

Green Finance Quarterly



Renewing Britain's leadership on the green
transition



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Welcome to the fourth edition of the Green Finance Quarterly.

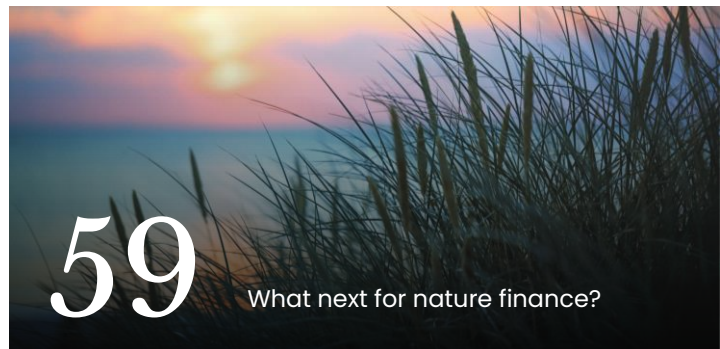
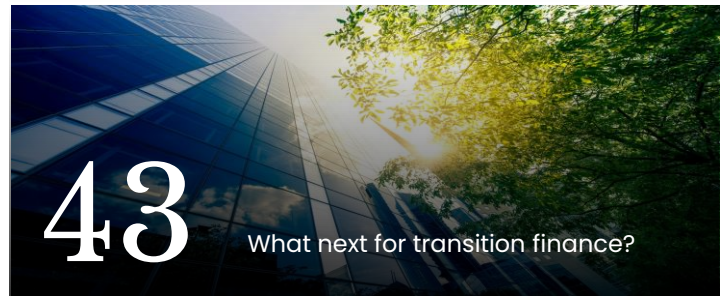
This latest collection of articles captures the insights shared during a series of expert think ins we held during London Climate Action Week (LCAW) in partnership with JPMorgan Chase, Standard Chartered, Lloyds Corporate and Institutional Bank, BNP Paribas and the Laudes Foundation.

The topics range from transition finance, adaptation finance in emerging economies, mobilizing capital in service of a just transition in the Global South to developing nature markets and decarbonizing the UK building stock.

One key theme emerged throughout – the agenda of policymakers and financial markets must be brought into greater alignment. Regulation can be an enabler of a greater capital flow to where it is needed most. But ultimately, we cannot solely regulate our way to net zero. We also need to create market opportunity – new asset classes connected to pipelines of viable projects. The powerful combination of regulation and innovation will drive the investment we ultimately need to deliver sustainable growth through a green economic transition.

The GFI continues to deliver the radical, public-private collaboration needed to turn these agendas into solutions that mobilise finance. By bringing together thought leaders across financial services, business, philanthropy, and the third sector, we demonstrate the expert thinking coming out of London at a time when the UK has the opportunity to renew our global climate leadership. Whether through the delivery of the National Wealth Fund, a new approach to our international climate finance, or renewed momentum in our sustainable finance policy offer, there is now a clear ambition for the UK to lead and we all have an opportunity to play our part.

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What next for mainstreaming adaptation finance in emerging markets?



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Context

The world is already facing damaging impacts from climate change at the current 1.26°C increase in global temperatures.¹ This is most acute in Asia, Africa, the Middle East, and Small Island Developing States (SIDS), most of which are countries least responsible for global warming.

This is not just an economic or financial issue – it is a security and social justice issue: the latest United Nations (UN) analysis on global climate impacts underlines the need for urgent action, with 2023 marking the hottest year on record amid rising sea levels and the increasing extreme weather. Estimates vary but according to Swiss Re, natural disasters in 2023 caused economic losses of US\$280 billion, with 40% of those losses covered by insurance. This was a new record, with 142 insured-loss causing catastrophes in 2023. This figure is just the tip of the iceberg of the real uncounted costs on people's lives.² Analysis by Christian Aid found the poor suffer most – with devastating wildfires and floods hitting those who can least afford to rebuild, and the countries that have contributed least to the climate crisis being hit harder than the developed world.³

Further climate change is inevitable, although the magnitude and rate of climate change will be determined by societies' actions. Even so, it is often overlooked that keeping global temperature increases to no more than 1.5°C and reaching net zero by 2050 is in itself a scenario that requires adaptation to happen. Given the changing weather patterns we are already experiencing and the inertia in the climate system means that, even if greenhouse gas emissions ceased today, more extreme weather is to come.

Today, less than 10% of all climate-related finance is allocated to adaptation, with the majority of this coming from public finance sources. As such, it is unsurprising that the adaptation financing gap is widening globally. Current levels of funding remain well below the estimated US\$215 billion per year needed through to 2030 to adapt developing countries alone.⁴ For perspective, in January 2024, foreign debt sales from developing nations scaled an all-time record for January at US\$47 billion, led by major and less risky emerging markets, but the credit supply has still not recovered its 2020 high, and – as a comparator data point – is still a fraction of the overall investment needed.⁵ Issuances of green bonds with some adaptation and resilience component are growing but, again, are still only a fraction of the overall market – estimates place volumes at between ~2.5% and 16% of aggregate global issuances to date.⁶

Current levels of funding remain well below the estimated US\$215 billion per year needed through to 2030 to adapt developing countries alone.

In short, more private capital needs to be deployed in support of adaptation-focused investment in emerging markets. For this to happen two issues need to be overcome:

- The fundamental risk aversion of many mainstream banks and investors to emerging market opportunities: risk considerations include the financial stability of issuers, geopolitical shifts and higher costs of funding in developed markets.
- This risk aversion is compounded by concern about risks associated with physical climate change impacts, which could further increase antipathy towards investing in emerging markets.

The good news is that understanding of the challenges, imperatives and opportunities is growing. So too is the understanding that adaptation finance is not something to be 'done to' emerging markets counterparties, but to be developed in partnership. This note sets out what should happen next, building from a closed-door discussion held during London Climate Action Week (LCAW) with leading finance practitioners and experts, including those from India and South Africa as well as the UK.



From barriers to solutions

Noting engagement and interest in initiatives such as the adaptation working groups convened by the Prudential Regulation Authority and the Financial Conduct Authority (the Climate Financial Risk Forum – CFRF), Principles for Responsible Investment and Institutional Investors Group on Climate Change, sentiment among banks and asset managers is changing, driven by interest in the very rapid growth of these economies and commercial opportunities this brings. So too is understanding of the need for both mitigation and adaptation to be factored into financial decision-making and product development to ensure resilient economic opportunity is unlocked. For the insurance sector, it is becoming clear that a retreat from developed markets, and failure to engage with emerging market opportunities based on climate risks, is both a social ill and unsustainable for the sector’s survival long-term. Rather than cutting back on coverage, the industry needs to be innovating to expand it.

Building a better understanding of how emerging markets can adapt – and supporting clients and investee companies in these regions to facilitate the investments needed – makes good economic and financial sense. At a local level that is because it ensures that communities, businesses and assets can withstand the more frequent and intense weather extremes that are now upon us, enabling them to rebuild and restore access to critical infrastructure and thriving livelihoods more quickly than without such support. At a global level, this knowledge and capacity-building is important because it unlocks new market opportunities that also contribute to collective global resilience while supporting emissions reductions and nature protection and restoration.

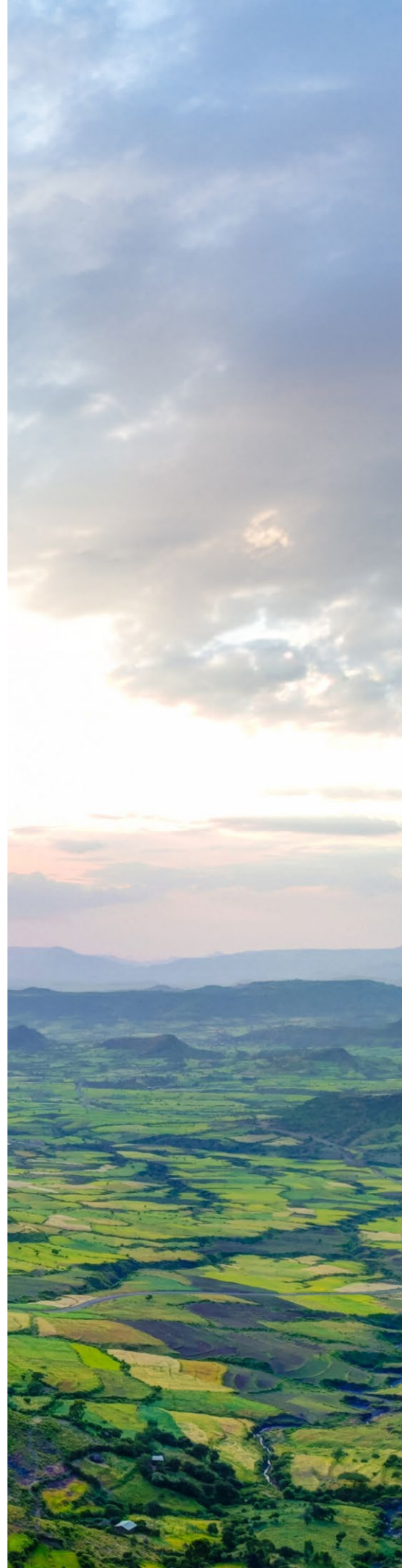
A range of measures and tools can be considered as part of supporting developed country investors to introduce these considerations through an emerging market's 'adaptation toolbox'. This includes engineered solutions, nature-based solutions, advancements in risk analytics and data, risk transfer solutions (insurance but also parametrics and risk pools), behavioural changes and supportive policies and regulations. However, many of these tools are currently underutilised, underfunded or inefficiently implemented, and in less well-developed emerging market contexts, availability and affordability present challenges.

Also growing among financial services actors is an understanding that means of consultation with appropriate local counterparties is essential at the project level. They may include non-usual suspects such as local governments, community representatives, environmental and humanitarian organisations, as well as local financiers.

This approach will, in turn, help embed locally appropriate adaptation and resilience into financial decision-making by private finance providers across all geographies in which they are active – and unlock investment opportunities amounting to hundreds of billions per year by 2030 and beyond.⁷

Three key themes are emerging to drive momentum across the public and private sectors in these markets:

1. Investment in greater awareness of the need and the opportunity by developed country investors.
2. Better use of supervisory/ policy levers by prudential regulators and policy makers to drive action by financial market participants.
3. More targeted risk-sharing between the public and private sectors – including accelerating the development and expansion of risk transfer solutions.





Better awareness of the need and the opportunity

On the public and the private side, there needs to be a better articulation and awareness of the opportunity.

Fortunately, models and tools are increasingly available to facilitate this.

Forward planning is key - On the public side, forward planning is key. As an example, in the wake of 2016's Tropical Cyclone (TC) Winston – the strongest and most devastating tropical cyclone to ever make landfall in the southern hemisphere, Fiji set a long-term objective to build resilience to natural shocks through 'Building Back Better'.⁸ To inform investment decisions for the future, the Fijian Government worked with the World Bank to develop the country's first-ever Climate Vulnerability Assessment (CVA). Underpinned by an understanding of the day-to-day reality of the Fijian people, the CVA sought to quantify and better understand the threat posed by natural hazards and climate change to Fiji in order to help design climate adaptation and risk management plans. It identified five main areas that could significantly reduce the country's vulnerability, including; inclusive and resilient urban development, enhanced and resilient infrastructure services, sustainable agriculture and fisheries, conserving

ecosystems and building socioeconomic resilience through actions on early warning and preparedness, social protection, and health care. The outcome of the CVA was a proposed list of 125 interventions across 10 sectors: housing and land use, hazard management, transport, water, energy, health/education, environment, agriculture, fisheries, and social protection. The total estimated cost to do all the interventions was F\$ 9.3 billion (almost 100% of GDP) over 10 years, plus additional maintenance and operational costs, and social expenditures. As a result of investments the World Bank subsequently made, none of the over 200 buildings constructed under its "Build Back Better" program were damaged when TC Harold hit in 2020.⁹

National development plans, infrastructure masterplans, Nationally Determined Contributions (NDCs), or resilience plans like the one based on the Fijian CVA – are key to creating investment plans to mainstream adaptation. This ideally needs to be combined with better forward-looking hazard data (discussed in more detail in the next section).

But financial institutions don't need to wait for these to be in place to act.

Taking action now

While government-led adaptation plans and taxonomies are very helpful in signalling to the market what ‘good looks like’ to support adaptation mainstreaming in emerging markets, there is no need to wait for these to be in place. Banks and insurers can work proactively with clients – and investors with investee companies - to understand hotspot vulnerability and, using the growing number of taxonomies that are available, assess adaptation readiness. As with mitigation, taxonomies can be an important tool for firms to make an initial assessment – even stepping into the breach where policies are lacking.

A guide developed by Standard Chartered, KPMG, and the United Nations Office for Disaster Risk Reduction (UNDRR) – with support from 20+ leading financial institutions, Multilateral Development Banks (MDBs) and non-government organisations (NGOs) – sets out investments that can be considered commercially viable within the context of adaptation and resilience needs in emerging markets and developing economies (Figure 1). This means – at its most basic level – that adaptation is about much more than just investing in physical sea defences funded from the public coffers.

Figure 1: Indicative Eligible Investments (Use of Proceeds) - Resilient Agrifood systems¹⁰

Climate Resilience Themes	Sub-Theme	Examples of Eligible Investments	Adaptation & resilience type		Green Bond/Green Loan Principles: Environmental Objectives				Social Bond/Social Loan Principles: Social Outcomes						
			Type 1: Activities that are adapted	Type 2: Activities that enable adaptation	Climate Change Adaptation	Climate Change Mitigation	Biodiversity	Pollution Prevention and Control	Natural Resource Conservation	Affordable basic infrastructure	Access to essential services	Affordable housing	Employment generation	Food security and sustainable food systems	Socioeconomic advancement and empowerment
Resilient Agrifood Systems	Primary production	Climate resilient crops (e.g. drought resistant seeds, new varieties including R&D expenditures)	x	x	x								x		
		Vertical farming	x		x	x				x				x	
		Drip irrigation/more efficient irrigation for agricultural production systems (e.g. pressurised irrigation technologies)		x	x				x					x	
		Drainage and stormwater diversion and storage	x	x			x	x						x	
		Climate resilient livestock infrastructure (e.g. temperature regulation technologies - cooling sheds*** emergency shelters etc.)		x	x									x	
		Climate-smart agriculture infrastructure and/or technology, including measures to improve soil health		x	x				x					x	
		Climate-smart sustainable fisheries management (e.g. biodiverse agroeconomic systems, aquatic food systems)		x	x		x	x							
		Infrastructure to prevent runoff of agrochemicals and sediment into rivers or coastal basins during flooding/heavy rainfall (e.g. high precision laser land levelling)		x	x		x	x							

But there are many other such guides available – for example, research by the University of Oxford identified – collated and analysed – more than 30 taxonomies.¹¹ It is worth noting that existing adaptation taxonomies tend to have less quantified criteria than mitigation taxonomies, this is because what constitutes ‘good adaptation’ can vary significantly by location. This again, emphasises the need to place the client or investee companies’ view front and centre when developing financial solutions in order to facilitate desired and achievable resilience outcomes. In this case, the level of guidance provided by a taxonomy will be useful. The taxonomy developed by Mott Macdonald, for example, operates at a very detailed level, defining the changes to infrastructure needed to ensure resilience to a range of hazards.

Figure 2: Mott Macdonald Taxonomy.¹²

Climate Hazard Database						
Water		W: Pipelines and networks		Clean water pipe network		Climate hazard: <input checked="" type="checkbox"/> Freeze-thaw (extreme shifts in temperature) <input checked="" type="checkbox"/> Flooding - fluvial <input checked="" type="checkbox"/> Extreme heat <input checked="" type="checkbox"/> Drought <input checked="" type="checkbox"/> Flooding - groundwater <input checked="" type="checkbox"/> Ground movement (heave, subsidence)
Climate Hazard	Climate Risk	Types of impacts	Resilience measures	Recovery Measures	Prompts	
Freeze-thaw (extreme shifts in temperature)	Fluctuating temperatures around zero to cause pipe bursts	Structural damages Operational disruptions (temp) Interruptions to supply (temp)	Proactive replacement of ageing pipe Use of material resistant to freezing conditions Gravel casing around vulnerable pipes	Emergency replacement of pipes	What soil type is the pipe lined within? What is the pipe material? What is the pipe diameter and its criticality within the network?	
Extreme heat	Increased water demand causing pipe bursts	Structural damages Operational disruptions (temp) Interruptions to supply (temp)	Upgrade network capacity Customer campaigns to reduce consumption Proactive replacement of ageing pipes	Emergency pipe replacement Network reconfiguration	Is the system able to cope under increased water demand? Which parts of the network experience the highest peak demand?	
Flooding - groundwater	Pipe floatation and bursts from increased groundwater levels affecting lining	Structural damages Operational disruptions (temp) Interruptions to supply (temp)	Proactive replacement of ageing pipes in areas at risk of groundwater flooding Regular inspection of networks Establish redundancies in the network	Emergency replacement of pipes Tankering	Is the area prone to groundwater flooding/high levels of water table? What type of soils are present? What is the pipe material?	
Flooding - fluvial	Collapse/burst of traversing pipes from erosion of riverbanks	Structural damages Operational disruptions (temp) Interruptions to supply (temp)	Relining of pipes away from riverbanks Establish redundancies in the network Surveying and monitoring of pipe conditions	Emergency replacement of pipes	Is the area prone to erosion? What type of soils are present? What is the pipe material? What is the pipe diameter and its criticality	
Drought	Increased water demand causing pipe bursts	Structural damages Operational disruptions (temp) Interruptions to supply (temp)	Upgrade network capacity Proactive replacement of ageing pipes Customer campaigns to reduce consumption	Emergency pipe replacement Network reconfiguration	Is the system able to cope under increased water demand? Which parts of the network experience the highest peak demand?	
Drought	Shrinking and swelling of soils leading to pipe bursts	Interruption to supply (temp) Operational disruptions (temp) Structural damages	Proactive replacement of pipe with material resistant to expansive soil conditions Gravel casing around vulnerable pipes	Emergency replacement of pipes	Is the pipe lined in clay soils? What is the pipe material? What is the pipe diameter and its criticality within the network?	
Ground movement (heave, subsidence)	Ground movement with effect on lining of underground pipes (i.e. burst/collapse)	Structural damages Operational disruptions (temp) Interruptions to supply (temp)	Proactive replacement of pipes in areas prone to ground movement Establish redundancies in the network	Emergency replacement of pipes	Is the area prone to erosion and/or ground movements? What type of soils are present? What is the pipe material?	

Developing an investment-focused adaptation and resilience index - Cultivating a more granular understanding of climate resilience in markets could be key to better understanding risk and opportunity in relation to adaptation. Resilience indices already exist – for example, the World Risk Poll Resilience Index, which collates a range of polling data on individuals, holistic, household and community data – on factors such as disaster planning, quality of local infrastructure and social and financial safety nets - and the Global Resilience Index Initiative of the Resilient Planet Initiative, which collates data on hazards, vulnerabilities, exposures and physical risks for different assets globally.¹³ This type of tool could help address what can sometimes be exaggerated/ misinformed perceptions of risk in emerging markets due to a tendency to blanket apply metrics used for developed markets as opposed to really understanding local risks. Such a tool could be evolved to have more assessments of the resilience of existing infrastructure and communities using existing adaptation-focused taxonomies; combined with assessments of plans to improve infrastructure and societal resilience through adaptation planning – including secured nature-based and physical infrastructure solutions – as well as a range of the insurance products in place to enable resilience in the face of climate events, countering a tendency for a withdrawal of lending and investment to follow withdrawal of insurance.



Better use of supervisory and policy levers by prudential regulators and policy makers to drive action by financial market participants

Feedback from financial service practitioners indicates a number of concerns that are holding back the mainstreaming of adaptation finance in emerging markets and more broadly. These include:

- Lack of clarity on what potential climate futures (scenarios) to consider in developing adaptation strategy and product development.
- Concerns about the quality and relevance/ usefulness of data for supporting physical risk analysis and adaption opportunity identification, particularly when moving from global emission scenarios to local hazard and asset level data.
- Lack of guidance on how to integrate emerging information into investment, lending and underwriting decisions – and how best to disclose it to the market.

Scenarios - Stronger direction and guidance from prudential regulators on how to carry out effective physical risk-focused scenario analysis to support mainstreaming of adaptation financing is key. Taskforce on Climate-Related Financial Disclosures (TCFD) guidance currently states: “Describe the resilience of the organization’s strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario”.¹⁴ The Network for Greening the Financial System (NGFS) scenarios help bridge this guidance gap – and are useful but not sufficient to understand physical risks within adaptation scenarios because they focus on macro-financial risks. Forthcoming proposals from the UK’s CFRF which is convened by the Prudential Regulation Authority and the Financial Conduct Authority, advise that two further steps are needed:

1. To encourage the use of local hazard assessment to validate short-term (up to five years) findings from NGFS-based scenario analysis. This represents a more granular approach to scenario analysis that will enable those deploying capital to direct it toward investments that will reduce the risk of current and future climate change impacts on economic activity, people, nature and individual assets by increasing their resilience to the changing climate.
2. For investment looking out beyond ~five years, a range of emissions pathways and climate response uncertainties need to be considered and a novel ‘Aim-Build-Contingency’ or ‘ABC framework’ is suggested to support decision-making under uncertainty. Here the Working Group have labelled the scenarios with global warming up to 2050 relative to pre-

industrial times, but firms may perform the risk assessment beyond 2050 if appropriate:

- **Aiming** for 1.5°C (a suitable proxy for this is the Intergovernmental Panel on Climate Change’s (IPCC) Shared Socioeconomic Pathway 1-1.9 (SSP1-1.9) scenario and taking the median climate response).
- **Building and budgeting** for 2°C by 2050 (the best proxy for this is the IPCC’s SSP2-4.5 scenario and taking the median climate response).
- **Contingency planning** for 2.5°C by 2050 (this is represented by the IPCC’s SSP3-7.0 scenario and taking the 95th percentile of the climate response).

Data - Access to good quality weather-related local hazard data is critically important to support short-term decision-making. Given that the impacts of climate change will vary by location, it is crucial to know where heat stress, flooding, humidity and hazards will affect infrastructure and communities so that appropriate resilience solutions can be co-developed. For financial institutions using this local data to support asset-based financing solutions, climate-related risks need to be assessed over the expected lifetime of the investment and tail risks (90th percentile), not just average (50th percentile) impacts, need to be fully understood. A database of good quality forward-looking and reliable hazard data sources searchable by timeframe, region, and resolution has been developed by a team at the Environmental Change Institute, Oxford University.¹⁵ However, gaps remain in data availability. To support emerging market investment, state-led investment into providing local hazard data is needed –

this could be delivered as part of overseas aid support, given the clear global public good nature of this investment and benefits for sustainable poverty alleviation, disaster resilience and economic development. Global coordination and collaboration is advantageous for all to close data gaps.

Every US\$1 spent on adaptation this decade, an economic benefit of US\$12 could be generated.

Where third-party datasets are provided, which draw on these sorts of public sources and then manipulate the data through black box approaches, assurances or 'kite' marks of quality should be requested of independent technical experts. Finally, to enable data application, companies need to disclose the locations of assets and/ or activities to support accurate analysis and meaningful resilience discussion. This is a key amendment for policy makers/ regulators: implementation of TCFD requirements into law should enable more adaptation-focused engagement by financial services firms with companies.

Guidance – This more granular approach to integrating hazard data into financial decision-making is very new – and significant data gaps exist as discussed. But it is important firms nonetheless get started on trying to use it since this is a key means to overcome the

challenges identified by Standard Chartered in their research, namely a perception of limited revenue streams and long investment horizons. A closer examination of concerns indicates current underinvestment stems largely from short-term perspectives, driven by a sense that adaptation is a future issue, not 'a now issue'. Getting started with using more granular datasets to support short-term decision-making and the ABC framework to support a longer-term view will help uncover the business case for acting early. Research conducted by Standard Chartered, published in its Adaptation Economy Report, found that for every US\$1 spent on adaptation this decade, an economic benefit of US\$12 could be generated – highlighting the significant economic pay-off of early action towards adaptation and the potential gains for investors. As global temperatures increase, emphasising the need for financial services firms to invest in the capability to support mainstreaming sooner rather than later is imperative. Here the role of prudential regulators is key.

As for countries, firms and the financial institutions supporting them, they should develop adaptation-inclusive transition plans as a default. The NGFS grouping can take the opportunity presented by its own Adaptation Working Group network to guide and support local financial market participants on the integration of this information into better risk management and disclosures alongside supporting clients and investee companies to seek financial adaptation solutions, drawing on forthcoming advice from the CFRF Adaptation Working Group. Special attention should be paid to the role of insurers as enablers of adaptation.



Targeted risk-sharing between the public and private sectors is the key to mobilising capital

Large-scale proactive mobilisation of private capital will be key to facilitating an orderly as possible transition to an adapted and resilient global economy, and clear definitions – alongside a shared understanding of what constitutes adaptation investment – are needed to support this. Within the private sector, adaptation investments can come from both private enterprises, as they invest in their operations and supply chains, and private financiers, including private commercial banks, microfinance institutions, insurance companies, institutional investors, private equity and venture capital investors. In many cases, the private sector is uniquely positioned to take on these investments, given their speed of delivery and relative flexibility with financial instruments.

It is commonly asserted that it is the government and multilateral development banks' role to drive private investment. However, the insurance sector is also emerging as a key player and partner in climate adaptation. Some insurers and brokers have started to prioritise adaptation and collaborate with their clients and the public sector to identify innovative ways to enhance current and future resilience. At the heart of this is the understanding that adaptation can be catalysed through a shift to a resilience-focused insurance system.

How (re)insurance can support the shift to a more resilient economy

(Re)insurers and investors can lean on three key capabilities to support the public and private sectors to better understand their climate-related risks and act upon them:

1. Data and analytics;
2. Advisory; and
3. Risk transfer products and efficient use of capital.

Data and analytics - Brokers, insurers and reinsurers have invested in advanced climate modelling capabilities for decades, from computing capabilities to skills. Outside academia, the insurance sector is ahead of other sectors in modelling climate risks and quantifying these risks into financial impacts.

Typically (re)insurers have the capabilities to model a wide range of climate risks including chronic risks such as changing temperatures, precipitation and coastal erosion to acute risks such as wildfires, hurricanes, droughts and landslides. There is a lot that the sector can contribute to enable corporates and policymakers alike to better understand the types and severity of climate risks they may become exposed to. Insurance executives have been talking increasingly publicly about the need for more sophisticated modelling systems, driven by increasingly advanced artificial intelligence, to enable them to provide affordable cover in a world that's deviating from historical patterns. This now needs to be acted on.¹⁶





Advisory - Based on advanced climate modelling, (re)insurers advise clients on short and long-term strategic planning. This can include ways to anticipate and prepare for chronic and acute risks; making informed decisions on locating new offices or operations; or how to allocate investments.

Many risk engineering teams are also able to translate climate risks into financial risks and support their clients in understanding the costs and benefits (or avoided costs) of implementing specific resilience measures.

Risk transfer solutions and more efficient use of capital - Increasingly, people and businesses can't assume the full costs of climate risks from their own funds or balance sheets. For hundreds of years, (re)insurers have helped businesses, people and investors to share risks more efficiently. (Re)insurers are already innovating with new mechanisms like parametric insurance and alternative risk transfers. There are also examples where (re)insurers have been able to create financial resilience for more vulnerable parts of the world, especially by working with the third sector (e.g. through resilience bonds¹⁷ or reinsuring third sector

funds¹⁸). With integrated strategies that tie risk transfer to risk reduction measures, insurers can provide incentives to promote the deployment of resilience interventions. For example, the purchase of policies can be accompanied by guidance for property-level protection measures or through the adoption of “build back better” principles by Flood Re in the UK that ensures rebuilding projects prioritise climate adaptation investments. Another example is the development of innovative community-based catastrophe insurance schemes that rely on parametric insurance cover and can create financial incentives for resilience interventions through investments.¹⁹ Parametric insurance and catastrophe bonds that pay out quickly post an event, provide more budget certainty. When these instruments are linked to “build back better” policies that increase resilience to future climate shocks, it will facilitate greater confidence that the private sector will deploy capital to support development in these markets.

The following case study sets out how an innovative approach to insurance has facilitated resilience and adaptation in an emerging market context.

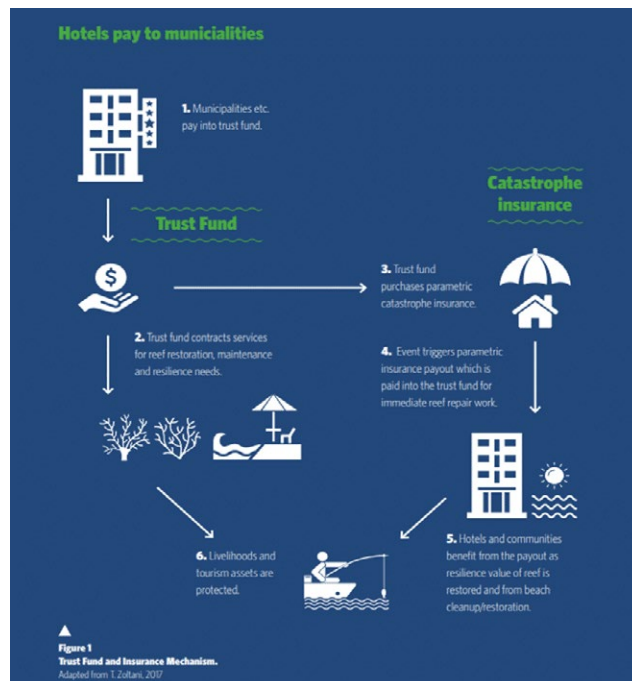
Case Study: Quintana Roo Reef Protection - Mexico

Type of intervention: Insurance

Structure: In 2018, the world's first insurance solution to preserve a natural ecosystem was launched, using a parametric mechanism. Private sector taxes and government funding were combined into a Trust, responsible for maintaining the reef. The insurance premium was then paid by the Trust, with fees generated through public/ private sources. The claim payment release would be triggered when hurricane wind speeds reached a certain level, allowing the policyholder to repair the area's coral reef quickly. The policy helps to maintain the reef and, by extension, the community that relies on it.

Success criteria: There were several stakeholders involved in this parametric insurance structure which included coastal property owners, municipal governments, the State Government of Quintana Roo, Coastal Management Zone Trust (CMZT) and insurance companies.

What next: Since launching this innovative design, Swiss Re continues to work to replicate this model elsewhere in the world. This includes coral reefs but also other types of natural ecosystems, such as mangroves.²⁰





Systematising support – the role of MDBs and other public finance institutions

In some instances, public-private risk sharing will be needed. The role of MDBs, international climate funds and national public banks/ export credit guarantee facilities will be especially important. While MDBs have announced they will step up efforts to finance adaptation activities, to date it appears to be seen as a separate line of business.²¹ Climate resilience needs to be integrated as standard into all infrastructure and green investment advice and support.

A key consideration should be how public capital can be deployed most efficiently to maximise private co-investment and ensure access to solutions that are socially inclusive. Here, a shift toward supporting emerging markets-led programmatic investment will help accelerate progress. Currently, there are many blended finance instruments and project preparation facilities – but they all

have different due diligence requirements: streamlined access is needed to reduce the effort of doing business. For example, the Green Climate Fund works project by project: this needs to shift to providing country-level or regional programmatic support with shared learning so that deals can be replicated. Programmes like the LEAF Coalition should be widened to include a focus not just on reducing deforestation but on the role of reforestation support as a means to increase resilience. A more programmatic approach needs to link directly to helping countries develop national adaptation plans, and execute them through using targeted risk-sharing to secure the private finance needed. The Bridgetown Agenda 2.0 calls for existing programmes to be better coordinated and focus on client country needs.



Looking ahead

The physical risks associated with climate change are escalating globally; no country is untouched and addressing economic and social consequences depends on the respective capabilities of countries. Calls abound for a transformation of the international financial system, in recognition of the fact that it is not built for, or adjusting to, the need to address the multiple crises we face in our time, and especially not so in emerging markets.

The economic counterfactual should inspire action: aggregating across the period 2025-2100, the total cost of inaction is estimated at US\$1,266 trillion, that is, the difference in losses under a business-as-usual scenario and those incurred within a 1.5°C pathway.²² But no one sector or organisation has all the answers. A systemic change is needed which is only possible if the different system actors come together to drive collective positive change.

As ever, not waiting for perfect information or tools is key. Properly supported, embedding adaptation imperatives into emerging markets investments helps mitigate some fundamental market risks through increasing transparency, strengthening forward-looking planning and governance of adaptation-focused portfolios. In addition, a better understanding of these markets, along with better utilisation of a range of insurance products alongside risk sharing through well-targeted support from public finance institutions in these markets can bring risks within the tolerance of a broader range of investors and lenders. In short, investing in resilience is good for investors and countries, because it makes investment in emerging markets lower risk and more sustainable long term.

Action can be accelerated through:

- National planning improvements – countries and regions need to be better supported by MDBs in the way that Fiji was supported to develop country-appropriate climate resilience investment plans.
- Private sector actors engaging more deeply with adaptation, using tools such as taxonomies plus better data and analytics to create the business case and basis for just and inclusive adaptation efforts.
- Regulators including a focus on adaptation in supervisory activities and approaches.
- Development of more decision-useful forms of risk assessment – such as the resilience index; this can close gaps between perceived versus actual risks.
- Public finance institutions that can mainstream adaptation into investment and risk approaches within countries – potentially via intermediaries such as Rabia Transitions in South Africa and through GFI’s work in Indonesia – to develop products and programmes that partner with private finance to broaden access to capital and shared risk.

GFI is developing an international programme of work to support the delivery of the components of this to-do list. We invite potential delivery partners to get in touch to discuss how we can work together in a shared endeavour.



Endnotes

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What next for accelerating the decarbonisation and resilience of the UK's building stock? The convergence of financial and real economy policy



The UK is at a critical juncture in addressing the energy efficiency of its homes, a move essential for managing ongoing cost of living pressures and meeting the UK's carbon reduction targets.

The UK's 29 million homes represent the least energy efficient housing stock in Europe, making up 16% of total UK emissions.¹ Adapting our built environment to be more affordable, energy efficient, and resilient is a clear priority for the new Labour government, which seeks to upgrade five million homes to cut bills for families as part of the Clean Energy Mission.²

The UK Committee on Climate Change has estimated that £250 billion needs to be invested to deliver a net-zero housing stock by 2050.³ Alongside traditional retrofit for energy efficiency, there is also the increasing need to adapt to the changing climate, ensuring that our homes are resilient to heatwaves and flooding. As such, retrofitting existing homes to ensure affordability and resilience represents a significant opportunity to lower energy bills, slash fuel poverty, reduce greenhouse gas emissions, improve the quality of the UK's housing stock, and create jobs.

The Labour Party's manifesto commits the Government to "work with the private sector, including banks and building societies, to provide further private finance to accelerate home upgrades and low carbon heating". It also promises to "ensure homes in the private rented sector meet minimum energy efficiency standards by 2030, saving renters hundreds of pounds per year."

To achieve these outcomes under the Clean Energy Mission, the UK has a distinct opportunity to draw on past successes in tackling urgent, multi-faceted challenges and establish an empowered public-private National Taskforce, underneath the Clean Energy Mission control, to decarbonise UK homes. This briefing note sets out a view on how to achieve that, building from a closed-door discussion held during London Climate Action Week (LCAW) with leading finance practitioners and experts.



**A Green Finance
Institute paper written
in partnership with:**



Caroline Snowden

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LLOYDS BANK



A recap on the problem

Despite the clear benefits, the market for energy efficiency improvements and climate-proofing homes has yet to achieve the scale and momentum needed to reach decarbonisation goals. The UK needs to increase its current rate of renovation seven-fold to meet 2030 decarbonisation targets.⁴

This is, in part, because the home decarbonisation challenge has been framed as a consumer problem under the assumption that if the offer on the table is attractive, people will be enticed to make energy efficiency improvements to their homes. A home that is resilient to natural disasters, keeps us warm in the winter and cool in the summer, and is affordable to power and heat, is a compelling offer. However, given the well-documented barriers that consumers face when improving the energy efficiency of their properties, we have yet to see the bottom-up consumer led growth of this market to reach our national ambitions.

The lack of action is the symptom⁵ of building decarbonisation being a ‘wicked problem’ - one that is difficult or impossible to solve

because of incomplete, contradictory, and changing requirements that are often difficult to recognise.⁶ If a household’s economic resources are limited, the up-front cost of retrofitting their home could feel unattainable despite the wide range of financial products coming to market, such as green mortgages, unsecured green home loans, and property linked finance. As a result of the electricity-to-gas price ratio, there is also no guarantee that the running costs of low carbon heating systems will be more economical than running a gas boiler. Furthermore, the process is convoluted, there is no central resource to guide households through the process, and there remains a long-standing mistrust of contractors and tradespeople in the sector.

In reality, delivering resilient and energy efficient homes is not a consumer problem – it cannot be solved by individual actors in a free markets fashion. Instead, the transition to resilient, energy-efficient, affordable homes should be viewed as a citizens’ challenge – requiring a whole-of-society approach and top-down leadership to drive the change.

Solution: National Taskforce

This problem cannot be solved in isolation. To ensure that citizens across the UK are able to live in climate-resilient, safe, and energy efficient homes:

- Financial solutions and individually priced products need to be available to a range of different homeowners, with and without mortgages, social housing tenants, rentals, and beyond.
- Robust, localised supply chains need to be in place to deliver retrofit solutions effectively.
- Colleges and training facilities need to train the existing workforce as well as the workforce of the future to install and service existing and evolving technologies.

In the face of complex and urgent challenges, we have seen the success of co-ordinated national missions – from the Vaccine Taskforce during the Covid-19 pandemic, to the Olympic Delivery Body in 2012. And more recently, this approach and mandate has been replicated with the announcement of the Mission Control for Clean Power 2030, where Chris Stark will lead a one-stop shop of industry experts and officials to accelerate the transition away from fossil fuels to clean, ‘homegrown’ power.

To address the £250 billion investment gap and deliver comfortable, affordable, resilient homes by 2050, we need a new, national approach to decarbonise the UK’s buildings. A National Taskforce to improve the energy efficiency of UK homes, with clear and measurable goals, can overcome the inertia of recent years and accelerate progress.



Drawing on previous successes, delivering this outcome would be owned centrally by government through a multi-disciplinary taskforce that coordinates across the whole of the public sector (including government departments and local authorities) and the private sector (from financial institutions to supply chain actors). The taskforce would be the first step to overcoming a fragmented landscape, as it would signal the importance of accelerating the pace of building decarbonisation and centralise accountability for delivery.

We need a new, national approach to decarbonise the UK's buildings.

The taskforce would focus on addressing the multiple complex challenges spanning policies, tactics and outcomes facing the decarbonisation of UK buildings including, but not limited to:

A stable financial, policy and regulatory framework will instil confidence and encourage long-term investments in retrofitting.

1. Secure long-term regulation, funding and incentives

A stable financial, policy and regulatory framework will instil confidence and encourage long-term investments in retrofitting. A taskforce of this nature can only be successful if accompanied by clear commitment on policy. The taskforce should oversee the provision of sustained financial incentives, alongside catalysing private sector financial innovation and investment.

2. Develop and enforce robust standards and certifications

Implement stringent standards for retrofitting practices and materials to ensure high-quality outcomes. Establish certification programs for contractors and professionals to maintain industry credibility and consumer trust. Ensuring high standards will maximise the environmental and financial benefits of retrofitting.

3. Streamline planning and regulatory processes

Simplify the planning and regulatory requirements for retrofitting projects. Create a one-stop-shop model for approvals and permits, reducing bureaucratic delays and making it easier for homeowners to start retrofitting projects.



4. Launch a National Retrofit Awareness Campaign

Establish a nation-wide programme to educate the public about the benefits of retrofitting, including cost savings, increased property values, and improved living conditions, which must be locally delivered by organisations that are trusted by the public - highlighting success stories and leveraging media channels to reach a broad audience. A survey by the Department for Business, Energy & Industrial Strategy (BEIS) found that 65% of homeowners would consider making energy efficiency improvements if they understood the financial benefits better.³ Lloyds Banking Group's *Housing Stocktake* found that homeowners are overwhelmingly positive about their experiences of retrofitting, with 96% of survey respondents reporting they were pleased with the results, and 81% insisting that they would recommend doing so to a friend, family member or colleague.⁷

65% of homeowners would consider making energy efficiency improvements if they understood the financial benefits better

5. Support training and workforce development

Invest in training programs to upskill the workforce, ensuring there are enough qualified professionals to meet the increased demand for retrofitting. Collaborate with educational institutions to develop relevant courses and certifications.

6. Create green job opportunities

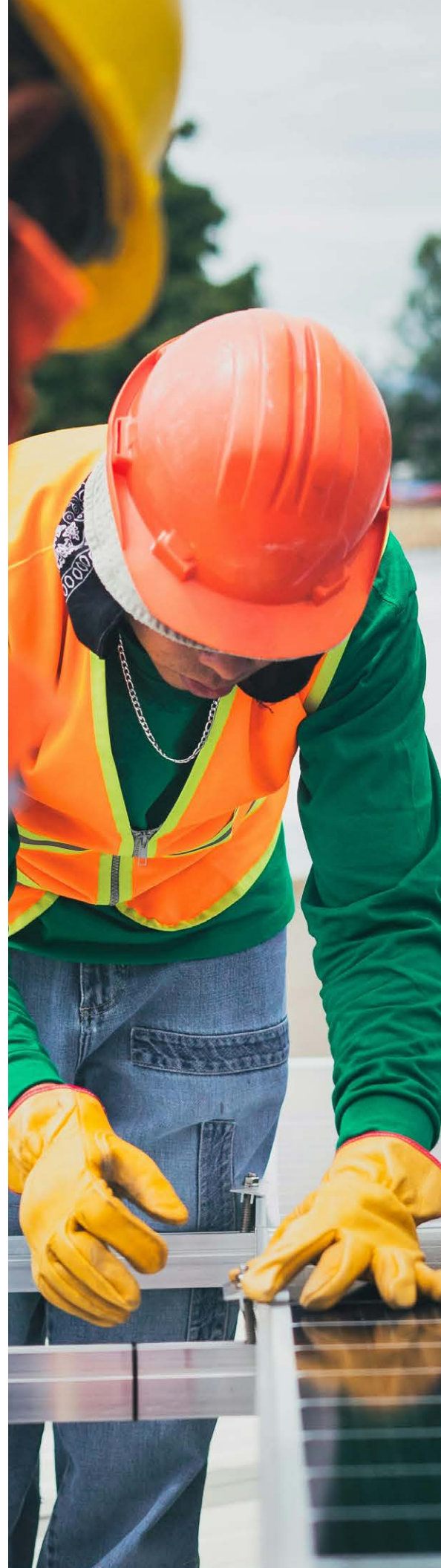
Leverage the retrofitting initiative to create green jobs, particularly in regions facing economic challenges. The Better Homes Alliance campaign⁸ identified a relationship between the areas with the least energy efficient housing stock and the most deprived local authority areas in the country by the Government's own definition, and would therefore stand to benefit most from a co-ordinated retrofit programme. Training and employment opportunities could be provided to support a just transition to a low-carbon economy, benefiting communities across the UK.

7. Encourage private sector innovation and investment

Foster partnerships with private companies to drive innovation in retrofitting technologies and materials. Provide incentives for research and development, and support startups that offer innovative solutions in the retrofit space.

This can be driven through a range of measures: providing a long-term pathway for home energy improvements, introducing an energy-adjusted stamp duty, improving the quality of EPCs, rebalancing the policy costs levied on electricity consumption, using employer tax incentives, setting ambitious but attainable deadlines for reaching improved Minimum Energy Efficiency Standards, and rebalancing the costs levied on electricity consumption..

The combination of this policy certainty and an Olympic-style delivery body could accelerate the pace of change and provide clarity and confidence for homeowners, landlords, industry and finance. For example, there is already a heat pump mandate in place – but it only applies to boiler manufacturers. If the taskforce were to collaborate with industry, this mandate could be expanded to all actors across the value chain in a positive and effective manner. The taskforce would facilitate a coordinated effort to not only have the manufacturer create more heat pumps, but to facilitate installation, enable grid connections, and lead a consumer campaign backed by brands trusted by consumers.





Providing local solutions to a national problem

While a top-down mission, driven by policy certainty, is essential to transform our built environment, it must also be combined with local delivery due to the distinctly local nature of the demand and supply. We have seen successful attempts at this across the country. For example, the Greater Manchester Combined Authority's (GMCA) *Your Home Better* is an independent service delivered by retrofit experts, providing advice, planning and delivery to help reduce the costs of bills as well as carbon emissions associated with home energy and heating. A public-private collaboration, the service works with homeowners to provide information and support consumers with their journeys, giving them credible choices and information across the whole process. The GMCA programme is effective through its central coordination of

public and private sectors, and has credible government backing while simultaneously facilitating localised delivery.

Underpinning the entire mission is the need for adequate financial provision to cover all consumer segments and all housing tenure types, from able-to-pay homeowners – who can access green mortgages or property linked finance – to social housing where blended finance can be deployed to mobilise institutional investment. Insurance will also have a crucial role to play in supporting the climate resilience of homes and driving standards in energy efficiency. The rollout needs to be sequenced with the easiest to retrofit segments delivered first, to build the necessary jobs and supply-chains and increase consumer confidence.



Conclusion

Without centralised leadership and a coordinated approach across market players, the challenge of retrofitting Europe's leakiest housing stock may be insurmountable. A new government, which prioritises the building of and transition to homes that are more affordable to run, has the mandate to deliver a national energy efficiency programme within the Clean Energy Mission.

Through effective use of public-private partnerships, top-down leadership and localised delivery, the challenge of making sure our homes have lower energy bills, are energy efficient and resilient should become a achievable goal which, when delivered, will improve the lives of citizens across the country.

We now need a 'go to market' strategy, driven by an Olympic-style delivery taskforce, that will drive decarbonisation of our building stock through engagement across the ecosystem. This means taking a centralised approach but delivering locally, driving education and consumer confidence, identifying skills-gaps and effectively using policy levers. We invite potential partners for delivery to get in touch to discuss how we can work together to deliver this vision.

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What next for mobilising capital in service of a just transition in the Global South?



A Green Finance
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It is now well recognised that, with public balance sheets increasingly stretched, private capital has a significant role to play in financing the net zero transition. Both in donor and recipient finance ministries, there is precious little fiscal head room; for example, South Africa's consolidated budget deficit rose to 4.9% of GDP in 2023/24¹. Yet at COP28, it was noted with "deep regret"² that the long-term climate finance goal of US\$100 billion per year agreed at the Paris COP in 2015 had not been met. According to The Organisation for Economic Co-operation and Development (OECD), of the US\$89.6 billion climate finance mobilised by developed countries in 2021, only 16% of this was private finance (US\$14.4B in 2021)³. As of 2023, global private climate finance deployed stood at US\$625 billion⁴, 49% of total climate finance, demonstrating growth but not at the pace and scale required.

75% of climate finance was facilitated through market-rate debt instruments with an average cost of capital between 10% and 12%.

To compound this challenge, when climate finance is deployed in countries that most need it, the cost of capital remains high relative to countries in the Global North. In the Climate Policy Initiative's 2023 report on South Africa's climate finance landscape⁵, "75% of climate finance was facilitated through market-rate debt instruments with an average cost of capital between 10% and 12%". This reflects the fundamental risk aversion many lenders and investors have to emerging markets, which range from political to currency to liquidity and corporate governance risk, which – without action – will be increasingly compounded by increased physical risks from climate change.



However, it is not only a quantity of finance challenge, but also a quality of finance challenge. This challenge is central to the transition, one that will be disruptive but must be equitable. The International Labour Organisation estimates⁶ that 80 million jobs will be lost and 100 million created in the transition to a net-zero economy – but the location and quality of these roles is a critical factor.

We are already seeing this, in 2022, with the decommissioning of the Komati power station in Mpumalanga, South Africa⁷ and more recently, the closure of the Port Talbot blast furnaces⁸ in Wales in the UK.

Jobs are being lost or relocated and communities bear the consequences of these outcomes. When looking to finance the transition, these factors must be taken into account.

Furthermore, the notion of a just transition does not resonate with all countries in the Global South, with many focused on security, development and social resilience. The

Institute for Human Rights and Business has identified four essential elements⁹ of a just transition that highlight the need to present risks and opportunities to potentially affected groups, including workers, communities, indigenous peoples, and consumers and give them agency in transition planning and decision making.

In all, this means that whilst recipient countries need capital for the transition, it needs to be both low cost and also to support wider public policy requirements. Quite often this is framed by the market as an insistence on local content requirements that add friction cost to transactions. But these requirements are also about the ongoing legitimacy of the transition itself and so are essential if we are to deliver at the scale and pace required.

This briefing note sets out a view on how to scale finance for a just transition in emerging markets and developing nations, building from a closed-door discussion held during London Climate Action Week (LCAW) with leading finance practitioners and experts from South Africa, India and the UK.

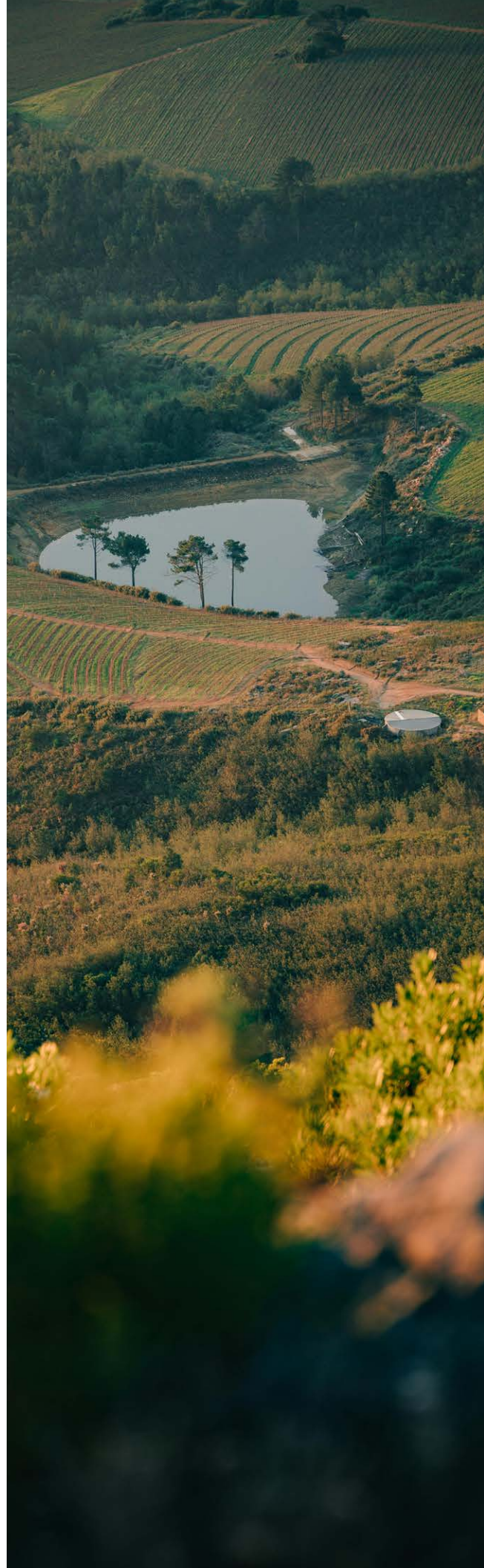
From barriers to solutions

Building a better understanding of how emerging markets and developing nations can increase the flow of private capital to a broad set of projects, covering all elements of the transition, including adaptation and resilience, makes good economic and financial sense at a local level. This is because it ensures that communities, businesses and assets can withstand the more frequent and intense weather extremes that are now upon us, enabling them to achieve societal functionality more quickly than at present. It also makes sense at a global level because it unlocks new market opportunities that contribute to collective global resilience.

This is not just an economic or financial issue – it is a security and social justice issue: the latest UN analysis on global climate impacts underlines the need for urgent action, with 2023 marking the hottest year on record amid rising sea levels and increasingly extreme weather. While economic losses from natural and climate-related disasters are estimated to cost more than US\$ 330 billion per year¹⁰, this figure is just the tip of the iceberg of the real uncounted costs on people's lives.

There are two key themes that have emerged across the public and private sector to drive the best outcomes:

- Risk-sharing capital structures that can simultaneously crowd-in private finance and reduce the cost of capital.
- Creating the right institutional architecture that fills the execution gap between global supply and local demand.





Risk-sharing structures

The efficient use of public capital to crowd-in private finance should be a key aim of governments and development finance institutions everywhere. Grant funding has its place but should be limited to those circumstances where cashflows are impossible to generate.

Public capital must be deployed with caution, both to avoid potential inflationary impacts and to maximise private co-investment. By taking a first-loss or guarantee position, public capital reduces financing costs and enhances credit ratings. As mentioned above, diverse risks, including political, credit, currency and construction risk, prevent institutional investors, banks and equity providers from investing in emerging markets.. Whilst there are several products available that cover these risks, such as Multilateral Investment Guarantee Agency's (MIGA's)¹¹ these are yet

to be deployed at the scale required. Default rates are roughly 2% higher on infrastructure projects in emerging economies compared to those in developed countries, but recovery rates are similar at around 75%¹². This further demonstrates the need to clear hurdle rates at the outset of projects - and public capital can be deployed to do that, leveraging in private investors and then being recycled once the projects are operational.

Furthermore, governments have a toolbox of options alongside capital deployment that they can leverage. Creating a long term and stable policy environment is also key to providing confidence to private finance. For instance, ensuring a consistent application of planning law or the creation of enterprise zones are ways to increase investor confidence.



The Just Energy Transition Partnerships (JET-Ps) have not proven to be the catch-all solution to the challenge they were once hoped to be. The benefits of this solution, to a very complex challenge were overstated and subsequently over-criticised; this binary thinking is not helpful. The JET-Ps should be seen as a first step and one of the successes they have had is in breaking new ground and providing valuable insights to the next iteration – we need to keep learning. Aligning new institutions and innovations like country platforms will be key to success, as will ensuring this alignment is prioritised over the modus operandi of financial institutions to deploy capital quickly.

Aligning new institutions and innovations like country platforms will be key to success.

A just transition requires a bottom-up approach that ensures capital from development finance institutions is both country and demand driven and that where necessary “project one”, entirely publicly financed, leads to “project ten” that is privately financed. Furthermore, these projects are a portfolio of everything that is required and so will include those projects that might not have a market-level commercial return but are delivering a tailored just transition in-country. This will necessarily mean that within the multilateral development bank landscape there needs to be a recognition that some investments may be environmentally and/or socially transformational and have lower returns, but this is counterbalanced by taking a portfolio approach to both returns on investment and impact.



Insurance products, particularly index based or parametric solutions, also have a role to play. With parametric insurance, the pay-out is linked to a loss-causing event occurring, not the actual loss sustained as in traditional insurance. These products will therefore pay out if income loss is incurred due to cloud cover over a solar field or drought leading to crop loss¹³. Where first-of-a-kind technology is being deployed, which by definition lacks historical performance data, insurance can pick up the risk of technology performance and its impact on economic outcomes¹⁴. This can unlock the capital required and speed up time to market.

Bringing more projects into the financeable universe of private capital is where the just transition can be realised. Private sector actors can integrate justice elements into their project design and thereby internalise this process and incorporate it into the package of projects being financed. Separating out those projects that might not have a market-level commercial return but are delivering social benefits or securing local jobs exacerbates the challenge and so public development finance should mandate these elements being included in the portfolio. It will increase the cost of financing at the outset, but

overcoming these challenges should be the focus of public capital and in the long run this investment will pay-off – for instance, in nations with low broadband connectivity, connecting schools to the internet has the potential to grow GDP by 20%¹⁵. In a similar vein, retraining and reskilling programmes (such as those offered by the United Nations Institute for Training and Research)¹⁶ in emerging economies may not result in a return on investment immediately, but manifest in economic terms over time.

In nations with low broadband connectivity, connecting schools to the internet has the potential to grow GDP by 20%

The challenge is the route to scale. Innovative transactions like JETPs and MIGAs referenced above, must be a catalyst to attracting private capital at scale.

Institutional landscape

In any transaction, money moves between counterparties and with respect to developing markets and global investors, there is an execution gap that needs to be filled to get capital to flow. For example, to move beyond one off transactions, with high friction costs and low throughput from private investors to scalable sector transitions, we need to align multiple stakeholders and counterparties. This includes, for example, ensuring that project developers have adequate technical assistance. There is also a need for both financial sector policy and sectoral policy designed to provide a clear enabling environment. Finally, where policy isn't enough, development finance may be required alongside demand side guarantees.

All elements in the value chain need to be aligned before capital can flow. Doing so is ultimately what completes blended finance deals. The challenge is that there are so many counterparties in the chain.

The situation is compounded on the demand side. Governments may have political objectives that point towards the just transition, but they don't have the means to transpose these into a scalable pipeline of investible opportunities. Either they work with stakeholders to create one-off transactions that deliver both capital and impact, or investors cherry pick projects – generally the ones with fewer or no just transition challenges, leaving the difficult or less commercial projects and sectors to public capital.

The solution is to recognise that aggregation and working at scale is not the challenge - but the solution. Only at scale can you align sector policy with development finance and demand side support to create investment pathways that private capital can access. Only at scale can you 'bake in' just transition requirements across the entire transition to avoid cherry picking, whilst bearing down on friction costs.





To deliver this scale we need to both reform existing institutions and create a new sort of counterparty.

On the former – existing institutions require their institutional mandates to be reformed to give effect to the risk sharing arrangements that will mobilise sufficient capital and foster the development of new products and services. Existing institutions – such as the World Bank, Green Climate Fund (GCF), Brazilian Development Bank etc. – are at different scales of engagement, which are all intended to deliver some of the challenges outlined above. However, in order to solve these challenges, they need expanded mandates and ambition to do finance differently; in essence, to take on the appropriate level of risk required to address the systemic risk we are collectively facing. For example, reaching 1.5°C-aligned “finance flows” would intellectually require that every institution should have their mandates adjusted to consider the set of risks, shift the transition-related processes they bring up, and filter this through their systems. This will allow existing organisations to transition from compliance with standards, to the true mobilisation of resources.

On the latter, an organisation with private sector skills and a public sector mandate can develop financeable sectoral transition plans at scale. Instead of an institutional investor working to align multiple public sector stakeholders and development finance providers, a new institution can do this. What is presented to the investor is a strong pipeline, with clear enabling policy and where necessary concessionary finance provided either by a third party with an aligned mandate (such as a green bank or fund) or the institution itself. Similarly, a third-party can also ‘bake in’ just transition requirements from the beginning, across an entire sector not just a one-off transaction. By bringing private capital into the process earlier, it would facilitate brokering scalable approaches that deliver adequate risk-return profiles for private capital, and public policy outcomes for governments and their citizens.

We are currently relying on a highly fragmented landscape of actors to deliver this, leading to sub-scale, high-cost finance. To solve it is to recognise we need new kinds of institutions that can align stakeholders and build scale.

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- 15 <https://www.unicef.org/eu/press-releases/connecting-schools-has-potential-boost-gdp-20-percent-worlds-least-connected-nations>
- 16 <https://unitar.org/about/news-stories/news/call-applications-developing-essential-digital-skills-women-and-youth-africa>



What next for transition finance? Roles, responsibilities and getting practical

Roles, responsibilities and getting practical

Over the past 12 months, the term ‘transition finance’ has paradoxically become both better understood and increasingly muddled. Debating complex topics is healthy – but given the urgency of the transition, the focus of this debate does need to narrow down to answer two key questions. First, how to secure the capital to finance the transition to a net zero carbon, nature-positive and resilient global economy. Second, which firms and geographies are best placed to develop the technology, infrastructure and natural capital needed to achieve or enable this and therefore to be the recipients of this transition finance.

Much of the transition finance debate is being conducted through the lens of whether incumbent corporates can pivot their business models to be Paris Agreement alignment¹ – and the role of financial services in supporting that journey. This misses several important challenges. First, a one-size-fits-all approach to Paris alignment will not be accepted by emerging markets and developing economies (EMDEs) and may be very difficult to implement for any organisation with assets or financing assets in high-emitting EMDEs. It also misses the challenge that new transition-enabling businesses are facing: in the UK and Europe there is a “missing middle” tranche of capital to put into these businesses to grow them beyond the venture capital phase. As a result, these organisations may either fail or migrate to other markets where this capital is easier to find because the underlying economic and policy conditions make these investments possible.

A Green Finance
Institute paper written
in partnership with:



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Bridget Beals

Independent

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this report.**

There are also sectoral differences: the challenges for producers of fossil fuel are very different from those of fossil fuel users. For example, the transition away from fossil fuels will depend on their falling demand and the move of the entire energy system to alternatives².

In fossil fuel using sectors, such as steel-making, cement and chemicals, the ability to transition will rely on a supportive policy environment, access to cheap and plentiful green electrons and a robust strategy driving investment in R&D, new plants and skills. Increasingly, new start-up disrupter businesses – incentivised by access to governmental funding and supported by venture capital, including in some cases incumbent supply chain investment – are leading the charge³. It is not enough though. The latest data suggests that only about 10% of the deployment of low-emissions technologies globally by 2050 required for net zero has been achieved.⁴

The Transition Finance Market Review (TFMR) is developing recommendations on transition finance, including consideration of: Leveraging the Green Finance Institute's work on how public and private finance can be deployed in transition contexts to create investable opportunities; and setting out what contributes to making finance capable of being classified as high integrity transition.

This is important work. It is being done against a constantly evolving backdrop of voluntary sustainability standards and regulatory expectations around transition plans and taxonomy-based reporting. As this settles down, they should support

firms to develop credible transition plans that get into the detail of how business models will need to change to meet meaningful and substantiated targets.

For both incumbents and disrupter firms driving the transition, access to catalytic capital to support innovation; develop and grow new businesses/ business lines; and bring new green infrastructure solutions and products to market will be key. In the UK, the launch of a National Wealth Fund (NWF), which will provide £7.3bn in flexible catalytic capital to attract private investment into green steel, green hydrogen, carbon capture utilisation and storage (CCUS), port decarbonisation and battery gigafactories, is an important innovation in the transition finance space. The NWF intends a targeted approach to risk-sharing with the private sector. Alongside insurance product innovation to address, for example, technology performance-related risk, it could be a powerful model for other countries to consider, complementing incentives such as the US Inflation Reduction Act as a means to attract private co-investment to support the transition.

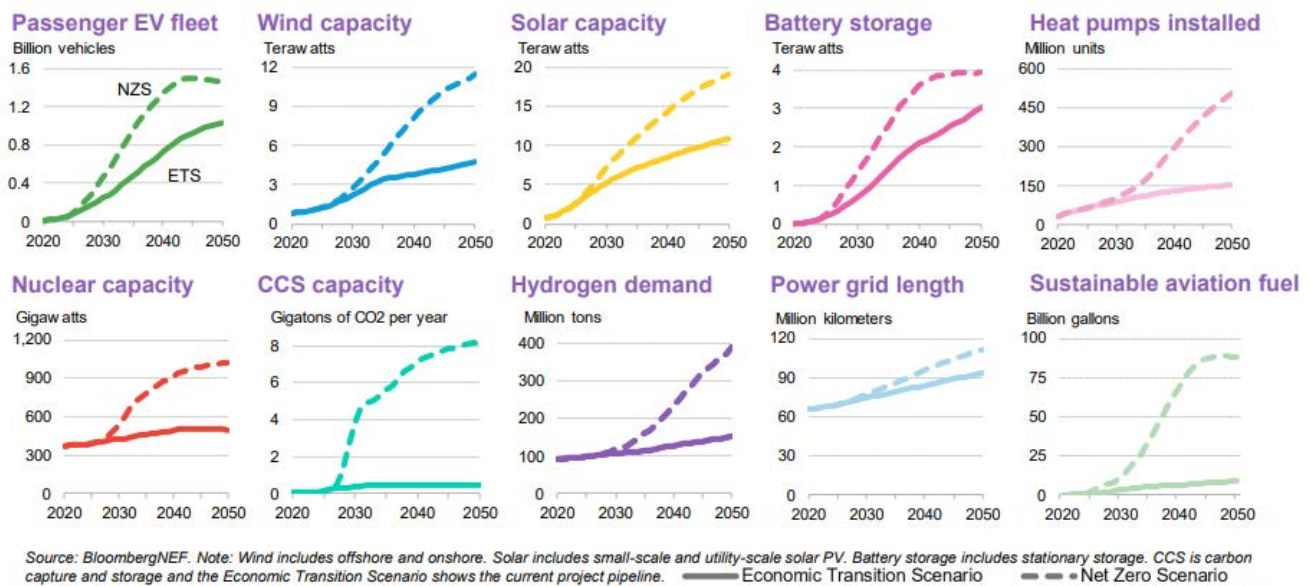
This note sets out a view on the outlook for high-integrity transition finance at the product and company levels, drawing and then building upon insights shared at a closed-door discussion held during London Climate Action Week (LCAW) with leading finance practitioners and experts.

Supporting project-based transition opportunity

Increasingly discussion on transition finance turns to the topic of finance for clean and green tech solutions (also confusingly known as 'green finance'), which are central to decarbonising the global economy. As banks become more adept in integrating climate change into their risk management approaches, so attention is turning to the opportunity side of the equation.

Progress is being made. According to Bloomberg New Energy Finance (BNEF), in 2023, US\$1.8 trillion was invested in the energy transition but ambition still needs to radically increase. Out to 2030, the US\$5.4 trillion required globally needs to focus on scaling well-understood solutions such as electric vehicle (EV) deployment alongside more batteries and wind and solar capacity (see Figure 1)⁵.

Figure 1.

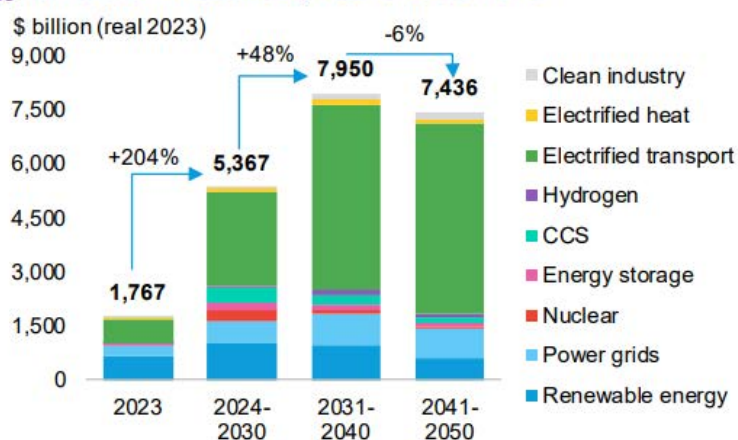




From 2030, novel technologies including Sustainable Aviation Fuel (SAF), Carbon dioxide removals (CDRs) and hydrogen are needed. Thus, of the US\$5.4 trillion needed per annum to deliver progress on the energy transition to 2030, the majority – 70%-75% – will go to technologies such as renewables for which business models are understood, technology is proven and projects are considered bankable. The remaining 25-30% pertains to harder-to-abate sectors such as aviation, shipping, agriculture and industry – both in supporting the largely new entrant technology providers through their commercial development process, and in new and incumbent firms in deploying first and nth of a kind technologies.

The latter won't be achieved purely through a disclosures regime – although this can help. Instead, the focus must be on enabling deal flow created through good policy design and catalytic public finance that can address the 'missing middle' tranche of capital issue and unlock private investment. Finding ways to bridge this gap offers an obvious opportunity for markets, including but not limited to the UK, which have a strong cleantech start-up ecosystem (See Figure 2).

Annualized energy transition investment, Net Zero Scenario



Source: BloombergNEF. Note: 2023 shows actuals. Excludes investment in fossil-fuel processes and power and conventional energy, and spending on ICE vehicles, which are not captured in 2023 investment figures reported in BNEF's Energy Transition Investment Trends report ([web](#) | [terminal](#)). CCS is carbon capture and storage.



Institutions are key to creating effective risk-sharing frameworks to support transition.

To accelerate the pace of the transition and the amount of capital deployed to support it, new ways of working are needed. The public sector needs to work far more closely with the private sector to address the 'missing middle' capital tranche issue. A trifecta of appropriately mandated and staffed public finance institutions, a robust revenue model and a wider enabling policy environment are key public sector levers⁶. On the flipside, private sector levers include building out of market experience in creating and sequencing effective solution stacks for transition financing, capacity building amongst early-stage solutions providers and private capital so each understands better the other's worldview, capabilities and expectations, and fora or institutions (like Green Finance Institute) that can inform market understanding, input into relevant policy and pilot new approaches.

One notable deal that points to the way forward is the private placement of H2 Green Steel in Europe this year, which has raised about €1.5bn in equity from an investor

group led by Altor, GIC, Hy24 and Just Climate. The round will finance the world's first large-scale green steel plant and Europe's first giga-scale electrolyser. H2 Green Steel has raised €3.5bn in senior debt and up to €600m junior debt facility with the crucial support of public finance including the following:

- A €250m grant agreement under the EU Innovation Fund, which supports innovative projects that aim to speed up the decarbonisation of European industry and accelerate the green transition.
- A green credit guarantee from Riksgälden (Swedish National Debt Office) that has covered significant amounts of the private finance provided to H2 Green Steel.
- ECA covered financing through Euler Hermes, which helped to further de-risk the project for private lenders.
- Support from the European Investment Bank (EIB).

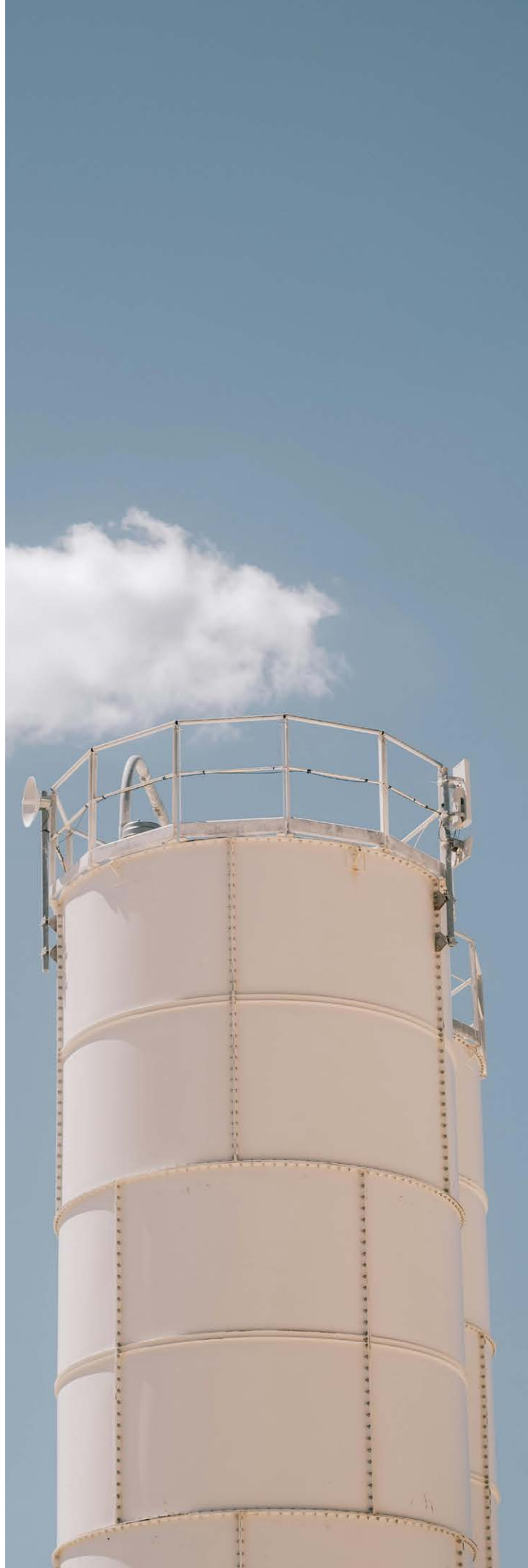
Taking a classic project finance approach, modified to the needs of the project (financial structuring, debt sizing, structuring around conditions precedents proving technical ramp up etc), proved successful, with a total of €4.2bn in debt finance being secured.

This example shows how public finance can be used to mobilise larger quantities of private finance in support of innovative new green technologies that help to decarbonise hard-to-abate industries.

In another example, in March 2024, Sunfire announced it had secured more than €500m to accelerate the growth and industrialisation of its green hydrogen technologies.

Sunfire announced it had secured more than €500m to accelerate the growth and industrialisation of its green hydrogen technologies.

The transaction included €215m raised in Series E equity financing from new and existing investors. The company also secured a term loan of up to €100m provided by the EIB, of which €70m has been signed with the help of InvestEU finance, to support Sunfire's development of solid oxide electrolyzers. This is in addition to €200m of undrawn grant funding to support Sunfire's growth. The financing makes Sunfire one of the best capitalised electrolyser manufacturers in the industry and will support Sunfire in developing electrolyzers to produce green hydrogen more efficiently and cost-effectively for industry processes, replacing the use of fossil fuels in high energy consuming sectors like chemicals and steel.





More dedicated catalytic public finance capability and capacity of the type provided in the H2 Green Steel and Sunfire examples are needed. Examples of this type of institution and risk appetite include the UK's newly announced NWF⁷. The NWF will address the current funding gap for green investment projects that are not being funded by private investors. The fund will likely be most additive by investing in nascent technologies or projects at the initial stages of market development, to address risk and reduce private sector barriers to investment. Focused on supporting the UK's transition to a low-carbon economy by mobilising private investment, the NWF needs to be understood as a sovereign-backed green catalytic fund rather than a sovereign wealth fund, which are typically larger in scale and invest for purely financial objectives. The NWF must therefore be designed to address various sectoral risks presented (technology maturity, regulatory certainty etc) through well-structured risk-sharing solutions. These need to be co-developed with policymakers and the market – taking a flexible approach to provide first-loss debt, equity or guarantees as appropriate to the sector/ technology being considered.

The NWF itself was based on leading international comparator funds such as the Canada Growth Fund and Australia's Clean Energy Finance Corporation – a recognition of the growing understanding among public policymakers of the need to create these types of institutions to work flexibly with the private sector on what is a dynamic and ongoing financing opportunity and challenge.

This needs to be done alongside the process of developing an enabling policy environment that can include demand-side financial incentives and mandates as well as supply-side measures to accelerate planning and permitting timescales.



The potential transformative role of insurance

In addition to catalytic public capital, insurance is increasingly being seen as a means to transfer risk from the capital markets to the insurance markets. Providers such as New Energy Risk (NER) and Howdens are already developing a range of solutions to complement public sector de-risking solutions and we need more entrants into this market. For example, technology performance insurance can be deployed to address performance risk in the operation of a technology by guaranteeing a level of production sufficient to meet debt servicing or by supporting the warranty obligation of the insurance provider. This type of

specialist insurance can be used to facilitate financing. It unlocks EPCs (engineering, procurement and construction turnkey contracts) from technology providers that, in turn, can unlock access to debt financing. This moves insurance away from being an annual procurement exercise to a long-term partnership to support developers bringing first-of-a-kind projects to market.

More interaction between debt capital providers, specialist insurers and developers is needed to unlock the full potential of insurance solutions – which indicates a further skills and knowledge gap that will need to be filled.



Effective policy design, including but not only offtake, is also key

Whether transition finance is secured at the project or the corporate level, across the board, planning and permitting, grid connections and access to catalytic capital and competitively priced green energy as well as offtake agreements will be key⁸.

Offtake agreements are a key condition for investment across the clean infrastructure space. Current policy support for green investment tends to be relatively short-dated with limitations in regulatory frameworks to drive demand, particularly for novel technologies. This is compounded by a lack of established and creditworthy markets for low-carbon products resulting in an absence of long-term bankable offtake contracts needed to secure project financing. Here, mechanisms such as the revenue certainty mechanism being developed for UK SAF – or the contract for differences (CfD) being developed for CDR and hydrogen are key enablers.

These need to be complemented with measures to address value chain readiness, pre-empting timing delays by ensuring consenting, enabling infrastructure and dependencies between production and offtake assets are aligned. Robust domestic supply chains in an increasingly tight global market and a sufficiently skilled workforce and established enabling infrastructure (e.g. Transport and Storage Infrastructure) are also key and all need to be coordinated.

All of this means that catalytic institutions, insurance products and capital, while important, are not a substitute for but rather a critical complement to enabling policy design and delivery. This is the type of granular bottom-up work the Green Finance Institute does with the market to understand what is stopping capital being provided to green and transition technology solutions and devising market and government-led solutions to overcome them – and which needs to be replicated across sectors and geographies.

High-integrity corporate transition finance

As set out in Green Finance Institute's 2023 LCAW ['What next for Transition Finance?'](#) article, great care needs to be taken when providing what the Glasgow Financial Alliance for Net Zero (GFANZ) calls category 3 finance to 'assets/ companies committed to transitioning in line with a 1.5°C pathway'⁹. These firms potentially have a key role to play in the future net zero economy and include industrial firms producing steel, cement and chemicals, for example. For these firms, financiers may ultimately find routes to support any capital expenditure to facilitate transition through providing business-as-usual corporate debt and equity financing and classify it as transition finance. This would respond to the preference of borrowers to use general-purpose finance and not be constrained by the administrative burden of use of proceeds structures. However, it currently raises greenwashing risks on both sides that need to be robustly addressed to ensure that such transition finance is indeed financing the transition before either side will be comfortable with this approach.

Mainstreaming transition planning has the potential to be very helpful in addressing this challenge. Entity level metrics that borrowers, lenders, and standard setters are comfortable with will also be needed. Until that happens, the logic of current ways of working means that borrowers will often elect to use general-purpose facilities for transition-focused investment instead of labelled transition or green finance - and there will be no reliable way for financial institutions or governments to assess accurately how much of that general purpose finance is invested in transition activities.





In the face of great uncertainty over how the transition will unfold globally, a principles-led approach to disclosures of the sort set out by the Transition Plan Taskforce (TPT) seems preferable to a more prescriptive approach in assessing the performance of companies on their transition journeys at an entity level. However, the devil is in the detail.

The UK has yet to see many high-quality TPT-aligned transition plans published. This should not be surprising given the disclosures framework was only published in October 2023 and sector guidance in April 2024 and remains voluntary at present. Challenges experienced include the significant strategic changes inherent for companies and the systems-level adjustments required. For example, companies may have limited clarity on what percentage of revenues come from which activities (particularly where these are co-located) and what volume of capital has been allocated towards the delivery of the components of the transition plan because this is not something they have previously considered. This points to the growing pains of using TPT-aligned transition plans as a ‘kite mark’ for credible entity-level transition finance – similar issues have arisen with entity-level reporting in respect of taxonomy alignment. There are also legal risks associated with the use of transition plans, which rely on forward-looking assumptions that are reliant on several external factors. Regulators can alleviate these by allowing for a certain degree of flexibility and “safe harbour” provisions.

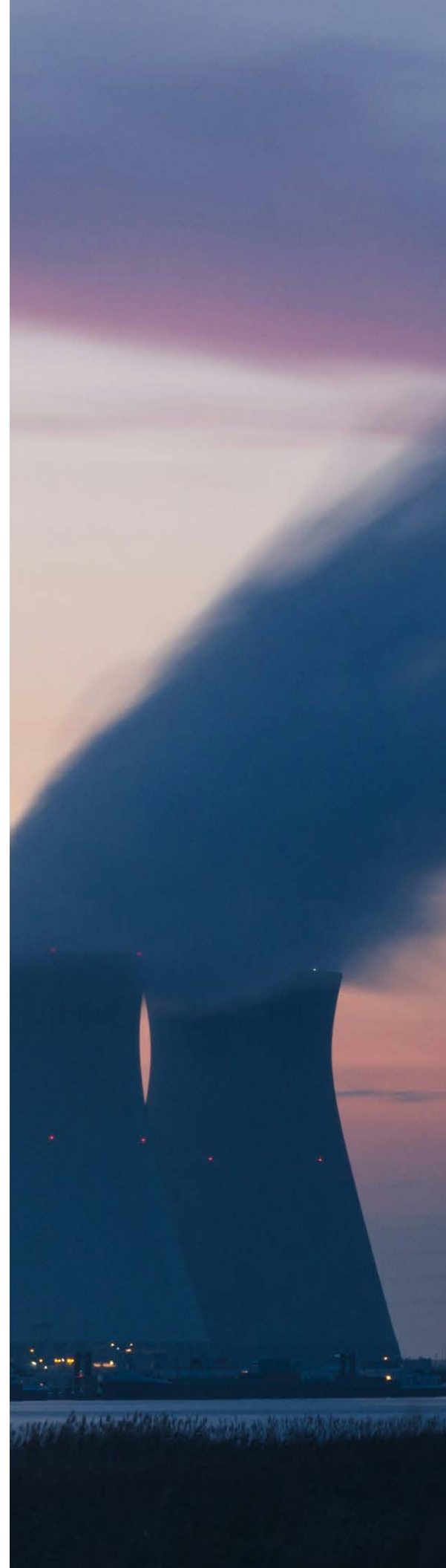
If TPT-aligned transition plans are in time to play this role, they will need to incorporate both timebound strategic and operational business changes which need to be executed to deliver the plan, alongside integrated and detailed climate-related financial disclosures, relating to R&D and other capital expenditures (incurred or planned) for green or transition activities. In addition, the amount of revenue aligned to these activities will need to be

tracked over time, as determined by accounting Key Performance Indicators (KPIs) appropriate to the industry being assessed.¹⁰ These KPIs should be unpinned where possible by taxonomies or other appropriate metrics.

These transition plans can then be scrutinised by investors and financiers, who can use them to inform their stewardship activities and company valuations. Transition plans will continue to evolve as company strategies develop and economic conditions change, which underscores the need for flexibility and regular updates. As we move towards this end state, plans will also inevitably vary in quality so, while they are a useful resource for demonstrating corporate capability and execution, it will be important not to overly rely on them in the short-term and it is reasonable to assume that they will need to be considered alongside other elements, such as historical emission reductions and CapEx spent or stipulated in business plans.

Sticks and carrots will need to be used to encourage uptake. Learning lessons from the sustainability-linked loans market, banks supporting these companies should seek to base terms of debt financing on clear, material and measurable performance objectives over time. This will contribute to accountability on the part of clients to achieve their goals while also supporting incentives for clients to raise capital for the transition.

To be able to assess the credibility of these transition plans, both banks and asset managers/ owners will require an increase in users' understanding of the nuanced transition pathways; this is driving calls for country-level transition plans, which can look very different across jurisdictions. In the absence of these being in place, or being at odds with a firm's view on whether and how the scientific imperative to halve emissions by 2030 is delivered in practice, a taxonomy can be a helpful proxy tool (since taxonomies seek to set out a set of Paris Agreement-aligned activities as each jurisdiction defines that) in conjunction with a credible sectoral pathway assessment e.g. as described by the IEA to assess ambition and alignment of specific economic activities with a 1.5°C future.





The fly in the ointment?

Transitions are disruptive and uncertain but the global endpoint target of Paris Agreement alignment should be clear, given – as noted above – the plethora of taxonomies in place around the world. Collectively financial institutions reflect the economies that they finance and the uncertain trajectory of the transition of those economies. It should not be a surprise that financial services firms and corporates alike cite concerns about how disclosures focused on financed emissions or emissions reductions targets open them up to litigation and reputational risk if, despite best efforts within their sphere of influence, targets are not met. This also over-emphasises one metric: there is a need to move to a more nuanced approach of looking beyond financed emissions to focus on how capital can be allocated to the necessary transition technologies to drive emission reductions.

Here roles and responsibilities are key. To support the growth of high-integrity transition finance, regulators will need to consider mitigants for the concerns raised. These include firms clarifying which elements of their plans are within their own power

to achieve, versus those which rely on government or other stakeholder (e.g. supply chain) action, and for those firms to provide greater transparency regarding what they are doing to positively promote policy or economic change in support of net zero aligned outcomes. Asset owners – as investors with a longer-term focus¹¹ – should be particularly vocal in calling for this. Careful attention needs to be paid to managing any unintended consequences or conflicts of interest, that may arise¹³. Mechanisms for rating transition plans – with transparent scoring methodologies and broadly comparable ratings – and for robust assurance of plans will need to be developed, to support the integrity of transition finance products that will form part of the market alongside general corporate funding.

Finally, it is worth flagging at this juncture that even 1.5°C is an adaptation scenario and that not just mitigation but adaptation efforts need to be factored into transition plans. Some experts, including BNEF, have suggested that 1.75°C is a more realistic goal – which brings with it further physical risks that need to be mitigated.



Next steps

Speed is of the essence. This note seeks to provide some insights into the roles that different public and private financial services and corporate actors can play to increase the supply of finance that will materially accelerate the transition.

With global temperatures already at 1.26°C above preindustrial levels, radical change is now needed to roughly halve emissions based on 2010 levels in the next five to six years and move to net zero by 2050, if the Paris Agreement goal to limit global temperatures is to be met. Wide transition definitions are dangerous and confuse this

important discussion. However, there are also dangers associated with the search for a perfect definition. To genuinely finance the transition, the focus should be on creating the policy frameworks which will enable the development of industrial activities and solutions necessary for the transition and in turn attract the debt and equity needed to deliver both asset specific first of a kind project and infrastructure finance, support companies with raising corporate finance to deliver on credible transition plans, and provide patient growth capital for next generation clean tech providers.

Endnotes

- 1 By which we mean aligned to keeping warming to well below 2°C with efforts to pursue no more than 1.5°C
- 2 See for example analysis by RMI at <https://rmi.org/insight/how-past-energy-transitions-foretell-a-quicker-shift-away-from-fossil-fuels-today/>
- 3 For example, in 2021 IAG invested venture capital in LanzaJet (SAF producer) and in 2022 in ZeroAvia (Hydrogen powered aircraft) as a strategic investment into supply chain decarbonisation. In a subsequent VC round in 2023, Airbus invested in ZeroAvia.
- 4 McKinsey, <https://www.mckinsey.com/industries/electric-power-and-natural-gas/our-insights/the-energy-transition-where-are-we-really>
- 5 Bloomberg NEF, From Dispelling Myths to Taking Meaningful Action, June 2024
- 6 This must address first of a kind technology plus construction and commissioning risks alongside the price and volume of risks that come with selling novel green products.
- 7 <https://www.gov.uk/government/news/boost-for-new-national-wealth-fund-to-unlock-private-investment#:~:text=The%20National%20Wealth%20Fund%20will%20reshape%20the%20way%20we%20approach,new%20jobs%20across%20the%20UK.>
- 8 These were issues, perhaps uniquely, not faced in the H2 Green Steel example which benefitted from access to clean and cheap green power. The deal also benefitted from an experienced leadership team that secured offtake agreements with a client network with their own net zero goals predicated on access to green steel supplies and sufficiently confident of being able to pass costs onto their own consumers due to the EU's carbon border adjustment mechanism (CBAM) being in place.
- 9 <https://www.gfanzero.com/our-work/financial-institution-net-zero-transition-plans/>
- 10 For investment banks for example, advisory services and debt provision to credibly transitioning companies will be more useful KPIs than financed emissions overall.
- 11 As compared to asset managers that are incentivised to outperform benchmarks and peers in the short term to retain mandates.

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What next for nature finance? Bolstering demand drivers to mobilise private sector capital and corporate action for nature

A Green Finance
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Nature-related risks are financial risks. Water shortages can cripple manufacturing and energy sectors. Soil health decline can deplete crop yields. Beyond physical risks, reputational damage and litigation costs due to pollution or deforestation can cost companies millions of pounds.

In the UK, recent analysis curated by the Green Finance Institute (GFI) and delivered in partnership with University of Oxford, UNEP-WCMC, and University of Reading shows these risks, born of nature degradation at home and abroad, could lead to an estimated 12% reduction to UK GDP in the years ahead – larger than the hit to GDP from the global financial crisis or Covid-19. Day-to-day nature degradation alone could wipe out 3% of UK GDP by the end of this decade.

Over 400 organisations globally have now committed to report against the TNFD recommendations by financial-year-end 2025.

Managing and mitigating these risks is good business and makes economic sense. The recommendations and guidance of the Taskforce on Nature-related Financial Disclosures (TNFD) have been essential in improving businesses' understanding of their own dependencies and impacts on nature and the risks and opportunities these create for their organisation. Over 400 organisations globally have now committed to report against the TNFD recommendations by financial-year-end 2025.



Boards are often choosing to develop TNFD-aligned reporting because they anticipate that it will become a mandatory regulatory requirement, or because their investors are requesting it. Despite the evidence, few boards outside of the agriculture and water sectors believe that the financial risks and opportunities posed by nature are material to their business.

As a result, corporate action off the back of disclosures is lagging. Only 9 businesses have published strategies to shift to practices with lower impacts on nature under the Now for Nature campaign.¹ Even fewer have published investment plans to maintain and restore the natural environments on which they depend.

Economic resilience and prosperity depend on the delivery of national and international targets for nature, such as those laid out in the Global Biodiversity Framework. In order to meet these, we will need to build on – and move beyond – assessments and disclosures to making a sufficient contribution to nature-positive outcomes.

This requires making even clearer the business case for avoiding and reducing harm to nature and conserving and restoring the natural environment. Businesses require clear paths for action.

With these, businesses will be equipped to translate their exposure to risks into financial opportunities. The World Economic Forum goes as far as to say that such a transition could generate \$10 trillion in annual business value and create up to 395 million jobs by 2030.

At a closed-door discussion during London Climate Action Week (LCAW), leaders across finance, construction, fashion, agri-food, water and energy identified eight actions to unlock corporate action to avoid and reduce harm to nature and conserve and restore it. The barriers are in many cases analogous to those faced in the early days of climate change action, and there are lessons to be learned from how corporates, financial institutions and governments collaborated to start to tackle climate change-related risks.

First, businesses need to start their journey on nature by considering the outcome they would like to see, not the disclosure they could make.

Leading CEOs and boards have taken a highly strategic approach to TNFD assessment and reporting. They started by asking: “how can this generate value for my business?” and “what actions can this inform?” From here, they focussed on the components of the TNFD framework that directly inform those actions. In doing so, they ensured that they invest resources into assessment and disclosure where it is most helpful and decision-useful. This maximises benefits and minimises costs, building a strong business case. If more businesses take this approach, they will build stronger ExCo and board support and move more rapidly to action.

Second, businesses should start now; we don't need to wait for more guidance. New definitions, metrics and datasets relevant to nature are published every quarter.

Some businesses see this as a reason to delay action. Yet the resources currently and publicly available including the TNFD disclosure recommendations and guidance and SBTN target-setting guidance, as well as tools such as the ENCORE database and WWF risk filter are sufficient to identify a business' most material impacts and dependencies on nature. This is enough to understand where action to avoid and reduce impact on and conserve and restore nature can start. Early experimentation can help prioritise efforts, upskill teams, develop datasets, and already provide useful insights for strategy, risk management and asset allocation decisions. Methodologies and data will continue to develop for many years to come. Waiting for “the dust to settle” risks being unprepared.





Third, businesses need to upskill on nature to use and understand the wide range of data already available today. Understanding how to reduce a business' impact on nature and build its resilience requires a new set of skills that many don't currently have. For example, as nature impacts and risks are highly localised, sustainability teams often need to work with geospatial data. There is a broad range of data currently available on the health of natural ecosystems. However, it often takes specialist skills to access, clean and use this data. Businesses interested in insetting², for example, may need ecological expertise to help identify where nature restoration can help build their resilience. Businesses should focus on identifying which skills are required across different corporate functions and consider where to acquire new talent and where to upskill teams to develop these. This will both help integrate nature into strategic decision-making across the business and improve the availability of data to underpin nature assessments.

Fourth, governments and scientists need to develop nature-positive sectoral pathways (NPPs) to demonstrate how businesses can build resilience and align with the transition. NPPs lay out the specific changes needed within a sector or system - and at what pace - to align with a government's nature-related targets following the Global Biodiversity Framework (GBF) and domestic policy. For example, what changes are needed across the agriculture, construction and water sectors over time to reduce local nitrogen and phosphorous build-up and ensure the continued supply of high quality, safe water. Businesses are demanding governments develop these pathways as they provide actionable steps that businesses can take to mitigate risks, build resilience and bolster growth. Businesses want to know what bad and good looks like. This can help unlock innovation by identifying nature-friendly technologies and business models that will underpin the transition. In doing so, it can also demonstrate how much capital will be needed across different sectors and technologies, giving the financial sector the confidence to develop product offerings to support it.



Fifth, governments need to develop a suite of policies to ensure the actions required in NPPs are economically viable and therefore investible. To underpin climate change action, governments have employed a suite of demand and supply side policies and incentives to support the development and uptake of low-carbon/zero emission technologies. These include, for example, emissions trading schemes, feed-in tariffs and innovation grants. For NPPs to drive action at scale, they will need the same policies and incentives that ensure the actions make financial sense for the private sector. Policy support will be required where actions and technologies are not net present value (NPV) positive.

Sixth, governments should integrate the private sector's voice into the development of NPPs and support uptake by sharing successful examples. To be effective, the pathways must be both science-based as well as practical. Businesses are keen to contribute by helping to identify which technologies and business models have the highest potential to be commercially viable while also avoiding and reducing impact on or conserving and restoring nature. In addition, businesses want to form a community of practice to learn from one another and understand real life examples of actions that they can take. For example, how manufacturers are working to reduce their water consumption and how construction companies are working with their suppliers to switch to more sustainable materials.

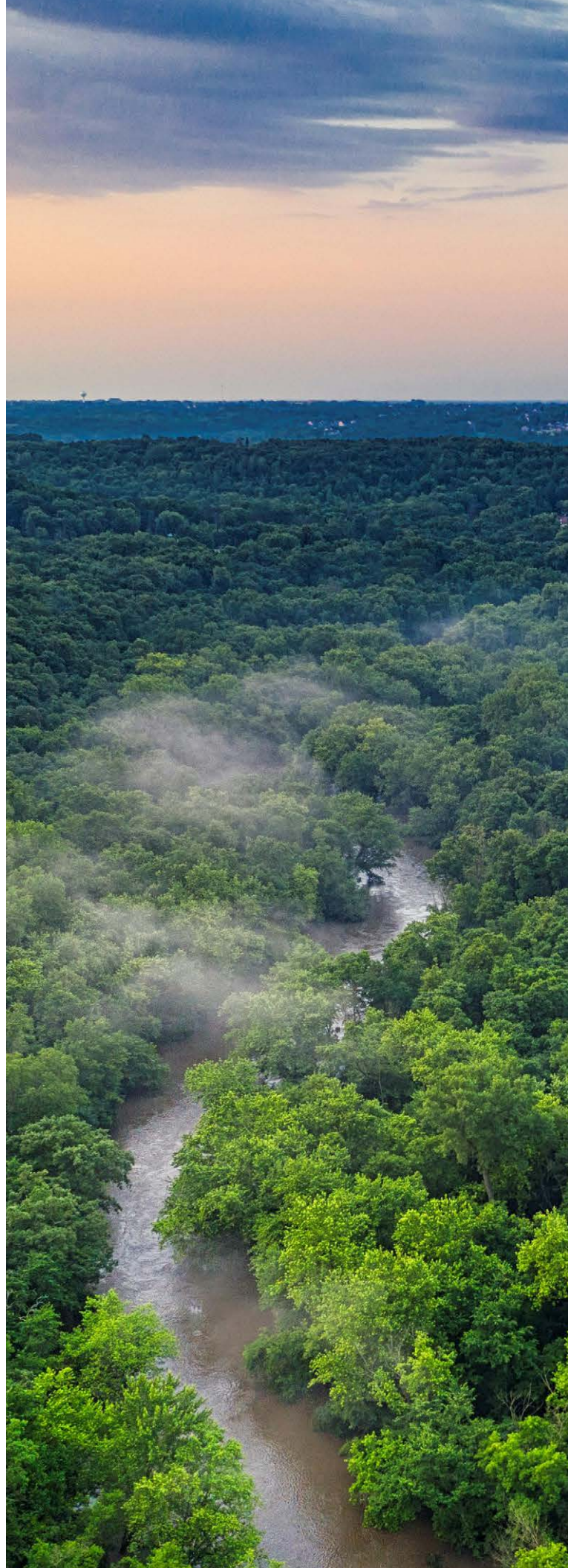


Seventh, governments should consider expanding compliance markets for nature impacts. Compliance schemes require businesses to mitigate as far as possible, and then compensate for, the negative impacts that they have on nature. There are several examples of existing schemes across the world including in the UK, USA and Colombia. Under the UK's Biodiversity Net Gain (BNG) scheme, property developers are required to mitigate their impacts on nature due to, for example, land use change and pollution, as far as possible. They must then invest in nature restoration either onsite or through an offsite provider to ensure an overall 10% net gain measured by a specific BNG metric developed for the scheme. While compliance markets may not be appropriate for all sectors and types of impacts on nature, they create a demand driver and can unlock investment into nature restoration from the private sector.

Finally, businesses, financial institutions and NGOs should work together to scale innovative financing mechanisms that enable payments for nature restoration across multiple companies and the value chain. Multiple businesses across different sectors can mutually benefit by sharing the cost of nature restoration schemes. For example, a reforestation project could help increase surface water run-off, improving water availability for local industry as well as filter and purify ground water, thereby reducing treatment costs for local water utilities. The project may not be NPV positive for any individual business, but it may be if they all share the cost. Financial institutions and NGOs can play an active role in identifying where there are potential nature restoration projects that provide financial benefits to multiple businesses and then helping to bring those businesses together and structuring appropriate financial instruments for the investment.

Assessments and disclosures are essential but not enough; concerted action is needed to transition to an economy that values and invests in nature and translate risks into opportunities. By following the actions above, businesses can turn disclosures into action and develop transition plans for how they plan to avoid and reduce their impact on and conserve and restore nature. Yet they need support from government through the development of nature-positive sectoral pathways underpinned by a suite of policies and incentives.

We are developing a programme of work to support this approach and develop nature-positive sectoral pathways for the UK. We invite potential delivery partners to get in touch to discuss how we can work together to accelerate corporate action to avoid and reduce impacts on and conserve and restore nature.



Endnotes

- 1 <https://nowfornature.org/strategies/>
- 2 The World Economic Forum defines insetting as “doing more good rather than doing less bad within one’s value chain” via “the implementation of nature-based solutions such as reforestation, agroforestry, renewable energy and regenerative agriculture.” (<https://www.weforum.org/agenda/2022/03/carbon-insetting-vs-offsetting-an-explainer/>)



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