investments.

The correct framing of an investment opportunity is critical to being able attract institutional capital: EIP has been able to attract commitments from a wide range of traditional, mainstream investors because it offers market-rate returns, not because the investors are driven by the environmental benefits but because EIP's product, environmental offset credits, are so valuable and sought after. The ability of EIP to absorb large amounts of capital and generate market-based returns lies in its structure as an asset management business; other mitigation banks do not typically take this market leaning, patient capital approach.

Lessons for Government

Solid, well-balanced regulation is needed to support the development of LEO markets: With Official Development Assistance drying up for governments globally, this fund demonstrates how the government can leverage policy (not just funding) to attract private capital for conservation and restoration efforts. Creating a market for environmental services can have large environmental impact, while allowing for appropriate land development, for decades and centuries to come.

5.4 New Forests' Tropical Asia Forest Fund

OPPORTUNITY OVERVIEW

Launched in 2012, the Tropical Asia Forest Fund is the first dedicated institutional timberland fund in Southeast Asia. The fund focuses on certified plantation forestry with an emphasis on technological and silvicultural improvements in primarily Malaysia, Indonesia, and Indochina (Vietnam, Laos, and Cambodia). The fund manager, New Forests, manages this fund out of its office in Singapore.

New Forests was established in 2005 in Australia, with a head office in Sydney, with the objective of developing an investment business focusing on sustainable forestry and environmental markets globally. New Forests now manages investments including more than 780,000 hectares of land, conservation projects, timber plantations, and associated natural vegetation, agriculture, and timber processing infrastructure. Investments under management and capital commitments total AUD 3.7 billion (USD 2.7 billion) and are spread across Australia, New Zealand, Southeast Asia, and the United States.

TRANSACTION SUMMARY

Opportunity Type	Fund
Asset Class	Real assets and private equity
Investment Manager	New Forests
Location of Manager	Australia
Opportunity Launch	2012
Target Sector	Forestry
Target Geography	Southeast Asia
Opportunity Duration	10-year closed ended
Fee Structure	Not disclosed
Assets Under Management	USD 170.7 million
Assets Deployed	Almost fully committed (last deal pending settlement)
Target Investment Size	USD 30 million
Instruments	Equity
Target IRR	14% - 16% real gross
Investors in the Fund	FMO, Finnfund, IFU, several European pension funds, one European and one American fund of funds
Other Features	N/A
Fundraising Status	Opportunity closed, but likely new Asia fund being launched in 2017

New Forests offers commingled funds and separate accounts for institutional investors. The majority of its clients are pension funds, but clients also include insurance companies, sovereign wealth funds, endowments, and family offices.

While mostly known for sustainable forestry, New Forests goes above and beyond the typical sustainability policies and takes a full landscape approach with its investments. The company not only actively promotes appropriate land use and planning, but also supports the provision of ecosystem services, implementation of good governance (including transparency and inclusiveness in decision-making of local stakeholders), and promotes shared prosperity through business practices that support local communities.

The Tropical Asia Forest Fund is in the process of making its third and final investment. The second investment of the fund, a large-scale rubber plantation in Indonesia, was recognized by the publication Environmental Finance as the Sustainable Forestry Deal of the Year 2016 for its large-scale approach to integrated landscape investment.[48]

RELEVANCE TO THE LANDSCAPE APPROACH[49]

The Tropical Asia Forest Fund adheres to a product-based approach to landscape finance. It invests in sustainable timber plantations and may include opportunities related to ecosystem restoration and protection, through engaging directly in the primary production at the base of the supply chain.

New Forests acknowledges that the management of forests has moved beyond forests towards a range of sustainable development issues, which demands active fund managers be able to navigate an increasingly complex operating environment with numerous stakeholders involved. As a response, New Forests has been continuously evolving its social and environmental guidelines to best meet the issues that present themselves in the landscape. The most recent version of this is the Sustainable Landscape Investment model, which encompasses six core themes, including productivity, land use planning, ecosystem services, shared prosperity, governance and risk management.

Every year, the company publishes detailed reports of how each of its funds and underlying investments are performing against the goals set for each of the themes. It also openly discusses some of the complex issues that arise at the landscape level and how it is looking to resolve those issues, for instance through active participation of local stakeholders. The fund manager is also keen to include ecosystem services more actively into its revenue model, but highlights that these markets are still underdeveloped in Asia. As such, it works with local governments and non-profits to help further develop those markets. In the United States, where California's carbon market has been operating for several years, New Forests has an active carbon investment program and also manages combined timber and carbon investments..

Sustainable Rubber production in Indonesia

In 2015, the Tropical Asia Forest Fund in joint venture with the Indonesian firm Sampoerna Agro invested in PT Hutan Ketapang Industri (HKI), a large-scale rubber plantation in Indonesia. This 100,000 ha plantation concession is located in Ketapang, West Kalimantan, which is a landscape dominated by monoculture oil palm plantations. The new rubber plantation aims not only at diversifying the landscape through expanding rubber production, but also by introducing conservation management areas throughout the plantation. HKI employs a 'landscape investment model', or a mosaic land use system which includes areas designated for rubber production, conservation set-asides, community forestry and peatland rehabilitation, seeking to create shared value for investors and local communities. New Forests and Sampoerna Agro envisage a landscape approach that optimises synergy between rubber production, conservation of remaining forest, and restoration of degraded land. Local communities are part of this process, through active consultation and engagement, emphasizing social and environmental outcomes along with financial gain.

[48] 2015 Sustainability Report. New Forests

[49] Sources: New Forests Sustainability Report 2014-2015, and New forests – Investing in Forest Restoration and Conservation in Tropical Asia 1, 2016, and New Forests Briefing note for forestry investors based on the proceedings of the 2nd Asia-Pacific Rainforest Summit 2016 , all available at https://www.newforests.com.au/; Environmental Finance, 18 December 2015 and Environmental Finance, 23 March 2016, available at https://www.environmental-finance.com/content/deals-of-the-year/sustainable-forestry-2016-new-forests-and-sampoerna-agro.html;

New Forests takes an active ownership approach in its investments to embed its sustainability policies and landscape agendas at the core of the underlying investments. In Asia, all investments have been made in the form of joint ventures, enabling the fund manager to embed its policies at the highest level of the firm and ensure that the policies are followed.

New Forests is a signatory and member of the PRI since 2010, and publishes its scores on its website each year. In 2016 it received a score of 30/30.[50] New Forests is also an active member of the 'Zero Deforestation Movement' and the Asia Pacific Rainforest Partnership, a private sector roundtable that was launched in December 2015 to foster private-public cooperation in forest conservation, climate mitigation, biodiversity conservation, and sustainable livelihoods.

INVESTMENT MANAGER

New Forests is headquartered in Sydney with an international presence that includes a group of nine (wholly-owned) subsidiary businesses and more than 50 employees across offices in Australia, New Zealand, Southeast Asia, and the United States. While operating as a single global company, each New Forests subsidiary contributes to a shared corporate business plan and strategy. In 2015, two new subsidiaries were launched in line with business development and investment strategy objectives.

Below is a summary of New Forests' funds and other investment products, based on assets under management and committed capital:

Australia and New Zealand	
Australia New Zealand Forest Fund	New Forests' first timberland fund closed in 2010. The fund is fully invested and has a portfolio of more than 330,000 hectares of Australian softwood and hardwood plantations, as well as the Timberlink Australia sawmilling, sales and distribution business.
Australia New Zealand Forest Fund II	New Forests' second round fund in Australia and New Zealand closed in 2014. The fund has a portfolio of hardwood and softwood assets and is expected to be fully invested by early 2017.
Australia New Zealand Forest Fund III	New Forests' third Australia-New Zealand timberland fund reached a close of AUD 663 million in late 2016, and is anticipated to continue the investment programs immediately following the completion of the predecessor fund.
Southeast Asia	
Tropical Asia Forest Fund	The first institutional investment fund dedicated to sustainable forestry in Southeast Asia closed in 2013. The fund is currently finalizing its third and final investment.
United States	
Eco Products Fund	This fund is co-managed with Equator LLC. The fund ahs invested in US-based migration banks, forest carbon offset projects and a biobank in Malaysia.
Forest Carbon Partners	Forest Carbon Partners finances and develops forest carbon offset projects for the California carbon market. It works with family, industrial and tribal landowners to create carbon offset projects that deliver real financial value – increasing and diversifying revenue for timberland owners.
Carbon Forestry	New Forests is actively investing in this strategy to manage forestry assets for both timber and carbon.

STRUCTURE OF THE OPPORTUNITY

New Forests Tropical Asia Forest Fund is a closed-ended, commingled fund with a 10-year fund life, with possibility of extension for up to three additional years. The fund held an initial close in June 2012 and final close in June 2013 with USD 170.7 million in capital commitments. The fund has nine Limited Partners, including development banks, pension funds, and funds of funds.

[50] PRI Assessment of New Forests: https://www.newforests.com.au/wp-content/uploads/2016/07/New-Forests-2016-PRI-Full-Assessment-Report.pdf

The fund's aim was to create a diversified portfolio of forestry assets across a limited number of tropical countries in the Asia Pacific region and to provide exposure to the higher quality sawlog markets and other forest product markets. The fund's commitment period completed in September 2016, with commitments made to three investments in three countries. The portfolio includes a diversity of market exposures across geography and markets, including timber products and rubber latex.

Tropical Asia Forest Fund Holdings Ltd, a wholly-owned subsidiary of the New Forests Group, is the General Partner. The fund is managed by New Forests Asset Management Pty Ltd, which provides the Investment Committee, back office, administrative and compliance functions. New Forests Asia (Singapore) Pte is engaged to provide acquisitions services and operational asset management, including asset and portfolio management.

REVENUE MODEL

The Tropical Asia Forest Fund's revenue model is predominantly based on two components: (i) income from cash yield and (ii) capital appreciation from biological growth. In terms of cash yield, it is mainly generated from timber and rubber sales, although it may also include income from environmental services such as carbon offsets, conservation funding and complementary land uses, such as agroforestry. At the same time, the trees grow and increase in size, making forests an appreciating asset. Currently, the Tropical Asia Forest Fund does not incorporate the value of environmental services into the asset value, although New Forests does incorporate this in regions where these environmental markets are more established.

The combination of these two revenue components, which is typical for forestry investments, results in low volatility. Timberland also has low correlation to other asset classes, in large part due to this combined return profile, which means it can improve the risk profile of a diversified portfolio. Thirdly, timberland has a positive correlation with inflation, because the use of timberland products tends to be correlated with economic growth. Thus, investment in timberland provides a low risk investment, with attractive and relatively stable returns that is desirable in a diversified portfolio.[51]

IMPACT

Since 2011, New Forests publishes annual sustainability reports to report on progress in the six impact themes:

1) Appropriate land use and **land use planning**
2) Improve both the biological and economic **productivity** of assets
3) Support the provision of **ecosystem services** like carbon storage and biodiversity conservation
4) Implement **good governance**, including openness to new ideas, transparency in decision-making, and accountability for decisions
5) **Risk management** and emphasizing long-term outcomes
6) Promote **shared prosperity** through business practices that support local communities

1) Appropriate land use and land use planning

New Forests takes into account the desirability and suitability for a given land use, such as plantation forestry, agriculture, community use, or conservation management, and considers the economic and social factors that may influence the management or that can be affected by the land use. This requires stakeholder engagement and may involve assessment of current and future stakeholder needs, resolution of land tenure uncertainties or conflicts, and identifying management models that support shared objectives. New Forests relies on the highest and best use analysis to support management decisions while also seeking to integrate conservation management and maintenance of High Conservation Values.

Specifically, as part of an investment by the Tropical Asia Forest Fund, the High Conservation Value areas and several forest types were included in conservation set asides demarcated as part of the transaction negotiation, ensuring that the zero deforestation goal is mapped and included into operational planning. The fund's shareholder rights include the ability to develop environmental markets projects through Hutan Ketapang Industri (the fund's second investment) on the conservation areas. In this way, the fund

[51] Return Characteristics of the Forestry Asset Class. New Forests.

has positioned the Hutan Ketapang Industri investment to comply with current best practice in zero deforestation as well as to have the possibility to develop revenue streams that will support ongoing management of conservation areas. In the table below, you will find some key metrics on land use planning of the Tropical Asia Forest Fund in 2015:

Metric	Result
Trees planted	1,177 ha
Ecological restoration management area	283 ha
Protected land area (total)	23,323 ha
Protected land area (permanent)	1,776 ha

2) Improve both the biological and economic productivity of assets

New Forests focuses on efficient, rational and strategic management of forests and land to bolster the productivity of its investments. The majority of its assets are timber plantations grown on sustainable harvest regimes that provide wood products that might otherwise come form native forests. As such, the timber plantations help alleviate pressure on the native ecosystems. Also, New Forests uses intensive plantation management to improve plantation yields, forest health and stability, while also taking into account the sustainability of the plantation system.

Some specific examples of productivity initiatives in the Tropical Asia Forest Fund include:

- *Improving degraded land and transitioning it back to productive uses*. The fund's investment in Hutan Ketapang Industri will include establishment of plantations on *Imperata* grassland, which is a modified ecosystem with very low productivity resulting from past deforestation and fire. By establishing new plantations on these degraded areas, the overall productivity of the area can be restored, offering both environmental and commercial benefits.
- *Aligning site selection, species selection, and appropriate management regimes*. The fund instigated a strategic shift in one of its investments away from *Acacia mangium*, which was suffering crop losses from Ceratocystis fungus, to *Eucalyptus pellita*. This will support intensified and more resilient production over the medium term.
- *Genetics and breeding programs for improved output, wood quality, and resilience.* In 2015, New Forests worked with Acacia Forest Industries to update tree nursery protocols as the business sought to increase nursery output while simultaneously improving seedling specs. The initial results from this ongoing effort have demonstrated better survival and improved early vigour in the plantation, which should support higher yields.

In the table below, you will find some key metrics on productivity of the Tropical Asia Forest Fund in 2015:

Metric	Result
Units/ volume sold (total)	238,392 tonnes of timber
Units/ volume sold (certified)	238,392 tonnes of timber

3) Support the provision of ecosystem services like carbon storage and biodiversity conservation

New Forests focuses on two key areas of ecosystem services that it believes are important material considerations across its investment programs: carbon and biodiversity. There is now an increasing recognition that market-based or price-based instruments will be a key part of supporting the conservation management of natural ecosystems such as forests. However, the pricing of such services is still emerging.

Carbon: New Forests views its climate change impact as being two-fold. First, the storage and sequestration of carbon in the forests it manages as timberland investments makes a contribution to reducing net greenhouse gas emissions. Second, forestry is increasingly seen as a key sector to replace fossil-based energy, fuels, and chemicals via bioenergy, biofuels, bio-plastics and biomaterials.

In 2015, the Tropical Asia Forest Fund experienced a net carbon loss in standing biomass, with Hijauan Bengkoka Plantations continuing to harvest the remainder of its plantation tree crop. Acacia Forest Industries has been replanting this area, and the second rotation is maturing, which has resulted in a modest net sequestration of 41,991 tCO_2e during 2015. The net change is somewhat lower than might have been expected due to revised yield tables in 2015, and in 2016 the carbon stocks are anticipated to increase based on expanded plantation area at Hutan Ketapang Industri

Biodiversity: In regard to biodiversity conservation, New Forests is committed to minimizing and avoiding any adverse wildlife impacts, and one of the more tangible facets of biodiversity in its investments is the wildlife habitat that can be found within the plantations and land that it manages. A biodiversity assessment has been completed for every plantation investment in New Forests' funds. Once species are identified, each investment company can then implement monitoring procedures. For instance, New Forests is monitoring a resident sun bear population at Acacia Forest Industries in the Bengkoka peninsula to help inform future research regarding the behavior of sun bears in and around the plantation and forest reserve.

Metric	Result
2014 MtCO_2e in plantation biomass	1.6
2015 MtCO_2e in plantation biomass	1.3
One-year change	-16.8%

4) Implement good governance, including openness to new ideas, transparency in decision-making, and accountability for decisions

New Forests' governance processes work across the business to promote ethical and responsible decision-making; recognize and manage risks; maintain fiscal responsibility; lay a solid foundation for management and oversight; and ensure the company makes timely and balanced disclosures.

New Forests also uses board seats to promote better corporate governance in the operating companies in which it invests and to support better governance of trust-owned assets. Because New Forests' investments include a variety of investment structures, ownership profiles, and risk exposures, it uses several mechanisms to address risk management and governance. For example, in Asia it has so far entered into partnerships where the fund is a partial shareholder in existing plantation businesses.

5) Risk management and emphasizing long-term outcomes rather than short-term gains

It is difficult to determine the direct benefits that come through avoided risks and equally or more difficult to capture the value created in terms of social and environmental impacts. New Forests' responsible investment approach supports ESG risk management by positioning its investments to capture value from environmental and social solutions rather than being exposed to risks from negative environmental and social impacts.

Key risks are monitored and reported to New Forests' Risk and Compliance Committee, which meets every two months. Throughout 2015, New Forests focused on implementing systems to support continual improvement in its risk management approach.

6) Promote shared prosperity through business practices that support local communities

Well-managed investments in forestry offer potential to benefit rural economies and align with the development objectives of local communities. However, there is also a range of issues of concern to local communities that must be managed when investing in forestry and conservation.

Forestry investments can directly support shared prosperity through growth in industry and employment. New Forests finds that in almost all cases there is opportunity to improve safe workplace practices and to develop a workforce able to support a growing and increasingly innovative forest industry. The table below reports on employment related to the operational management of the Tropical Asia Forest Fund's investments and does not include New Forests' staff.

Metric	Result
Permanent employees	224
Contract employees	401
Employees dedicated to social and environmental performance	18

FINANCIAL PERFORMANCE

Not Available

UNDERLYING INVESTMENTS

Name of Investment	Location of Investment	Size of Investment	Key partner(s)	Main focus of Investee
Hijauan Bengkoka Plantations and Acacia Forest Industries	Bengkoka Peninsula of Sabah, Malaysia	25,000 ha.	Sabah Forestry Development Authority (SAFODA)	Improve the quality of the timber plantation estate including through the right choice of plantation species and good execution of operations.
Hutan Ketapang Industri (HKI)	West Kalimantan, Indonesia	35% stake in HKI which manages a 100,150 hectare plantation	Major Indonesian conglomerate	Bringing ESG management to a large-scale rubber plantation through an integrated landscape approach

The third investment is currently being finalized, and thus is not yet reported. The investment is a hardwood plantation in Indochina, and includes an 85% stake with government as the remaining shareholder. The management strategy will emphasize improving productivity, developing processing capacity to add value, and re-invigorating community engagement with a focus on out-grower schemes and informed consent.

LESSONS LEARNED

Lessons for Investors

There are opportunities to invest in sustainable forestry funds that consider all aspects of the landscape: Fund managers are advancing their responsible investment policy (some faster than others) to account for the complex realities on the ground. New Forests is one of the most advanced fund managers in this area, having evolved its social and environmental guidelines to include all aspects of the landscape. It is also exceptional in its transparency – all its social and environmental reports are publicly available on its website for both investors and non-investors to view. New Forests believes that this makes business sense, and is looking to continue evolving its guidelines to become even more pro-active in all aspects of the landscape in its future funds.

Lessons for Entrepreneurs / Fund Initiators

First building a track record in a 'less risky' geography could help with raising funds in emerging markets: New Forests' first few funds were focused on Australia and New Zealand, which are seen as more mature markets by investors. It was not until the fund manager built up a track record in those geographies that it launched its first Asia fund. If it were not for the track record, it might have been way more difficult for them to secure USD 170.7 million for the Tropical Asia Forest Fund.

Clear messaging, transparency, and understanding of investors are critical to attracting institutional capital: New Forests has been able to able to attract significant institutional capital, not only because of its track record, but also because of its clear messaging. Its investment proposition fits neatly into an asset class (real assets) and a sector (forestry), and this focus is clearly communicated to investors. The transparency on social and environmental reporting on all aspects of the landscape is just seen as an added benefit of investing in the fund by most of its investors.

6 Conclusions and Recommendations

Enclude's analysis across 87 landscape investment opportunities revealed that attractive investment opportunities do exist, though few have achieved sufficient scale to be interesting to institutional investors. Nevertheless, lessons learned from both successes and failures in landscape finance lend themselves to recommendations for both building a more enabling environment for landscape investment, and structuring more attractive deals for institutional investors. Based on the findings from the study, Enclude has identified recommendations for entrepreneurs/ fund initiators, government, and investors who wish to encourage more institutional investment in landscape initiatives. We would like to highlight that many of these recommendations apply for impact investments in general.

No matter what kind of stakeholder you are, there is ultimately a need for:

1. **More players**: Landscape investments are predominantly promoted by non-profits, which do not have access to finance at scale. There is a need to get more companies, governments, development finance institutions and institutional investors on board.

2. **More examples:** Examples of successful landscape initiatives are needed to create the required track record. To get institutional investors on board more successful examples at scale are required. It will be good to make the sharing of lessons learned and good example part of technical assistance facilities.

3. **Enhanced awareness and openness**: There is a need on the side of landscape actors to be more aware of the rules of the game in the financial world, and a need on the side of investors to be more open to the social and environmental realities of landscapes in emerging markets.

Entrepreneurs / Fund Initiators:

4. **Clear communication of asset class:** Opportunities do not always fit neatly into a particular asset class or a particular sector. This makes it difficult for institutional investors to find a place for the opportunity within their allocation framework, and often provides a hurdle to even start the due diligence process. Investment managers that are able to clearly communicate which 'bucket' they belong to have an easier time raising institutional funding.

5. **Understand investors and clearly market the opportunity:** Initiators of landscape investment opportunities should make sure they understand investors and how they are organised in order to efficiently market an investment opportunity. In particular, those seeking investment should be aware of an investor's expected risk/return profile, and the pockets from which the institution is able to invest. The proposition should fit within institutions' definitions of asset classes or sectors—definitions that may differ from investor to investor. It is important that messaging is clear and tailored for each investor. Lastly, those marketing investment opportunities should recognize that investors are not necessarily sympathetic to environmental causes; the reality that institutional investors expect to see market returns is more prevalent.

6. **Transparency and reporting:** Transparency and reporting on social and environmental performance seems to contribute to the success of investment opportunities. Clear messaging and communication of a strong track record are enhanced by quality social and environmental policies and reporting. Partnering with a respected third party to perform monitoring tasks or adhering to well-known standards can signal credibility.

7. **Strategic partnerships:** Strategic partnerships can strengthen adherence to the landscape approach. In some cases, partners provide the social and environmental expertise surrounding the investments, as is the case with AATIF's engagement with ILO and UNEP. Other partnerships are formed for the purposes of providing technical expertise to investees to ensure inclusive and environmentally sound strategies are developed such as AAF's collaboration with Technoserve. Another type of strategic

partnership are partnerships with local leaders, cooperatives, social movements and NGOs that are in close contact with local communities. They can play an intermediating role to ensure that the voices of these local stakeholders are heard and taken into account and can help build the strength of many of these initiatives.

Government

8. **Regulations and incentives:** The introduction of targeted regulation and incentives to preserve nature can be an important stimulus for landscape investments. Governments can mandate, for example, that damage done to the environment must be compensated by equal support for restoration projects elsewhere. Such mandates create the demand for environmental credits. In addition to implementing strong environmental regulations, governments should consider what other actions they can take to incentivize participation in voluntary offset markets.

9. **Provision of grants to cover technical assistance and transaction costs:** Government grants can be important for the provision of technical assistance. Technical assistance can be instrumental to enable businesses to include local communities in a mutually beneficial way, avoid overexploitation of the environment and build the capacity of investees thereby lowering risks and contributing to increased revenue and long-term profitability of the company. It can be used to develop a joint vision between stakeholders, or to support the implementation of solution designs, like government policies that incentivize landscape investment, assistance to companies to manage out-grower schemes or technical training to improve farming or forestry methods. Technical assistance could also come in the form of monitoring and evaluation systems that are tailored to the investee and the local context. Finally, by helping to defray transaction costs, governments can help catalyse deal-flow in this space.

10. **Providing long-term and risk-tolerant capital:** Government provision of first-loss capital in blended finance facilities can be catalytic in de-risking investment opportunities in order to attract capital from private investors. For example, blended finance constructions used by AATIF and the Althelia Climate Fund have been successful in crowding in institutional investments.

Investors

11. **Support for proof of concept of smaller scale landscape initiatives:** There are many smaller scale landscape initiatives that need to be further tested and developed to be ready for larger amounts of capital. Anchor investors can be instrumental in proving a fund's ability to scale. Well-known investors with good reputations can also play a role in attracting early capital from others. Ecosystem Investment Partners has shown that institutional investors do come on board once a concept is proven, the asset class is clear and a certain scale is achieved.

12. **Flexibility in terms of asset class and sector focus:** If institutional investors want to increase their green portfolio, some flexibility in terms of asset class, sector focus, and minimum size of commitment should be considered. This is in recognition of the fact that many landscape investment opportunities are crosscutting in both asset class and sector focus.

Annex 1 Investment Opportunities in Landscape Financing

Basics							
Investment opportunity name	**Investment manager**	**Asset class**	**Sector focus**	**Geographic focus**	**Capital raised**	**Investment opportunity type**	**Status**
Australia New Zealand Forest Fund	NewForests	Real assets	Timberland	Australia and New Zealand	$ 355,000,000	Fund	
Australia New Zealand Forest Fund 2	NewForests	Real assets	Timberland	Australia and New Zealand	$ 512,000,000	Fund	
Tropical Asia Forest Fund	NewForests	Real assets; timberland	Timberlands: Sustainable tropical timberland plantations	Southeast Asia, with a primary focus on Malaysia, Indonesia, and Vietnam	$170,000,000	Fund	Launched 2012; Closed June 2013
Althelia Climate Fund	Althelia Ecosphere	Private equity	Sustainable land use, namely certified sustainable agriculture with landscape level benefits from ecosystem services	Global	$ 100,000,000	Fund	Fundraising, and investing
Conservation Forestry Fund II	Conservation Forestry	Private equity, Real Estate, Commodity	Natural resources and conservation (timberland)	United States	$358,100,000	Fund	
Moringa	Compagnie de Rothschild	Private equity	Sustainable Land Use (Agriculture or Forestry); Carbon & Environmental Commodities; Environmental Markets and Sustainable Real Assets; Employment Generation; Small Enterprises/SGBs; Access to Finance Specifically investing in non-fertile savannahs or eroded, compacted and damaged lands in Africa and Latin America.	Africa and South America	$92,000,000	Fund	Closed, investing
Africa Agriculture and Trade Investment Fund (AATIF)	Deutsche Asset Management	Fixed income	Agriculture (across the entire agricultural value chain)	Africa	$ 146,000,000	Fund	Fundraising, and investing
Ecosystem Investment Partners III	Ecosystem Investment Partners	Private equity	Wetlands, streams and trees.	United States	$3,010,000,000	Fund	
Root Capital Social Impact Funds	Root Capital	Fixed income (senior and subordinated debt)	Smallholder agriculture; Small and growing businesses (SGBs)	Latin America, Africa, Indonesia	$130,000,000	Fund	Open to investment; 1,917 investment to date
Conservation Forestry	Conservation	Private equity		United States	$129,700,000	Fund	

Investment opportunity name	Investment manager	Asset class	Sector focus	Geographic focus	Capital raised	Investment opportunity type	Status
Fund I	Forestry						
Conservation Forestry Fund III	Conservation Forestry	Private equity		United States	$159,300,000	Fund	
Ecosystem Investment Partners II	Ecosystem Investment Partners	Private equity	Wetlands, streams and trees.	United States	$181,000,000	Fund	
Green Bond (Waterobligatie)	Nederlandse Waterschapsbank (NWB)	Fixed income	(a) mitigation of climate change, being waterway management, (b) adaptation to climate change, meaning investments in climate-resilient growth (flood protection, other flood defenses and pumping stations) or (c) biodiversity projects which are related to water related biodiversity projects rather than directly climate related (i.e. sanitation and dredging of waterbeds, water treatment, transport and cleaning of wastewater and disposal of sewage sludge).	Netherlands	$2,700,000,000	Bond	
Livelihoods Fund for Family Farming (Livelihoods 3F)	Livelihoods Venture	Debt	Sustainable agriculture (smallholder farmers); Supply-chains	Africa, Asia, Latin America	$120,000,000	Fund	Launched February, 2015
Lyme Forest Fund III	Lyme Timber Company LP	Real assets	Forestland and rural real estate; sustainable timber	United States	$160,400,000	Fund	Closed - no longer investing; 12 investments
The Landscape Fund (TLF)	CIFOR and the Munden Project		Sustainable agriculture			Fund	Concept stage
Unlocking Forest Finance (UFF)	Global Canopy Programme	Fixed income	Protection of the tropical forests through activities across the supply chains, conservation, and livelihoods.	Brazil and Peru.		Bond	Concept stage
EcoEnterprises Fund I (Fondo EcoEmpresas)	JV of EcoEnterprises Fund and Inter-American Development Bank's Multilateral Investment Fund		Provides venture capital to small-scale and community-based companies (organic agriculture, NTFPs, sustainable forestry, ecotourism)	Latin America	$35,000,000	Fund	

Investment opportunity name	Investment manager	Asset class	Sector focus	Geographic focus	Capital raised	Investment opportunity type	Status
EcoEnterprises Partners Fund II	EcoEnterprises Capital Management	Private debt; absolute return / notes, private equity	Niches such as organic agriculture, non-timber forest products, sustainable forestry, or ecotourism		$ 35,000,000	Fund	
Lyme Forest Fund	Lyme Timber Company LP	Real assets	Forestland and rural real estate	United States	$190,600,000	Fund	
Silverlands Fund	SilverStreet	Private equity	Agriculture	Southern Africa: Malawi, Mozambique, South Africa, Tanzania, Uganda and Zambia	$ 450,000,000	Fund	
Global Energy Efficiency and Renewable Energy Fund (GEEREF)	GEEREF (supported by the European Investment Group)	Private equity	Renewable energy and energy efficiency projects	Africa, Asia, Latin America and the Caribbean	$253,000,000	Fund of funds	At the end of 2014 was invested in 6 funds
Green Bond – Made by KfW	KfW	Fixed income	Renewable energy, mostly in the area of: 1) Photovoltaic equipment as well as joint projects that combine the generation of electricity with energy storage and/or load management, 2) On-shore wind power plants and repowering measures, Hydro-electric power stations, 3) Equipment for the generation and use of biogas.		$1,700,000,000	Bond	Closed, and fully allocated
Africa Renewable Energy Fund (AREF)	Berkeley Energy	Private equity	Invests in small hydro, wind, geothermal, solar, stranded gas and biomass projects (grid-connect, development stage renewable energy projects)	Sub-Saharan Africa, excluding South Africa	$ 200,000,000	Fund	Fully capitalized as of September, 2015; Has been investing since March, 2014
Permian Global Fund	Permian Global		Restoration of tropical forest			Fund	
Sustainability Bonds	FMO	Fixed income	Renewable energy projects such as solar, wind, ocean, geothermal power, hydro and heat; Energy efficiency projects in buildings, public services, agriculture and industry and retrofit and improving of power plants and power infrastructure; Responsible agriculture, food production, forestry, transport and water projects (including biosphere conservation projects). Inclusive finance includes but is not limited to microfinance.		$1,140,000,000	Bond	Closed, and investing

Investment opportunity name	Investment manager	Asset class	Sector focus	Geographic focus	Capital raised	Investment opportunity type	Status
Terra Bella Fund SICAV-SIF (Farmers for Forests)	Terra Global Investment Management LLC	Private equity	Sustainable, local forest-linked agriculture	Developing countries: Latin America, Central America, South America, Africa, Asia	$40,000,000	Fund (SICAV-SIF)	Open - committed capital
Africa Sustainable Forestry Fund	Global Environment Fund	Private equity	GEF is focused on energy, environmental, and natural resources. This specific fund is focused on timber and forestry-related assets.	Sub-Saharan Africa	$ 160,000,000	Fund	Fund had final close, now fully invested
African Agriculture Fund	Phatisa Fund Managers	Private equity	AAF targets the full spectrum of businesses touching the food production value chain, including all major cereals, oils, proteins and their derivative products, from primary production, services, storage, fertilizers, seeds, supplies through to processing and branded consumer goods. Excludes non-food agriculture such as forestry.	Pan-Africa, with a focus on Sub-Saharan Africa	$ 264,000,000	Fund	Fund had final close, and investing
Climate Awareness Bonds	EIB	Fixed income	Renewable energy and energy efficiency such as wind, hydro, solar and geothermal energy production; district heating, co-generation, building insulation, energy loss reduction in transmission and distribution and equipment replacement with significant energy efficiency improvements.	Global	$14,600,000,000	Bond	Closed, and investing
EcoBusiness Fund	JV of Finance in Motion, KfW and Conservation International		Forestry, eco-tourism, aquaculture, and agriculture	Latin America and the Caribbean	$ 27,000,000	Fund	
Sustainable Ocean Fund	Althelia Ecosphere	Private equity; Real Assets	Aquaculture: marine and coastal enterprises	Latin America, Africa, Asia	Currently fundraising	Fund	Aiming for a first close during 2016
Agro-Ecological NZ Farmland Fund	Agro-Ecological Investment Management Ltd.	Timberlands & Agriculture; Real Assets	Organic agriculture: Transformation of conventionally managed farms into resilient, ecologically robust, certified organic production systems. In terms of farming activity, the fund has a focus on dairy, beef and sheep production	New Zealand		Fund	
AquaSpark	A Spark	Private equity	Sustainable aquaculture	Global	$ 10,000,000	Fund	Open-ended fund, so continuous fundraising, and investing

Investment opportunity name	Investment manager	Asset class	Sector focus	Geographic focus	Capital raised	Investment opportunity type	Status
Bunge Environmental Markets	Bunge	Private equity	Emissions reduction projects, sustainable land use, supply chain development & adaptation, sustainable livelihoods	Global		Company's project	N/A (financing comes from the company itself)
Commonland Fund			Large-scale landscape restoration	Global (incl. South Africa, Spain, Western Australia)			Pilot phase
D.C. Green Infrastructure Fund (District Stormwater LLC)	NatureVest and Encourage Capital		Development of green infrastructure projects on properties across the city that measurably reduce storm water run-off through proven distributed nature-based solutions.	United States; Washington DC (& regional waterways)	$1.7 million	LLC	
Fair Share Fund	Triodos Investment Management		Financial institutions that have sustainability as an objective; financial institution that offer special financial services to promote sustainable energy and sustainable agriculture		$328,000,000	Fund	Inception 2012; open-ended
Farmland LP	Farmland LP	Real estate, commodities, private equity	Sustainably managed organic farmland; Natural resources and conservation	Northern California and Oregon	$ 50,000,000	Company	
Global Environment Fund	Global Environment Fund	Private equity	Sustainable companies in agriculture, forestry, energy, manufacturing	Global	$1,000,000,000	Fund	
Hivos-Triodos Fund	Triodos Investment Management		Renewable energy and sustainable agriculture, as well as microfinance	Developing countries	$92,000,000	Fund	Closed, investing
SLM Australia Livestock Fund	SLM	Real assets; Timberland & Agriculture	Farmland, livestock	Australia	$ 57,000,000	Fund	First close in June, 2012; 15 investments to date
Voxtra East Africa Agribusiness Fund	Voxtra AS	Private equity / venture capital	Agriculture & Food; Aquaculture; Forestry; Value-chain; Access to Basic Services	East Africa, primarily Kenya, Tanzania, and Uganda as well as Ethiopia, Rwanda, Burundi, Malawi, Mozambique and Zambia	$ 13,300,000	Fund	Closed, still investing
Africa Sustainable Forestry Fund II	Global Environment Fund	Private equity	GEF is focused on energy, environmental, and natural resources. This specific fund is focused on timber and forestry-related assets	Sub-Saharan Africa	$ 30,000,000	Fund	Fundraising

Investment opportunity name	Investment manager	Asset class	Sector focus	Geographic focus	Capital raised	Investment opportunity type	Status
Arbaro Fund	JV of Finance in Motion and Unique	Private equity	Sustainable forestry	Africa, Latin America, Europe and China	$ 55,000,000	Fund	Fundraising
Australian Balanced Water Fund	NatureVest		Water	Australia	$ 20,000,000	Fund	
Gratitude Farmland Fund	Blackdirt Capital Management, LLC	Private equity	Agriculture	United States		Fund	
Land Degradation Neutrality Fund	Mirova	Private equity	Land rehabilitation		Currently fundraising	Fund	
Old Mutual African Agricultural Fund	UFF Management	Private equity; Real Assets; Timberland & Agriculture	Agriculture; Farmland	Africa	$45,000,000	Fund	Committed capital; still fund raising
African Agricultural Capital Fund	Pearl Capital Partners Ltd	Private equity	Food Products/Organics; Sustainable Consumer Products; Sustainable Land Use (Agriculture or Forestry); Environmental Markets and Sustainable Real Assets; Employment Generation; Small Enterprises/SGBs; Medium Enterprises; Access to Finance	East Africa	$ 25,000,000	Fund	Closed, and investing
Nisaba Impact Investing Fund for agribusiness	Louis Dreyfus and Bamboo Finance	Private equity	Agribusiness	Africa	Currently fundraising	Fund	
Olympus Capital Asia III	Olympus Capital Asia	Private equity	Agriculture	Pan-Asia	$750,000,000	Fund	
Conservation Note	NatureVest	Fixed income	Conservation projects, like protecting water sources, restoring wildlife habitats, and preserving working farms and ranches.	US and Canada	$ 16,000,000	Note	Fundraising
IDH ISLA	IDH		Making global commodity chains more sustainable			Project	Fundraising
Olympus Capital Asia Credit	Olympus Capital Asia	Private equity	Olympus Capital as a whole focuses on financing middle market companies; The Singapore office will support Olympus Capital Asia's private equity activities in: Agribusiness and Resources; Financial and Business Services; Environmental and Clean Energy	Asia		Fund	

Investment opportunity name	Investment manager	Asset class	Sector focus	Geographic focus	Capital raised	Investment opportunity type	Status
Renewable Energy Asia Fund I	Berkeley Energy	Private equity	Renewable energy; mainly in development stage projects, typically in wind, small hydro and geothermal but also in solar and biomass.	Asia, with a principal focus on the Philippines, India and Indonesia	$110,000,000	Fund	Closed, and fully deployed to 7 projects
TIAA-CREF Global Agriculture II	TIAA	Real assets; farmland	Sustainable agriculture (integrating environmental stewardship into investment approach)	North America, South America and Australia	$3,000,000,000	Fund	
TIAA-CREF Global Agriculture LLC	TIAA		Sustainable agriculture/ farmland	United States, Australia and Brazil	$2,000,000,000	Company	
Ag Real Value Fund	Teays River Investments	Private equity	Integrated agricultural assets	United States	$ 478,000,000	Fund	Closed
Asia Environmental Partners II	Olympus Capital Asia	Private equity		Pan-Asia	$300,000,000	Fund	Closed
Fund for Agricultural Finance in Nigeria (FAFIN)	Sahel Capital	Private equity	Agriculture; SMEs along the agricultural value chain; Intermediaries for on-lending to agricultural SMEs / small holder farmers	Nigeria	$ 34,000,000	Fund	
NCH Agribusiness Partners	NCH Capital		Agribusiness: A diversified portfolio of agricultural land and related businesses	Russia and the Ukraine	$1,200,000,000	Fund	
Olympus Capital Asia II	Olympus Capital Asia	Private equity	Agriculture	Pan-Asia	$194,000,000	Fund	
Renewable Energy Asia Fund II	Berkeley Energy	Private equity	Renewable energy; mainly in development stage projects, typically in wind, small hydro and geothermal but also in solar and biomass.	Asia, with a principal focus on the Philippines, India and Indonesia	$112,000,000	Fund	First close March 2016; a second close is expected at $150m with a final close bringing the fund to $250m later in the year
Sustainable cocoa in the Dominican Republic - ForestFinest Consulting	Nature Bank Asset Management	Private equity	Cocoa and carbon assets	Dominican Republic	Currently fundraising (looking for $10 mil)	Company	
Sveaskog (green bond)	Sveaskog AB	Fixed income	Agriculture/ forestry		$ 120,000,000	Bond	Closed, and investing
Evolution One Fund	Inspired Evolution	Private equity	Clean energy and environment industry (expansion stage companies prioritized)	Southern Africa		Fund	

Investment opportunity name	Investment manager	Asset class	Sector focus	Geographic focus	Capital raised	Investment opportunity type	Status
Global Timber Resources Fund	Greenwood Resources		Forestland and tree plantations	North America, Asia, Europe, Latin America	$670,000,000	Fund	
WestRock (green bond)		Fixed income	Agriculture/ forestry			Bond	
Asia Development Partners	Olympus Capital Asia	Private equity		Pan-Asia		Fund	Liquidated
Asia Development Partners II	Olympus Capital Asia	Private equity		Pan-Asia		Fund	Closed
Asia Development Partners III	Olympus Capital Asia	Private equity	Infrastructure and infrastructure-related companies. Its investments will include businesses operating in infrastructure sectors, including water and wastewater treatment, food infrastructure, renewable energy, transportation and facilitators of infrastructure.	Primarily in India, and could invest in other OPIC-eligible Asian countries		Fund	Closed
Asia Environmental Partners	Olympus Capital Asia	Private equity	Environment and clean energy	Pan-Asia	$ 250,000,000	Fund	Closed
Emerging Energy Latin America Fund II	Emerging Energy and Environment	Private equity	Renewable infrastructure investments, mainly companies within the energy related sectors of hydroelectricity, wind power generation, and solar energy	Latin America (Brazil, Mexico, Peru, Chile, and Columbia)		Fund	
Great Western Checkerboards	NatureVest			eastern Cascade Mountain Range of Washington and in the Blackfoot River Valley in Montana (United States)		Conservati on project	
MGM Sustainable Energy Fund	MGM INNOVA CAPITAL LLC	Private equity	Energy efficiency and renewable energy	Colombia, Mexico, Central America and the Caribbean region		Fund	
FIM Sustainable Timber & Energy LP	Forestry Investment Management (FIM)	Private equity	Sustainable timber		$177,000,000	Fund	
Quadia	Quadia	Private equity	Smart energy, biodiversity & conservation, sustainable consumption & product, health, housing, wealth creation	Global (45 countries developed and developing)	$150,000,000	Company (Investment Managemen t	Investing

Investment opportunity name	Investment manager	Asset class	Sector focus	Geographic focus	Capital raised	Investment opportunity type	Status
Armstrong South East Asia Clean Energy Fund	Armstrong Asset Management	Private equity	Renewable energy and resource efficiency	Southeast Asia, focusing particularly on Thailand, Philippines, Indonesia and Vietnam.	$ 130,000,000	Fund	
DI Frontier Market Energy & Carbon Fund	Frontier Investment Management	Private equity	Renewable energy (wind, solar and solar heating, hydro, biomass, waste to energy, geothermal), fuel switch and energy efficiency	Sub-Saharan Africa with a focus on East Africa, particularly Kenya and Uganda; Also Rwanda, South Africa and Tanzania	$67,000,000	Fund	
Seychelles Debt Swap	NatureVest / Nature Conservancy	Fixed income	Marine conservation; climate adaptation	Seychelles		Swap	
SolarArise	SolarArise	Project finance	Grid-connected solar PV	India		Company	
Caucasus Clean Energy Fund	Schulze Global Investments	Private equity	Renewable energy; especially hydropower plants	Republic of Georgia		Fund	Fundraising (target close Q2, 2016)

Annex 2 List of organisations interviewed

List of organisations interviewed

Althelia Ecosphere
APG
AXA Impact Management
Ceniarth
Christian Super
Deutsche Asset Management
Ecosystem Investment Partners
FMO
IUCN Netherlands
LPFN
New Forests
PGGM
RVO
The Nature Conservancy
The World Bank