

# Private funding is essential to leverage forest and landscape restoration at global scales

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# Private funding is essential to leverage forest and landscape restoration at global scales

Private-sector capital is needed to scale-up forest and landscape restoration initiatives globally. To ensure the delivery of social and environmental restoration objectives, investors need to be matched appropriately to different types of restoration projects, while policies need to realign investment incentives away from degradation-driving activities.

Sara Löfqvist and Jaboury Ghazoul

**F**orest and landscape restoration (FLR) has caught public and policy attention as a means to rehabilitate degraded ecosystems, recover biodiversity, sequester carbon, and alleviate poverty and hunger<sup>1</sup>. Fifty-seven countries, subnational governments and private enterprises have already committed over 170 million hectares for restoration as part of the Bonn Challenge, which aims to restore 350 million hectares within the next decade, and the United Nations General Assembly has declared 2021–2030 as the Decade on Ecosystem Restoration, with goals to scale-up the restoration of degraded ecosystems. One of the main challenges for delivering on these targets is mobilizing the estimated US\$36–49 billion annual funds needed for large-scale restoration interventions<sup>2</sup>. To achieve this, it is pivotal to understand where private investment potential for restoration lies, and how we can shift financial incentives from activities that drive degradation to those that support restoration.

## The funding challenge

FLR interventions include tree plantations, enrichment planting, agroforestry, integrating trees in agricultural landscapes and management for natural forest recovery<sup>1,3</sup>. In theory, each of these FLR options provides possibilities for economic, social and environmental returns on investment (ROI)<sup>4,5</sup>. Interest in the risk of climate change is also increasing among financial actors<sup>6</sup>. Most social and environmental benefits, including climate mitigation, biodiversity conservation and livelihood improvements, do not have an immediately intuitive business case, and so many types of investors are hesitant to explore investment options. These types of social and environmental benefits can, however, yield ROI indirectly by boosting brand image or enhancing resilience in supply chains. To scale-up

restoration, investments must be aligned with interventions to manage social, environmental and financial risks effectively, deliver direct and indirect financial ROI, and meet expectations of investors, project owners and other stakeholders. Mapping FLR opportunities is therefore not only a question of defining the environmental benefits of restoration but also requires inclusion of investor and stakeholder priorities, and matching risk exposure to risk acceptance.

The investor landscape is diverse, comprising conventional investors interested primarily in financial ROI, socially or environmentally orientated actors for which financial ROI is a negligible consideration, and impact investors that aim to address social and environmental challenges while generating financial profits (Fig. 1). The diversity of FLR strategies, and their portrayal as amenable and cost-effective mechanisms to deliver climate mitigation targets, has stimulated the development of innovative financing mechanisms and investment–implementation partnerships that remain largely experimental. The academic community has so far primarily focused on the environmental and social outcomes of FLR, but it is equally imperative to understand, monitor and evaluate the diverse investment opportunities through which FLR can be scaled-up and its long-term viability secured.

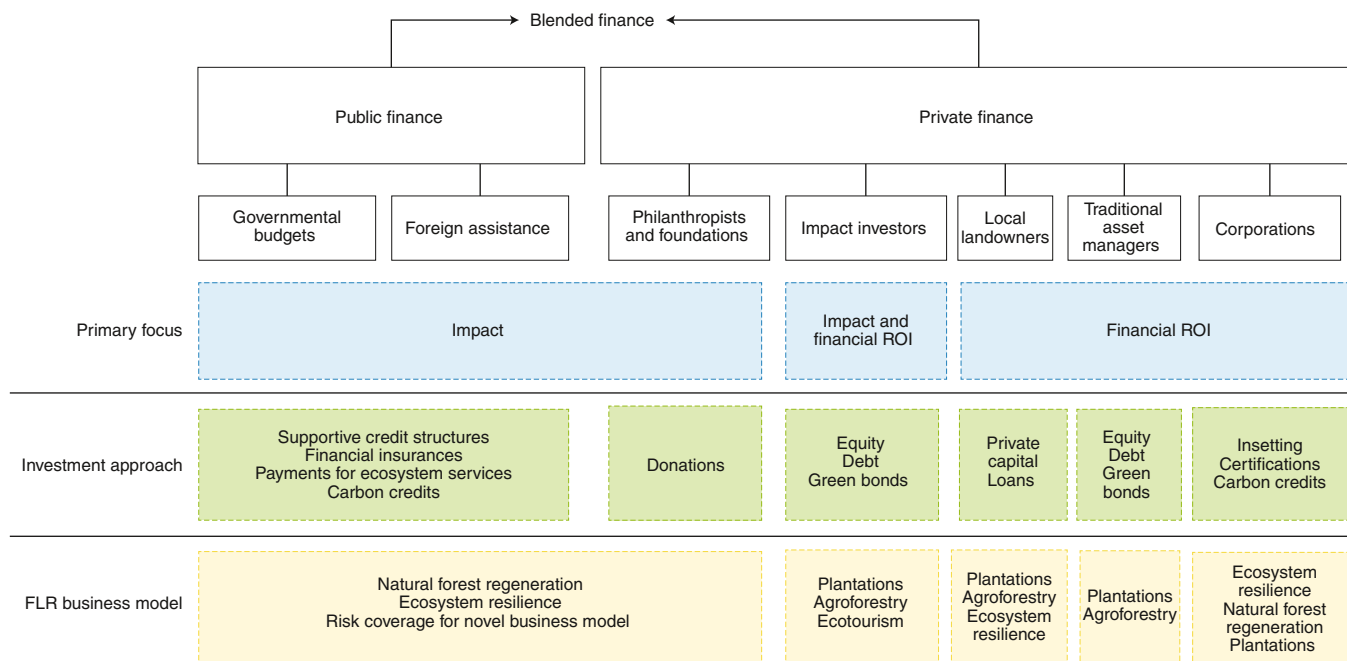
## Asset managers

Asset managers, who control large capital stocks, will be pivotal to achieving the global scales envisaged for FLR. Conventional asset managers are motivated primarily by financial ROI, which makes real and perceived financial risks the key barriers to their investment. For example, substantial pension funds are already invested in plantation forestry, a well-understood business model that delivers a low-risk, high-return asset, and has a promising

outlook as global timber demand continues to outpace supply. By contrast, natural forest regeneration, although generating a wide array of environmental and (arguably) social benefits, yields uncertain and only long-term financial returns<sup>4</sup>. Institutional investors such as pension funds might be willing to accept longer time horizons, but their risk aversion means they are rarely investment innovators. Risks can, however, be addressed through blended finance instruments, whereby public and philanthropic finance leverages private investments by taking on first-loss responsibility, or by providing insurance for losses related to currency fluctuations and legislative turbulence in target countries. National pension fund regulations that limit the overall share of foreign assets can generate opportunities for investments into national FLR programmes, particularly if supported by government guarantees to alleviate risk exposure. Impact investors might, for example, pay governments to provide guarantees that underwrite risk (effectively a form of insurance), which could in turn provide sufficient leverage to unlock much larger pension fund investments in national FLR schemes.

State-supported blended finance allocates public funds to restoration initiatives that benefit private actors. This could be politically sensitive, especially if it implies trade-offs with other uses for public funds (such as education, economic development, security and health). Yet blended finance is not dissimilar to government subsidies for agriculture or fossil fuel industries, and public benefits of FLR are arguably much greater. Nonetheless, there is the risk that public funds will be lost if invested in unsuccessful FLR projects, which could be politically sensitive.

Impact investors are the early adopters of FLR financing among asset managers. Sustainability is a core investment priority for this group, alongside financial ROI, and



**Fig. 1 | A typology of investment approaches and options for FLR.** While the figure provides an indicative alignment of business models and investment options, other alignments could also be envisaged.

although they currently hold a relatively small fraction of the total financial capital under asset management, they are important innovators in the FLR investment field. It is essential to capitalize on the new knowledge that such investments generate, to help build understanding of investment potentials in FLR, and to generate the confidence to encourage more risk-averse asset managers to invest.

### Corporations

Corporate concerns about branding are often sufficient to leverage large financial streams from marketing budgets<sup>7</sup>. Sustainable branding strategies aim to showcase sustainability rather than leveraging direct financial returns, which makes sustainability-oriented corporations suitable investors for FLR projects with visible and trackable sustainability outcomes. Large corporations are furthermore increasingly addressing sustainability concerns through ‘insetting’, by enhancing sustainability and resilience within their own supply chains<sup>8</sup>. This builds sustainable brand value while simultaneously reducing a variety of corporate risks associated with, or resulting from, unsustainable practices. Insurance agencies and financial institutions can play a role in leveraging this type of investments. Examples of insetting include investments for climate-resilient smallholder coffee production<sup>9</sup> or natural-forest regeneration in regions where raw

materials are sourced. The IKEA Group has, for example, pledged more than US\$1 billion for investments in sustainable forestry and raw materials to secure a stable supply of materials for their products<sup>10</sup>.

Such motivations also encourage the development of monitoring, reporting and verification systems, as corporations will need to track and demonstrate the positive impacts of their investments. An increased focus on monitoring and certification improves the transparency of impact pathways<sup>11</sup>, while also recognizing environmental and social benefits. Monitoring and reporting of FLR investment experiences raises awareness of the possibilities for achieving direct and indirect ROI, and tracking the financial, social and environmental performance of investments enhances investment credibility. Online platforms can publicize these experiences, and disseminate innovations and knowledge. Marketplaces, such as that supported by the OpenForests initiative (<http://marketplace.openforests.com>), can additionally connect projects to suitable investors. These platforms foster the creation of public–private partnerships, and facilitate the integration of both tradable and non-tradable (that is, social and environmental) values in FLR.

Carbon sequestration and storage has been a primary motivator of FLR, yet the underdeveloped carbon market and low price of carbon where markets do exist are

major barriers for corporate investments in carbon offsetting. Coordinated global governance is starting to incentivize private sector financing for carbon-orientated FLR. Increasing commitments by governments to curb emissions and mobilize mitigation, adaptation and resilience strategies through FLR acknowledges that such investments may be cheaper than the expected future economic costs of inaction, and recent ‘intended nationally determined contributions’, which define national emissions mitigation strategies, substantially favour land-based options to deliver emissions reduction targets. Similar approaches are needed to internalize biodiversity benefits in investment outlooks.

Debt instruments (loans and bonds) are best suited for projects with regular cash flows that allow regular loan repayments, such as sustainable agriculture, plantations or agroforestry. Green bonds function like traditional bonds but the investments must yield positive environmental impact. Green bonds for climate mitigation can raise substantial funding<sup>4</sup> (US\$167.6 billion globally in 2018<sup>12</sup>), but many FLR projects are too small to overcome the associated transaction costs<sup>4</sup>. Bundling several projects together into one investment object can improve the viability of this type of private investment, and diversify the associated risk. For example, a US\$95 million bond supported by partial credit guarantee from the United States Agency for International

Development has been raised to finance multiple sustainable rubber plantations on degraded lands across two Indonesian provinces<sup>13</sup>. Leveraging green bonds, however, depends on stable institutions and investment-ready FLR projects<sup>14</sup>.

### Local landowners

Local landowners often lack large financial capital, but they can make up for this in numbers. Individual restoration investments by many small-scale landowners can deliver landscape benefits that both improve livelihoods and environmental outcomes, such as enhanced pollination, pest control and soil fertility<sup>15,16</sup>. Secure land tenure by local landowners is pivotal to reduce investment risks and to incentivize long-term planning, yet land ownership in many tropical regions remains informal or contested<sup>17</sup>. Even with assured tenure, FLR investments may not materialize as perceived risks limit access to financial capital. Blended finance mechanisms can help, through protected loans, subsidies or microfinance, but transaction costs can impede implementation. Aggregating small landowners into cooperatives can help overcome transaction costs, but this usually requires investment by governments or non-governmental organizations (NGOs) to build the required capacity, skills and governance systems.

Scaling-up restoration practices across smallholder farmers will often require incentives or regulations, such as through state-funded payments for ecosystem services schemes<sup>18</sup>. Costa Rica has been a pioneer in this field, establishing a payments for ecosystem services scheme in the late 1990s that rewards landowners who protect environmental services through funds from taxes on fossil fuels and water use<sup>19</sup>. Innovative landscape certification or jurisdictional approaches can package multiple commodities and services emanating from a landscape into marketable investments, and thereby increase the chance that equitable benefits and opportunities are provided to many different land uses (and landowners) across a landscape<sup>20</sup>.

Connecting local landowners to investors through these mechanisms raises mutual awareness and knowledge on plausible pathways towards restoration, and builds capacity for FLR investments. It is important, however, to consider equity in decision-making, especially when farmers are integrated into supply chains. When private investment objectives drive restoration trajectories, there is an inherent risk that social and environmental objectives are marginalized. Safeguards and good governance structures must be established to

ensure that social and environmental justice are promoted. This depends, to some extent, on national legislation and environmental regulations, but there is also a role for public scrutiny and accountability through formal mechanisms such as certification systems or informally through non-governmental pressure groups and media attention.

### Linking investments and policy

Although market power can, in theory, be enough to attract private investors to FLR, most emerging economic activities need the support of the governments of both investor and target countries, especially in the initial stages of development<sup>7</sup>. We advocate that parties interested in FLR, including academics, devote more attention to understanding the investment environment, including how policy schemes and blended finance mechanisms can shift global financial incentives and flows away from degradation and towards restoration. Well-documented biophysical and social outcomes of FLR need to be better linked to investment suitability according to ROI, risks, transaction costs and investment readiness. It is also important to acknowledge that different sources of private finance might lead to different ecological trade-offs or synergies. Carbon offsetting schemes might fund natural forest regeneration, which enhances biodiversity, ecosystem services and a wider array of social benefits, or plantation forestry, which offers much less in the way of biodiversity or social benefits. Moreover, FLR funded through a corporate insetting scheme may be focused solely on enhancing those ecological functions and social benefits the corporation deem financially profitable. Consequently, other environmentally important restoration objectives, such as carbon storage, may be neglected.

Partnerships between governments, corporations, NGOs and individuals are key to overcoming existing barriers and creating new opportunities for FLR investments. Governments can support infrastructure development (such as nurseries) and underwrite mechanisms for risk coverage. Domestic policies in investor countries can foster investments in restoration and divestments from degradation driving activities abroad, such as through the sustainability-focused national pension funds in Norway<sup>21</sup>.

Governments should also level the playing field for FLR by abolishing perverse subsidies and policies that promote degradation and the loss of natural capital, such as those related to agricultural expansion. Regulatory anti-deforestation

policies in South America's soy-and-cattle frontier showcase the impact domestic policies can have in reducing deforestation<sup>22</sup>. Private and public sector investment partnerships in FLR should also mainstream sustainability concepts in economic sectors that are, currently, drivers of degradation. Rural landowners in São Paulo state, Brazil, for example, receive support from sugar mill companies to restore riparian forests on their properties, which allows companies to comply with legislation but also responds to market pressures from processors and retailers<sup>23</sup>.

If FLR is to be financed by private actors, safeguards are needed to ensure that investment outcomes are not skewed in favour of external investors. Such safeguards should include recognizing the rights of local communities and land managers to free, prior and informed consent. FLR interventions should also include clearly specified and tractable objectives that are subject to transparent accountability. Moreover, if investment flows for FLR disproportionately target countries with stable institutions and a favourable investment climate, then this risks leaving behind countries with weaker governance structures where the potential for land restoration, and its benefits, might be greatest. A strong public commitment to FLR needs to be retained to support the projects that private investors deem too risky. Governments need to provide supporting structures to leverage private investments for restoration — national restoration mandates without at least some public financial support are unlikely to be implemented.

Despite all of these challenges, conservation financing is growing at a rate of 26% annually<sup>24</sup>. Asset owners are increasingly demanding disclosure of environmental impacts, which is driving investments into conservation and FLR, and away from degradation-driving activities. Funding mechanisms for FLR are moving from niche to mainstream, and governments are developing policies that incentivize investments in FLR and ecosystem services. NGOs and development agencies are collaborating with businesses and private investors to unlock further financial opportunities. Enhanced evaluation of the range of investment outcomes will provide further impetus and confidence for governments, corporations and private actors to capitalize on FLR investments that benefit environment and society. □

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The article was conceptualized by J.G., the research was undertaken by S.L., and the paper was written and edited jointly by S.L. and J.G.

## Competing interests

The authors declare no competing interests.