Green Finance Institute

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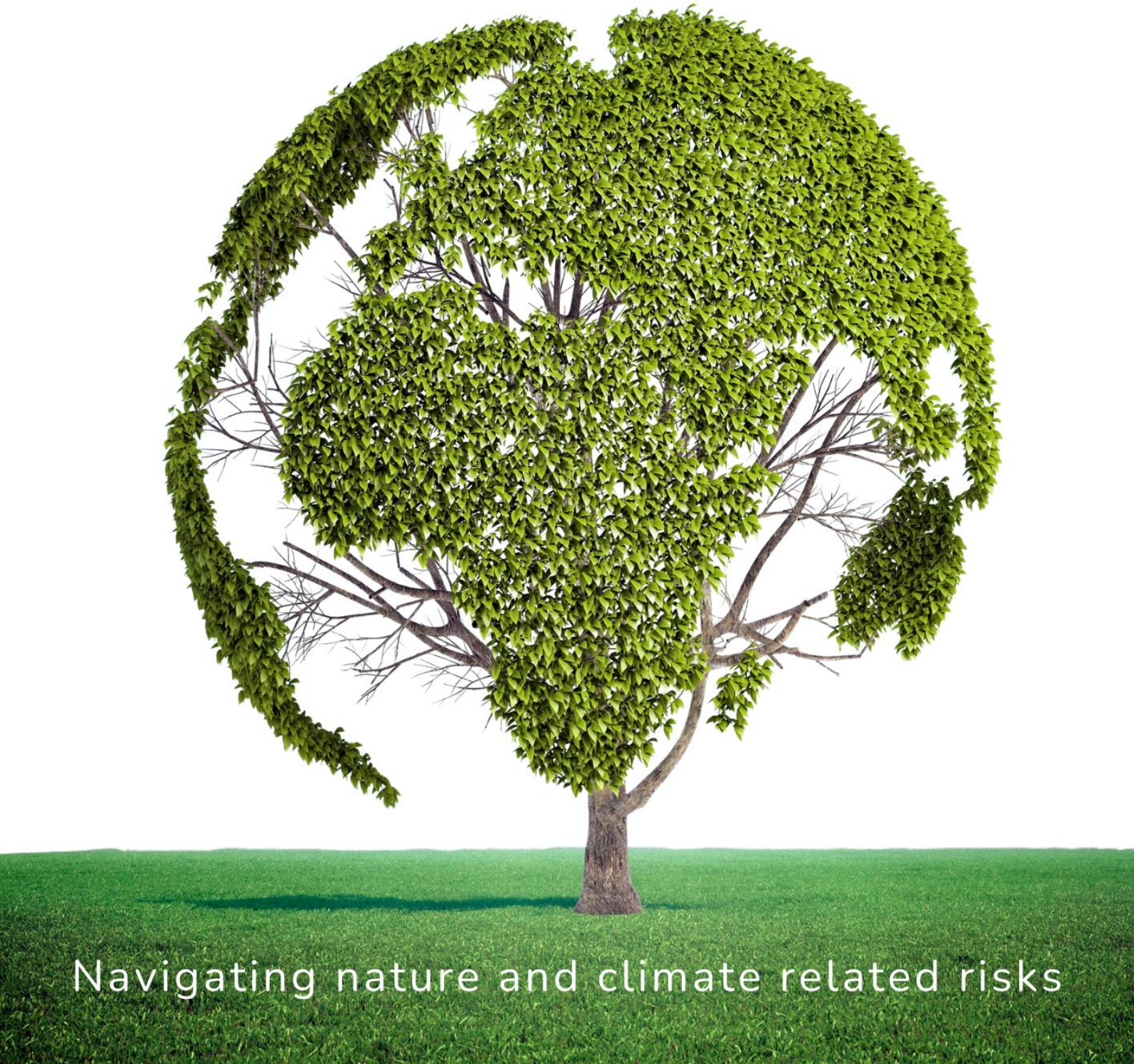

Navigating nature and climate related risks

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Are we irrevocably damaging our climate and depleting the world's natural resources? Sustainability in its broadest sense is defined as meeting the needs of the present without compromising the ability of future generations to meet their own needs. In financial services, our interpretation of sustainability is also about how durable, stable and resilient our system is. As the world's natural resources are depleted and our climate potentially irrevocably damaged, are we sowing the seeds of a future crash? This is of particular concern for the Bank of England, which monitors financial stability closely. This issue of GFQ is about how these worlds are destined to collide – how preserving our natural world will lead to better and more sustainable financial outcomes.

Our Nature-based Risk Quantification Report (RQR) looks at the impact that the degradation of our natural environment is having on the real economy. What it shows, is that nature-related risk is as big a threat to economic and financial stability, as Covid19 or the 2008 Financial Crisis. It is time, therefore, that both regulators and CEOs of financial institutions grip this issue, before it impacts the UK's bottom line. This is not about compliance and disclosure; it is about the solvency of our system.

We also look at adaptation in a similar vein. While we continue to grapple with the 'tragedy of the horizon', aspects of climate change have already arrived and we need to adapt. There are several unhelpful myths that we need to address about the viability of adaptation investment, including lack of revenue streams and overly long payback periods. What we do need to do is better enable adaptation to be accounted for, so that investment can flow. Our work chairing the adaptation committee of the Climate Financial Risk Forum sets out how to do this, including more policy guidance on what constitutes climate resilient infrastructure and what effective scenario modelling looks like.

A key aspect of resilience is its global import – the most exposed regions of our world are also the most vulnerable. So we also look at both global supply chains – the importance of securing access to critical resources for the transition – and how we can ensure developing markets have access to the capital they need for both adaptation and mitigation. We need secure supply chains for renewable energy infrastructure, but they cannot come at the expense of sustainable development. This means ensuring that for example, lithium mining and processing has access to Carbon Capture, Utilisation and Storage (CCUS), and that blended finance mobilises capital into adaptation and nature-based solutions.

Finally, across all of these issues, we look at regulation. How do we ensure that financial institutions act before it is too late? Disclosure is useful, but only if it changes behaviour. We need to ensure that corporate strategy is aligned to net zero - not just the ESG team. To do this we need to create the opportunity, but also anticipate the material risk of not aligning business practices to net zero. It is existential for our economic system and our planet.

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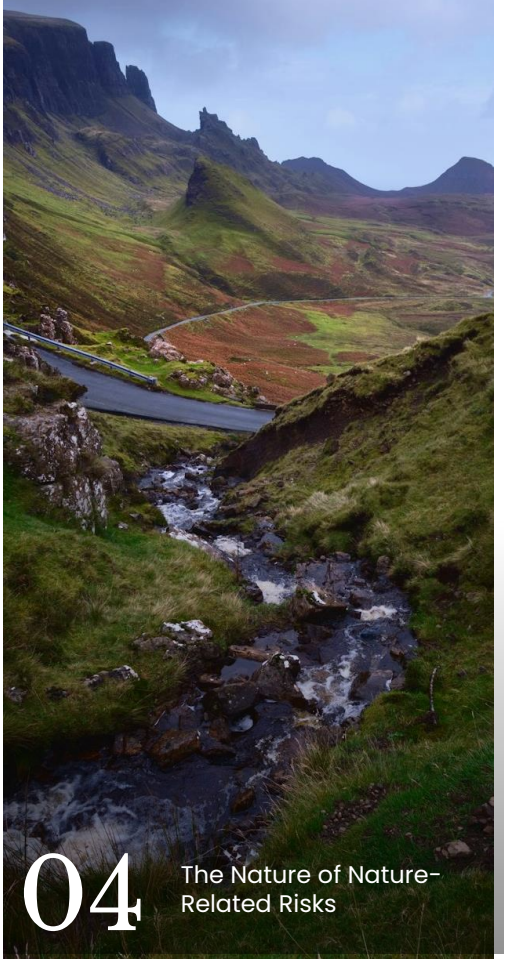
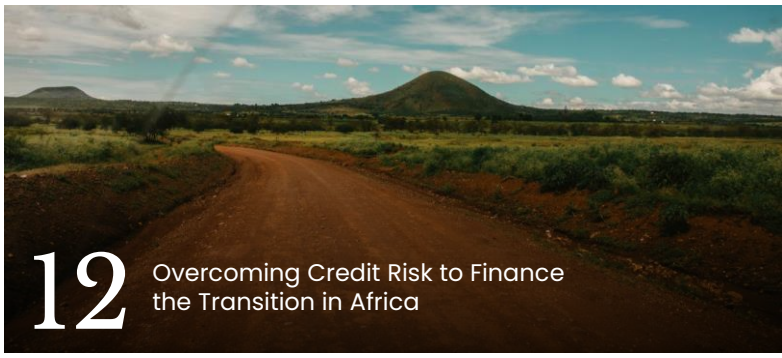




The Nature of Nature-Related Risks

For decades, we have seen how the continued degradation of nature harms our immediate environment. Perhaps we also now see how water pollution doesn't just destroy the natural environment we love, but how it negatively impacts fisheries and tourism. Or maybe we have read that the ongoing decline of soil health is lowering the resilience of our farms, as well as increasing prices and impacting food security. We are acutely aware that zoonotic diseases (like COVID-19), air pollution and reduced access to green spaces, are impacting our physical and mental health, reducing our workforce and putting a strain on our National Health Service. We see all of this, but what is being done to stop it?

Over the last five years, the Green Finance Institute (GFI) has been working to support the transition of the global economy to one that values and invests in the natural environment. However, to-date, there has been no value ascribed to the degree of risk that our economy and financial system face as a result of nature degradation.

In a first-of-its-kind analysis, the GFI, the Environmental Change Institute at the University of Oxford, University of Reading, UNEP-WCMC and the National Institute for Economic and Social Research, have quantified the impact that nature degradation, both domestically and internationally, could have on the UK's economy and financial sector.

The results are stark. Nature-related risks, driven by water shortages and pollution, soil health decline, and biodiversity loss, and compounded with inevitable shocks such as drought, may have a greater impact on our GDP than the Global Financial Crisis in 2008. As the risk of antimicrobial resistance-driven pandemics increases, we may even see a hit to our GDP greater than COVID-19.

Nature risks are on a par with climate risks, and the compounding, day-to-day degradation of nature is doing as much damage to our economy as an acute shock, like a drought or a pandemic.

Time for action

Armed with this evidence, there is now no excuse for delay. We must swiftly transition our economic and financial system to one that values and invests in our natural environment. To do so, we must first stop treating nature and climate as separate issues. One underpins the other. Even to regard climate and nature as 'two sides of the same coin' does not do justice to their degree of interrelatedness. An integrated and holistic approach is now needed.

At a practical level, we must use this evidence as a rallying call for central banks, supervisors, financial regulators and governments to assess if, and where, these nature-related risks may 'fall through the cracks' of current supervisory, regulatory and policy frameworks, and where this would necessitate action.

The analysis also indicates possible near-term adjustments in the values of domestic holdings of up to 4-5%, for particular sectors and banks, from nature-related risks alone. Financial institutions and corporates can take steps now to assess and manage nature-related financial risks in line with the Task Force for Nature-related Financial Disclosures (TNFD) framework, integrate nature into their transition plans, and develop technologies and business practices that reduce their impact on nature.

Secondly, we must recognise that these risks cannot be tackled by an individual country alone. Half of our nature-related financial risks are international. Our economic interrelatedness means that we must not only restore and protect nature here in the UK, but also work internationally, collaborating to meet the goals of the Global Biodiversity Framework.

Thirdly, we need to have real economy actors recognise and react to their nature-related risks. Financial institutions have an integral role to play by working with their clients to address nature-related risks, but corporates across sectors will be the key players in mobilising private sector finance for nature restoration and nature-positive outcomes.

We now have an opportunity to set a new course; one in which we value and invest in nature, and in doing so, create a future in which we can better ensure that our companies succeed, that our financial system remains strong, that our food system is secure, that our health and well-being is supported, and that our economy thrives.

For further information about this first of a kind analysis or to discuss the Taskforce for Nature-related Financial Disclosures which can be used to identify nature-related risks and opportunities, please reach out to tnfdncg@gfi.green.

Emerging Regulatory Risks

The green finance regulatory landscape is quickly evolving with a plethora of standards, rules, labels, and regulatory regimes – offering firms an opportunity to make their business more sustainable and lead the transition to a net zero economy.

Many of these seek to ensure that products, services and businesses that promote their green credentials are genuinely contributing positively to the environment. Their primary focus is to clamp down on greenwashing – the "practice of giving a false impression of the environmental impact of the benefits of a product which can mislead consumers."[1] While regulations are a critical part of ensuring effective governance and standards, and will ultimately accelerate the pace of change, they can also pose a regulatory risk to many firms, causing losses via fines and compliance costs as they adjust to new rules.

For example, from 31 May 2024, firms in the UK need to ensure their sustainability references are fair, clear and not misleading, and proportionate to the sustainability profile of the product and service as part of a new Financial Conduct Authority anti-greenwashing rule.[2] Similarly, at the beginning of this year, the European Parliament adopted a new law banning greenwashing and misleading product information.[3] Last year, South Korea was the first state in East Asia to draft a law that would fine firms for false or exaggerated green claims.[4] Across the world, the direction is clear – policies that cracks-down on misleading green credentials and claims are being implemented more regularly, across markets.

For firms and businesses to adapt to these emerging regulations, they will need two things: a clear, understanding what is and isn't considered green; and the right resources and guidance to be able to effectively comply with these regulations.

1. https://www.europarl.europa.eu/topics/en/article/20240111STO16722/stopping-greenwashing-how-the-eu-regulates-green-claims#:~:text=What%20is%20greenwashing%3F&text=To%20achieve%20that%2C%20the%20EU,the%20producer%20is%20offsetting%20emissions
2. https://www.fca.org.uk/publications/finalised-guidance/fg24-3-finalised-non-handbook-guidance-anti-greenwashing-rule#:~:text=We%20introduced%20the%20anti%2Dgreenwashing,making%20misleading%20sustainability%2Drelated%20claims.
3. https://www.europarl.europa.eu/news/en/press-room/20240112IPR16772/meps-adopt-new-law-banning-greenwashing-and-misleading-product-information
4. https://www.reuters.com/article/idUSL8N3672FQ/

The role of taxonomies

For anti-greenwashing regulations to be effective, businesses need long, loud and clear policy signals about what is and isn't considered green in each jurisdiction they operate in. This is one of the fundamental purposes of a green taxonomy. Taxonomies are useful in setting clear definitions of the economic activities and investments that can be defined as environmentally sustainable, and thus help channel capital towards net zero-aligned and resilient investment, as well as addressing greenwashing. Firms may have compliance obligations to report against a taxonomy but beyond these, will also have important decisions to make as to the extent to which they incorporate the use of green taxonomies into their business practices. With significant, and growing, market appetite for green finance, clear signals and common definitions from taxonomies can be transformational in mobilising private finance towards net zero activities.

Currently, despite the 50 taxonomies in development or available worldwide, there remains ambiguity and most businesses lack a clear and specific expectation of what will be required for their activity to be compatible with the transition to a net zero and nature-positive global economy by mid-century.

The Green Finance Institute (GFI) has chaired the Green Technical Advisory Group (GTAG) over the last three years, providing independent, expert advice to the UK Government on the design and implementation of a UK Green Taxonomy – all advice can be accessed here. Whilst the UK Green Taxonomy remains in development, for it to be useful and usable for the market, it must be interoperable with the other taxonomies in existence worldwide. For firms operating across borders, there is a risk of regulatory difficulties and significant extra costs if taxonomies lack interoperability. GTAG made a series of recommendations to support increased interoperability between taxonomies which cover the design of the taxonomy criteria and of the applicable disclosure regime.

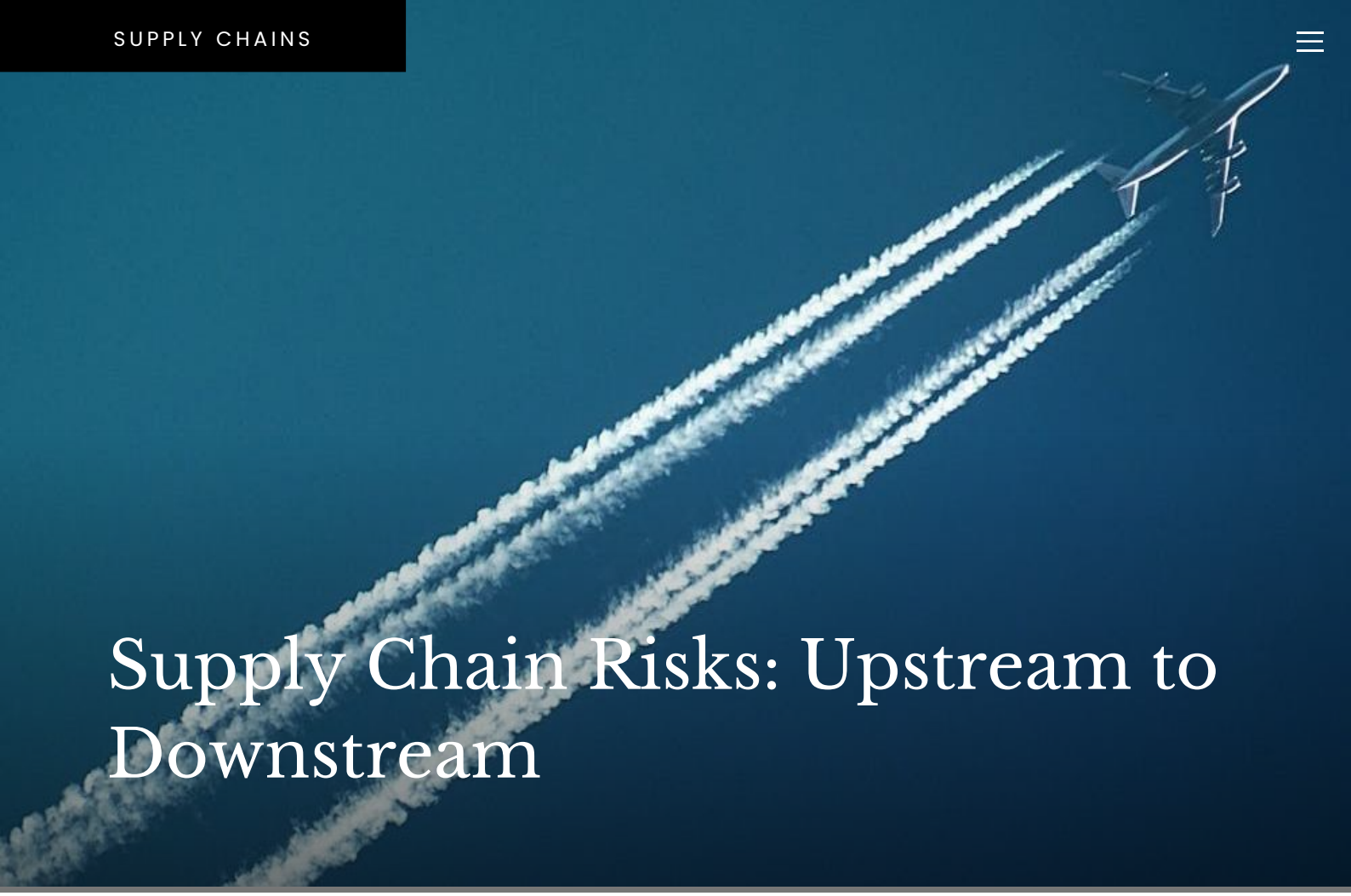
Resources & Training

To facilitate the economy-wide shift to net zero, all businesses need the right resources and guidance in place to support market actors to understand the environmental impacts of their business so that they can sell products and services, within regulatory boundaries, to clients. The GTAG has also advised on the importance of specific guidance and clear criteria for businesses to comply with taxonomy reporting requirements.

There is a huge amount of market innovation happening in this space. For example, the GFI has recently launched a Certificate in Green Mortgages for mortgage professionals to help them understand, define and sell green mortgage products to homeowners. With 23% of the UK's total carbon emissions coming from buildings, there is an urgent need to decarbonise the built environment. However, there is a knowledge gap around green mortgages among customers, intermediaries and brokers. 83% of advisers said their clients had no understanding of green mortgages, and 14% only partially understand them.[1] The majority (84%) of mortgage transactions are completed via mortgage brokers, illustrating the need for brokers to understand and be able to educate customers on green mortgages and other green products.

We're seeing this kind of innovation happening across the market with qualifications and courses in green finance and sustainability becoming increasingly available. For example, the Chartered Banker Institute's Certificate in Green and Sustainable Finance is aimed at all financial services professionals globally who wish to develop and demonstrate their knowledge and expertise in green and sustainable finance.

1. https://www.ftadviser.com/mortgages/2022/11/08/brokers-urged-to-educate-clients-on-green-mortgages/



Supply Chain Risks: Upstream to Downstream

Reaching our climate ambitions requires a whole economy transformation to ensure that the industries of the future are robust and resilient; be they batteries or sustainable aviation fuels (SAF), many of these low-carbon industries are scaling at pace – and have incredibly complex supply chains.

In all sectors with complex supply chains, businesses face risks, which can stem from a range of factors – inflation, climate disruptions, raw materials shortages or demand volatility, among many others. This is particularly pronounced for nascent industries that need to scale at-pace in order for economies to reach national and global net zero goals.

For many emerging sectors, there are technology hardware supply chain risks, given the significant infrastructure needs; and for some, there are significant raw material risks. Without robust supply chains here in the UK, companies will need to import materials and goods, reducing the sustainability of their operations, and potentially putting the supply chains at risk of global supply chain shocks.

In the context of national security, this becomes even more important. If we are to deliver a resilient, secure, net-zero economy by 2050, our industries of the future need to have reliable supply chains that can withstand global disruptions.

Technology Hardware

The UK Government has an ambition[1] to have five commercial SAF plants under construction in the UK by 2025. To produce SAF at scale at these plants, we will need a range of technologies, which require a spectrum of hardware across the value chain. Some of this can already be done here in the UK, however, if the industry is going to scale by 2025, supply chains will have to develop considerably to meet these ambitions

In the last year, we have also seen announcements of major car manufacturers making investments in gigafactories here in the UK, such as Jaguar Land Rover's £4bn investment in an electric vehicle (EV) battery factory in Somerset.[2] Without the supporting supply chain to process materials, manufacture components and recycle batteries at the end of their lifespan, automotive production won't reach its potential in the UK, pushing car manufacturers to look elsewhere for production sites.

Upstream & Raw Materials

Another important element of robust supply chains is securing the production of materials, such as those required to manufacture SAF or EV batteries.

Although the UK is unlikely to satisfy the entirety of its raw material demand for batteries from local supply, there are a variety of investment opportunities required to grow the UK's promising pipeline of raw material extraction facilities, which include companies experimenting with new faster extraction technologies, and expanding pre-existing processing capabilities. Regulation is driving increased transparency across the supply chain and demand for domestic extraction and processing projects from battery manufacturers downstream.

Similarly for SAF, it is critical to develop production capability domestically. There are many different ways to generate SAF – used cooking oils, advanced biofuels, or power-to-liquid technologies. The recently announced SAF mandate will be critical to drive demand, but it doesn't sufficiently ensure domestic production. If we fail to ensure the production of these sustainable fuels in the UK, they will be imported from elsewhere – which will be counterproductive to reaching our net zero ambitions, due to lower sustainability criteria elsewhere in addition to the increased emissions and cost from importing them.

1. https://questions-statements.parliament.uk/written-statements/detail/2023-09-04/hcws1002#:~:text=It%20is%20also%20helping%20to,in%20the%20UK%20by%202025.
2. https://media.jaguarlandrover.com/news/2024/04/jlr-powers-zero-emissions-charging-go-first-battery-energy-storage-system-using-second#:~:text=As%20part%20of%20its%20Reimagine,in%20energy%20storage%20and%20beyond.

Financial Solutions

Financing these supply chains in the UK requires public-private partnerships to increase investor confidence and reduce risk.

For example, in the EV battery sector, a Battery Investment Facility which blends public and private capital for scale-up companies can be highly effective to de-risk specific investments in the supply chain which would otherwise sit outside of traditional risk appetite.

For first-of-a-kind plants being developed, such as those for SAF, the GFI has been supporting the UK government in reviewing the different financial mechanisms that will be needed to facilitate access to finance – including government-led private law contract models, such as a CfD or buyer-of-last-resort, as well as market-based offtake models, which can help mitigate revenue uncertainty and support the growth of a UK supply chain. Without revenue certainty for SAF producers, they will not be able to access the project finance and capital needed for construction. There is a legitimate concern that the development expense already invested will be sunk capital, including government grant funding and private capital.

Across these sectors, developing the production capability in the UK is critical not only to mitigate supply chain risks, but also to develop national IP in these emerging sectors, create jobs and boost our energy security.

Overcoming credit risk to finance the transition in Africa

Having initially focused on delivering the 2009 Copenhagen commitment for $100bn per annum in climate finance to developing markets, it is now widely recognised that this is not nearly enough. We need to redouble our efforts again. The G20 Independent Expert Group puts the need in developing markets, excluding China, at $1.8tn annually by 2030. The Climate Policy Institute estimates that Africa alone needs nearly $300bn a year to meet its 2030 climate goals. This is not by 2030, this is now.

We need a new approach that is not predicated solely on government aid and Development Finance Institutions. A key challenge is unlocking private capital - it is the only source of viable capital sufficient to meet the amount of finance required In 2020, private finance made up only 14% of the total in climate finance, demonstrating the significant growth potential. The GFI has long advocated for an approach that closes the 'execution gap', mobilising notionally committed private capital, into real projects supporting NDCs in the Global South. To do this we need a sector-by-sector focus and new institutional architecture to broker deals at scale.

One of the main challenges with mobilising international private finance towards projects in developing markets is currency risk, as offshore funding made available for local climate infrastructure from the Global North likely is denominated in dollars. This leaves project sponsors exposed to currency fluctuations beyond their control as they generate project revenue in local currency but repay debt in dollars. The obvious solution is to raise finance in local currency – the execution gap is likely to be smaller as investors will have a better understanding of projects, sector policy, regulatory frameworks and for example in energy, the intricacies of power purchase agreements. But further risk mitigation is still required.

Despite an abundance of technical assistance programs from aid agencies and charitable foundations designed to unlock finance, and hundreds of billions of private capital looking for climate investments, project sponsors across Africa are struggling to access financing to meet their climate-smart infrastructure needs. This is because project sponsor credit risks are likely to be perceived to be too high to meet the investment grade needs of domestic institutional capital.

This is particularly true in areas where first of a kind technology is being deployed, such as carbon capture utilisation and storage, or in nature-based finance, where revenue streams may be less certain. This leaves a significant source of viable capital untapped. It also has wider economic consequences as domestic pension funds end up buying domestic sovereign debt at lower returns.

Credit enhancements in the form of guarantees can be particularly powerful in addressing project sponsor credit risks, circumventing the need for sovereign guarantees and addressing perceived risks pervasive in developing markets - while unlocking local capital to accelerate capital deployment for climate-smart infrastructure projects. Whereas development finance institutions are better equipped to address currency risk by providing lending in local currency or by providing the sovereign secured access to hard currency.

Drawing from an evidence base provided by existing instruments over a track record of several decades, the use of flexible guarantees for climate-smart infrastructure projects can significantly mitigate the potential for loss associated with these projects. In models currently used by the US government for other sectors, a contingent liability (non-cash commitment) of US$100 million unlocks, on average, US$700 million of direct capital deployment – a 1 to 7 leverage ratio.

Domestic financial institutions have significant pools of capital and can provide it in local currencies to developers, provided they have the right access to a guarantee facility. The GFI has designed the Green Finance Guarantee Facility (GF2) to respond to specific demands from investors and the public sector to de-risk transactions. It would work alongside direct grants in intergovernmental climate aid, as well as development finance investors like British International Investment and USAID. This combination will have a catalytic impact on the market and crowd in private investment at scale. We are piloting this in South Africa, on climate infrastructure projects sponsored by municipalities.

If the combination of these initiatives is directed at specific sectoral transition under new institutional approaches, there is a realistic chance that both domestic and international private capital can be mobilised to begin to address the $1.8tn gap. Any public and indeed philanthropic finance that continues to be committed is still essential. But where possible it should be deployed where it can have a catalytic impact on private financial flows. Only this approach can deliver the scale we ultimately need to meet the challenge ahead.

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