

Greener industry

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01. Introduction

Climate change is the largest, most challenging crisis the world has faced, bringing increasing risk and uncertainty for society, and for the future of our planet. As a systemic risk like no other, there is an increasing urgency for governments, industries and communities to respond to the challenge, as well as the scale of opportunity it presents.

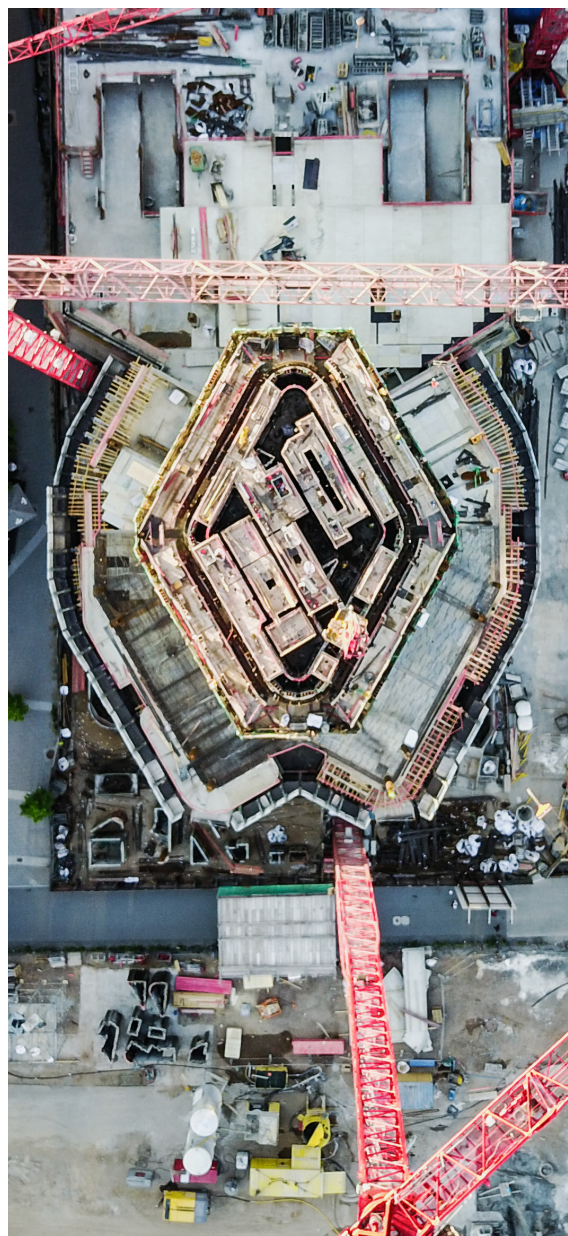
Governments and industries across nations are coming together to take action through a number of significant commitments and initiatives to accelerate the transition to net zero. In 2015, the Paris Agreement was signed by 197 countries in a bid to limit the rise in global mean temperature to 1.5C relative to pre-industrial levels. However, even if this ambitious goal is achieved, 1.5C of global mean temperature rise will result in significant risk implications across society.

The construction and finance sectors have undoubtedly contributed towards the increase in global carbon emissions. But they also both possess powerful tools to limit the impacts of climate change – and the global insurance industry is uniquely placed to help accelerate this transition.

There is no doubting the scale of the challenge. The construction industry contributes 39% of global carbon emissions, so the scale of opportunity to drive positive action and decarbonise is significant.

In construction, we are already seeing increasing integration of sustainable materials, buildings re-engineered to reduce energy consumption, and efforts to reduce reliance on fossil fuels.

More broadly, the rapid decarbonisation across economies and industries; the expansion of greener energies; and transitioning business models worldwide will require significant capital investments.



As innovation drives new technologies, materials and approaches, so too the insurance sector must innovate in its approach towards risk transfer products and services, helping carbon-intensive sectors make the transition towards climate-positive activities.

This is an urgent and once-in-a-generation opportunity for the global insurance industry to support and accelerate the transition towards a more sustainable, greener future. Importantly, the insurance industry has a significant opportunity to direct an increasing share of its more than \$30 trillion in assets under management towards climate-positive solutions and products.

Greener industry focuses on the construction and finance sectors, outlining the global pathway towards a lower carbon footprint and the challenges on that journey that require solutions and support. To address those challenges and drive forward supportive risk solutions, we have also set out a roadmap for insurance industry action which will be critical in fast-tracking global decarbonisation efforts and the transition to a low carbon economy.



02. Greener construction

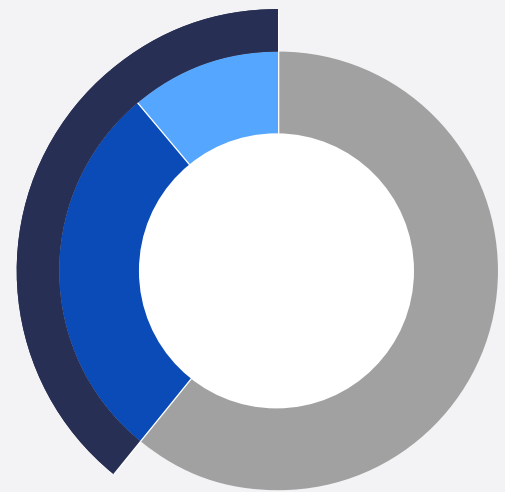
The current landscape

The construction industry accounts for 39% of the world's greenhouse gas (GHG) emissions. The World Green Building Council has called upon businesses, organisations, cities, states and regions to take immediate climate action towards decarbonising the built environment, with the ambition of all buildings being net zero by 2050, including both new constructions and existing building stock¹.

The Nordic region is a global leader in the development of green buildings; the region uses 30% more energy in buildings compared to the rest of Europe due to its long winters and larger living areas per person, yet the corresponding CO₂ emissions are 50% lower than the EU average.

This is due in large part to a larger share of renewable energy use, especially from biomass, together with stringent requirements for developers, contractors and suppliers to put green credentials at the heart of any construction activity².

Global greenhouse gas emissions in the construction industry



61% Other greenhouse gasses

39% Global greenhouse gas emissions accounted for by the construction industry

28%

Operational carbon emissions (from heating, cooling and lighting)

11%

Embodied carbon emissions (from the construction process throughout the whole building lifecycle)

¹World Green Building Council - The Net Zero Carbon Buildings Commitment
| World Green Building Council (worldgbc.org)

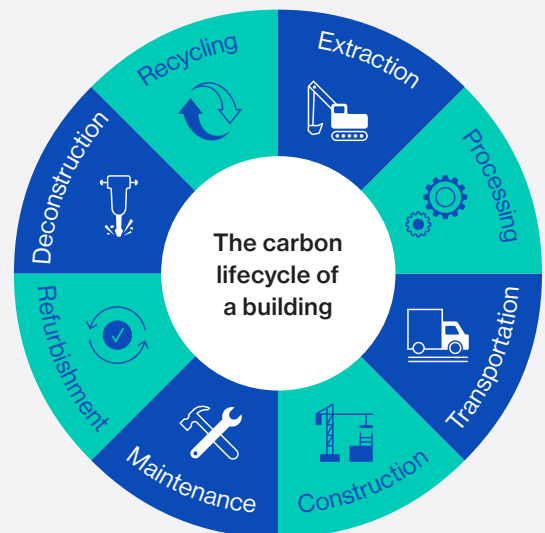
²The Explorer - Norway is greening the construction industry - The Explorer



Decarbonisation of construction

Efforts to decarbonise the construction sector are generally focused on two main avenues:

- Reductions in operational carbon, such as improving the energy efficiency of heating and cooling.
- Reductions in embodied carbon, including energy used to extract and process building materials; assemble and transport components; and construct, maintain, deconstruct and dispose of buildings, as well as the lifetime carbon footprint of the materials used.



Key obstacles and role of the insurance industry

Evolving construction and property risk landscape

The shift towards using more sustainable materials, new construction methods and energy sources has significant implications for the risk profile of a building, which need to be understood and priced appropriately by insurers.

Building standards are continuing to evolve, with construction firms increasingly seeking to utilise more sustainable materials and manufacturing techniques, in some cases with the ultimate ambition of achieving net zero carbon-building accreditation. Use of such sustainable materials

is likely to introduce additional risk factors; for example, concerns that some sustainable materials, including insulation materials, timber-based cladding, laminate timber and green roofing, may be more flammable than traditional materials. The repair risks associated with green buildings and/or sustainable materials can also be very specific and costly to resolve, particularly where sustainable materials may be less durable than traditional alternatives.

Increased awareness of the risks associated with these building methods will be crucial to ensure challenges are properly managed and to improve the resilience of the built environment to these risks. Many property developers are exploring new technologies such as 'Internet of Things' (IoT) devices to help understand their buildings' risk profiles and drive energy efficiency savings through improved consumer habits. Through working with customers, insurers can also help customers to understand the mutual benefits of such devices, such as through supporting early detection of issues which may lead to insurance claims, and help to accelerate their expansion.

Alternative construction methods such as offsite modular construction are growing rapidly. Such construction typically results in increased emphasis on the need for quality control at an early stage of the design process, and increased scrutiny on the interoperability of modular building materials with other construction materials, often resulting in a positive impact from a risk perspective on the safety of construction sites.



A key barrier to construction method innovation is the low profit margins typically achieved by construction companies, which tend to range between 2% and 8%, making it difficult for companies to invest in the critical technology required to innovate³.

Changing the energy source of a building also changes its risk profile. The UK Climate Change Committee estimates that around 34% of reductions in carbon emissions within the property sector come from energy efficiency measures, with a growing share attributed to low-carbon heating⁴.

The UK Climate Change Committee has recommended the phase out of high-carbon fossil-fuel and gas-powered boilers in new homes, commercial and public buildings from 2025⁵.

If these changes to property and construction risks are not understood and managed properly, this can create significant challenges and costs for both insurers and customers. For example, following the Grenfell fire in the UK, the UK building sector experienced a surge in insurance costs, with insurers also increasingly excluding materials such as cladding from professional indemnity policies⁶.

This creates a potential protection gap, acting as a significant deterrent to investment in innovation around greener building materials. Insurers will need to find the balance between providing insurance products that are reflective of the changing risk profile, at a premium which is not prohibitively expensive for new building owners and the construction industry.

The global insurance industry should leverage its data and claims experience to identify crucial gaps in property resilience and ensure these are addressed appropriately, and work with material scientists to properly understand the risk implications. Some insurers are taking steps to get closer to the design phase of buildings to support these challenges. However, given the lack of historic data for new materials and resulting reluctance from the market to provide coverage for certain materials (e.g. timber-based cladding), there could be a role for public-private partnerships to obtain the level of coverage required to facilitate growth of these materials on a meaningful scale.

³Designing Buildings - Top 4 challenges facing the construction industry - Designing Buildings Wiki

⁴The CCC - Sixth Carbon Budget - Climate Change Committee (theccc.org.uk)

⁵HM Government - The Ten Point Plan for a Green Industrial Revolution (publishing.service.gov.uk)

⁶Reuters - UK building sector hit by surge in insurance costs after Grenfell fire | Reuters

Decarbonisation of the existing property stock

A key challenge for the sector is the decarbonisation of existing property stock; around 80% of current UK homes for example will still exist in 2050, therefore there is a significant emphasis not just on new construction but also on retrofitting to improve energy efficiency⁷.

Costs and supply chain capacity are key challenges to retrofitting, for example to provide low-carbon heat pumps to existing homes. This challenge is compounded by the balance of policy costs between electricity and gas, which could make low-carbon options less competitive, as well as a potential lack of clarity as to who will bear the cost of retrofitting existing building stock. As a result, incentives to innovate and reduce the carbon footprint of a building beyond what is required by legislation are limited, with retrofitting activities most likely to occur only during major building alterations.



Common retrofitting activities for existing building stock



Upgrade energy and water systems to reduce consumption



Optimize recycling of demolition debris and construction waste



Consider energy efficient lighting using daylight and light sensors



Consider natural ventilation to reduce heating/cooling loads



Investigate renewable energy options



Replace existing windows with high-performance windows



Consider using a cool roof or green roof



Use a rating system (e.g. LEED) to gauge the building's performance



Install meters for utilities to monitor real-time consumption

The insurance industry can support with encouraging greater investment in decarbonisation initiatives through adapting insurance products.

For example, more readily including green and/or 'Build Back Better' clauses within property wordings can help to ensure that damaged properties can be rebuilt to standards aligned to a net-zero transition. This is similar in concept to 'building ordinance and law coverage' present in many property insurance policies, which pays for the additional cost of upgrading property to meet current building regulations.

⁷Wired - The climate crisis issue that no one is talking about?
Your gas boiler | WIRED.UK

The industry also has an opportunity to proactively lead the transition, for example by offering policy incentives for clients who decrease the carbon footprint of their home. There is precedent on which insurers can build – for example, many insurers have experience of providing credits to customers who have fitted freeze detection

devices and water flow sensors on their pipes. However, it is important that such solutions are balanced with an assessment of risk to ensure they do not lead to increased claims exposure if they are not reflective of the new risk profile.

Roadmap for action



The shift towards using more sustainable materials, new construction methods and alternative energy sources has significant implications for the risk profile of a building, which insurers will need to understand. Insurers should explore how to incentivise customers to lower the carbon footprint of their building(s), and/or more readily introduce 'Build Back Better' wordings in policies.

This should be balanced with understanding the risk profile of sustainable materials and new construction techniques, to ensure that the application of these does not ultimately result in increased claims exposure.

Through its role as chair of the Sustainable Markets Initiative (SMI) Insurance Task Force, Lloyd's has:

- Convened a workstream dedicated to developing and launching an industry-wide framework for greener insurance supply chains to drive sustainable outcomes for customers, including through claims processes.

In addition, Lloyd's will:

- Conduct targeted research to understand the risk profile of new construction materials and techniques, exploring the insurance implications and opportunities for new or evolved risk solutions.

Lloyd's and Marsh's commitment to addressing the protection gap for new construction materials and technologies

Lloyd's and Marsh are collaborating on a solution to managing innovation risks in construction through a test and learn strategy.

Lloyd's and Marsh will work closely with an insured party (a large construction company) and its broker to scientifically assess the risk characteristics of a new material or technology. Following an initial research period, coverage

for the material will be offered by the market for a limited time, with pricing agreed on risk-based rates.

This experimental approach will provide the required data and knowledge to address the coverage gap in the longer term, forming the basis for new products which can be offered by the market.

03. Green finance

Introduction

Unlocking capital to support the development of new industries and technologies is vital to enable the transition towards a low-carbon economy. Green finance initiatives aim to support the flow of capital into assets which support positive outcomes for the environment and society.

These initiatives are not necessarily restricted to climate-related areas but can be much broader in scope to generate material societal benefits. A number of industry bodies in this space are helping to drive change including the Green Finance Initiative and the UN Principles for Sustainable Insurance, whilst several insurers are making impact and long-term value investing central to their purpose.

What is the role of the global insurance industry?

The investments which insurers make are critical to supporting sectors with their decarbonisation objectives, and there is a need to accelerate efforts to direct capital towards climate-positive solutions and products. With more than \$30 trillion in assets under management, the global insurance industry has deep pools of capital that if unlocked could be increasingly directed toward investments that drive climate-positive outcomes in both developed and developing nations.

There is clear demand from the global insurance market to deploy this significant pool of capital into green investments, with in-flows to such investments increasing significantly in recent months.

Morningstar recently reported that global in-flows into sustainable funds reached \$80.5bn in the third quarter of 2020, with sustainable fund assets reaching \$1.2tn globally.^a

The Lloyd's market has substantial capital at its disposal (c.£85 billion⁹), demonstrating there is a significant opportunity for the Lloyd's market to make a positive impact through directing capital towards green investments.



^aSustainable assets reach \$1.2 trillion in Q3 | ESG Investing

⁹Lloyd's of London proprietary market data (accessed 30 March 2021)

What actions can be taken to accelerate the flow of capital into green investments?

The insurance industry is taking steps to support the flow of capital into green investments through the use of different levers:

- 01** In the first instance, applying exclusions is seen as an effective approach to shifting investments away from particularly carbon-intensive sectors, however it does forego the opportunity to engage with corporates involved in such sectors on their respective transition pathways.
- 02** We are starting to see investors complement exclusion policies with structured voting and engagement activities, particularly in the equities market. Insurers have a role to play in helping industries with their transition and leveraging their influence as a capital provider to put pressure on companies around the actions they are taking to support decarbonisation.
- 03** The integration of ESG (environmental, social and governance) factors can help to embed non-quantifiable risks into the investment decision making process and support identification of opportunities to actively invest in corporates and sectors critical to the transition.
- 04** Some insurers are actively making 'impact' investments, which are investments made with the intention to generate positive, measurable social and environmental impact alongside a financial return. This is a way in which the industry can therefore take affirmative action to proactively invest in parts of the economy that are actively decarbonising.

There are several challenges to overcome to increase insurance investors' allocation to green assets. This includes the availability of such assets to achieve the necessary scale to drive the low carbon transition, a consistent taxonomy to define 'green', and data availability to test the green credentials of assets.

A strong understanding of the contribution of different sectors towards decarbonisation pathways will be crucial, in order to ensure investments are directed towards the parts of the economy where they will have the greatest positive impact.

Green finance initiatives within the Lloyd's market

Recognising the acceleration of activities across the global insurance industry in this space, the Lloyd's market has taken positive steps through its recent commitments. This includes the allocation of 5% of the Corporation of Lloyd's Central Fund to impact investments by 2022; the phase out of new investments in thermal coal-fired power plants, thermal coal mines, oil sands and new Arctic energy exploration activities; and the commitment to develop guidance on impact investing to support participants in the Lloyd's market to create their responsible investment strategies.



It is therefore unrealistic to expect the Lloyd's market to invest substantially in long-dated assets, such as infrastructure loans for example, however there is still a considerable universe of shorter-dated green investments which also satisfy the market's broader liquidity and solvency requirements.

These activities are, in part, driven by a number of broader initiatives seeking to accelerate the drive towards greener finance.

For example, as part of the United Nations-convened Net Zero Asset Owner Alliance, 35 institutional investors including insurers, representing \$5.5 trillion assets under management¹⁰, have pledged commitment to transitioning their investment portfolios to net-zero GHG emissions by 2050.

¹⁰UN-convened Net Zero Asset Owner Alliance – Introduction to the Alliance

In addition, signatories to the UN's Principles for Responsible Investment have committed to a set of investment principles and associated actions for incorporating ESG issues into investment practice.

Lloyd's case study

The insurance industry is taking steps to support the flow of capital into green investments through the use of different levers:



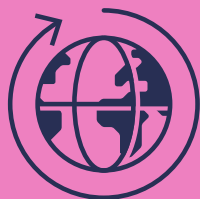
Green:

The Corporation invested in an International Development Association (IDA) bond, the proceeds of which will support the financing of green projects and programs in eligible IDA countries to advance Sustainable Development Goals. This offers investors an efficient way to contribute to development in the world's poorest countries.



Social:

The Corporation invested in a social bond issued by the National Australia Bank, which is aligned to the International Capital Market Association's Social Bond Guidance. Proceeds are earmarked for (re)financing a portfolio of organisations across Australia that hold the Employer of Choice for Gender Equality citations from the Workplace Gender Equality Agency.



Sustainable:

The Corporation invested in a sustainable bond whose proceeds are allocated to (re)finance existing and/or future projects or businesses which meet eligibility criteria as defined in the issuer's sustainability bond framework. This framework, developed post the outbreak of COVID-19, has been expanded to focus on climate change mitigation, disaster resiliency, healthcare and social well-being.

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Roadmap for action



The insurance industry has a significant opportunity to direct an increasing share of its more than \$30 trillion in assets under management towards climate-positive solutions and products. It can achieve this through actively integrating ESG factors into the investment decision making process; proactively making impact investments into areas of the economy which are actively decarbonising; and excluding investment from particularly carbon-intensive sectors which are failing to commit to the transition.

There is also a significant opportunity for the global (re)insurance industry to collaborate with investors and governments to provide financing structures to support disaster resilience, response and recovery in developing countries.

Through its role as chair of the SMI Insurance Task Force, Lloyd's has:

- Convened a workstream focused on supporting and encouraging more sustainable investment; in 2021, the workstream will develop a framework for accelerating and scaling sustainable investment, to help unlock the global insurance industry's more than \$30tn in assets under management, increasingly directing capital towards investments that drive climate-positive outcomes in both developed and developing nations.

In addition, Lloyd's will:

- Convene a workstream dedicated to establishing a public-private disaster resilience, response, and recovery framework to help protect developing nations from the evolving economic and societal impacts of climate change, including the effects of increasingly frequent and severe weather events. The framework will combine an insurance product with risk management and loss recovery services. Lloyd's, as part of the SMI, will work closely with key stakeholders including (re)insurers, governments, aid agencies and data providers to deliver a pilot scheme in 2021.

04. Committing to action

Lloyd's and the global insurance industry are uniquely positioned to facilitate efforts across communities, businesses and governments around the world to drive a transition to a lower carbon economy.

We have engaged with a range of insurers, Lloyd's market participants and corporates to assess the scale and complexity of decarbonisation ambitions across both the construction and finance sectors.

The actions taken by the insurance industry today to support the scale and pace of ambition from both governments and businesses will be critical in driving positive, long-term change.

	Greener construction	Greener finance
Action the global insurance industry should take	Incentivise customers to lower their buildings' carbon footprint; introduce 'Build Back Better' wordings in policies.	Direct capital towards climate-positive solutions through integrating ESG factors into investment decisions and identifying impact investment opportunities. Work with investors and governments to provide financing structures to support disaster response and recovery in developing countries.
Actions that will be delivered through the Sustainable Markets Initiative Insurance Taskforce	Develop standards to encourage innovation across the insurance supply chain with a potential focus on 'Build Back Better' clauses within home insurance products.	Develop a consolidated framework to accelerate institutional investment in long-dated green assets. Develop a framework and pilot to support disaster response and recovery in developing countries.
Actions that Lloyd's will take	Convene construction companies, insurers and brokers to understand the risk profile of new materials and construction techniques. Conduct targeted research to explore the insurance implications of new construction materials and techniques.	N/A

Together, by taking immediate action on climate change, Lloyd's and the insurance community can make a positive contribution. Actions such as adapting insurance products to encourage clients to 'Build Back Better' and lower the carbon footprint of the built environment are supported by commitments to deepen the insurance industry's understanding of the risk implications of new building materials.

Lloyd's own commitments are wide-ranging, from convening a workstream dedicated to sustainable innovation as Chair of the Sustainable Markets Initiative (SMI) Insurance Taskforce, to leading research into new construction materials and technologies.

From a finance perspective, Lloyd's and the global insurance industry have the power to actively accelerate the pace of growth of climate-positive solutions through their investment strategies. The global insurance industry must also collaborate to support disaster resilience and recovery efforts as climate change continues to adversely impact developing nations in particular. Through its role on the SMI Insurance Taskforce, Lloyd's will take a proactive approach to addressing both of these issues.

Discover how we are guiding our
customers towards a greener future.
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