Risk revealed by Lloyd's

Clean technologies and hard-to-abate sectors

Lloyd's Futureset

Hard-to-abate sectors

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The insurance industry currently provides climate resilience to the agri-business sector, but incentivising production changes could accelerate 25% of identified carbon abatement opportunities

Line of business	Number of solutions[1]
FL, incl. credit and surety	29
Property	27
Liability (incl. D&O and BI)	22
Energy	19
Construction and engineering	15
Agri-business	6
Motor (fleet and personal)	4
Alternative Soln. e.g. advisory	4
Cargo and logistics	1
Marine (hull, P&I)	0
Aviation	0

20+ solutions | 10-20 solutions | <10 solutions | 0 solutions

Agribusiness: Agriculture significantly contributes to global emissions with practices differing greatly by geography. Identified abatement measures range from consumer dietary changes to supply-side efficiencies including production practices. Combining production changes and electrifying farming vehicles could unlock 25%of abatement options

Abatement measure	Net-Zero emissions[2]	Development outlook
Diet shifts	-39%	– Consumption of carbon intensive ruminant animal proteins (namely lamb and beef) would have to fall by 45% in the Net-Zero pathway
Animal protein production	-13%	– Animals' GHG emissions could be reduced through selective breeding, feed-mix optimization and methane/nitrification inhibiting additives in feed
Crop production	-9%	– Less pollutive crop production practices would include low/no-tillage production, improved fertilization practices and better water & irrigation management
Reduction in food waste	-8%	– Food waste and loss would need to fall 13% to a 20% global average by 2050
Electrification	-3%	– Electric farm vehicles fully replace internal combustion vehicles by 2050 under the Net-Zero pathway as they are predicted to not only abate carbon but also save costs

Insurers have an opportunity to form sector-based partnerships which encourage behavioural change to better support the EU objectives and other sustainable goals

Market groups tackling the issue…

- To establish the SMI's Agribusiness Task Force (ATF), the former Prince of Wales gathered executives from some of the biggest agricultural corporations
- Its goal is to expedite the adoption of regenerative agriculture as the world's primary agricultural system
- The members worked together last year to determine what steps the business sector might take to create scalable value chain blueprints to accelerate the deployment of regenerative technologies
- The European Carbon+ Farming Coalition will employ a farmer-centric approach with partners focusing on promoting the adoption of regenerative and climate-smart agriculture practises, identifying the barriers to adoption, and devising solutions with advantages for farmers in terms of economics, practicality, and the environment
- Additionally, it will seek to provide financial instruments that farmers may use to manage transition risk and suggest the best combination of farmer incentives

Sustainable Markets Initiative

EU

Working with market groups..

- The insurance industry could look for opportunities to **form sector-based partnerships which encourage behavioural change to better support the EU objectives**, or other sustainable goals such as the UN SDGs
- Through insurance solutions that minimise risk and actively promote adoption, there is a chance to enable investment and **incentivise regenerative farming**
  - There is a longer-term/future opportunity to offer farmers insurance on conditions that lessen the cost of converting to and sustaining a regenerative system
- The insurance industry can also support on wider actions:
  - Encouraging the deployment of enabling technology, where these new technologies can promote regenerative farming practices and, in some situations, act as a crucial enabler, through the provision of insurance solutions for these technologies or strategic partnerships with tech companies
  - Ensure everyone working in the value chain is aligned to promoting regenerative farming over conventional farming practices, performance measurements could be linked to environmental objectives
- Additionally, the industry should prioritise working with Agricultural clients on protection of biodiversity and ecosystems and water use

Efficiency retrofits and the development of new propulsion methods such as biofuels and hydrogen will require continued support from the insurance industry

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Shipping: In 2021 international shipping accounts for ~90% of global trade volumes ($14tn). Reaching net zero by 2050 will require ~15% reduction in emissions by 2030, for which an estimated $5bn is required in the immediate term to advance alternative technologies

Abatement measure	Net-Zero emissions[2]	Development outlook
Hydrogen	-19%	– Low-carbon fuels account for ~45% of fuel intake by 2050, with hydrogen constituting a large portion of this but long vessel lifetimes may delay adaptation
Bioenergy	-19%	– Design and implementation of engines powered by ammonia and other biofuels – First hydrogen and ammonia powered vessels due to come into operation in 2023
Energy efficiency	-14%	– Energy efficiency must improve from 30 to 35% by 2050 to reach Net-Zero – Shipping has had limited investment in zero-emission technologies to date, however retrofitting to meet regulations and improve fuel efficiency/costs is a mainstream activity
Electrification	-4%	– From 2030, ferries and other vessels for short-sea shipping would be electrified – Technologies to decarbonise shipping are at early stages of maturity with R&D ongoing in alternative fuels, electrification and hydrogen
Shipping demand reduction	-4%	– Slowing demand growth driven by a 40% reduction of oil tankers as oil usage decreases

The insurance industry has a unique opportunity to work with marine market groups to learn and evolve existing offerings

Market groups tackling the issue…

- The 'Maritime Just Transition Task Force' was set up by the ICS, the ITF, the UNGC, the ILO4 and the IMO5 during COP 26
- First sectoral task force devoted to solving the climate emergency in a way that is as fair and inclusive as possible, whilst creating good work opportunities
- Seeks to increase and coordinate cooperation in order to move the shipping industry towards decarbonization in a safe, equitable, and people-centred manner between governments, business, labour, academia, etc.
- Allianz has partnered with Sea Shepherd, who fight to defend, conserve and protect the ocean. Last year, they collected 12 cubic metres of garbage made of plastic and polypro
- By deploying its fleet of ships to follow, monitor, and actively obstruct the activity of fishing vessels suspected of engaging in illegal and unreported activities that lead to the unsustainable exploitation of marine life, Sea Shepherd is perhaps most known for adopting direct action techniques to achieve its aims

Maritime Just Transition TASK FORCE

SEA SHEPHERD

Working with market groups..

- The insurance industry has an opportunity to focus investments or partner with innovators to facilitate the 4th propulsion revolution
- This includes opportunities to form sector-based partnerships which encourage behavioural change to better support the EU objectives, or other sustainable goals such as the UN SDGs
- With decarbonisation for shipping focused on purchasing offsets to compensate emissions, growth in carbon market offerings could increase coverage in hard-to-abate sectors
- Opportunities arising for insurance companies:
  - Liability coverage for failing carbon offsets
  - Coverage of risks related to the use and stock of hydrogen and ammonia in shipping
  - Liability insurance against increasingly demanding energy efficiency standards
- There is a short-to-medium term opportunity to adapt Marine insurance products to cover retrofits for current regulations and fuel efficiencies, for example asset performance products covering performance shortfall
- Given the nascent nature of the market, learnings are limited, leaving opportunity for profitable products specific to those technologies mentioned earlier (e.g. hydrogen, bioenergy and electrification) as a longer-term opportunity
- Increasing carrier propositions as limited carrier propositions have been observed so far e.g. Gard providing P&I and Hull & Machinery cover to Yara Birkeland, the world's first autonomous and zero-emission vessel, in 2021

The insurance sector is well placed to support the aviation transition pathway through innovative solutions and partnerships

Market groups tackling the issue…

- The SMI's Aviation Task Force (ATF) is coordinating efforts to ensure that aviation reaches net zero emissions by 2050
- While it is feasible to fly without using fossil fuels, effort is needed to make alternatives like SAFs a reality
- The ATF launched a SAF pocket guide at COP27 to promote adoption within the business community and support the goal of using 30% SAF in corporate travel by 2030
- The International Air Transport Association (IATA) members have committed to achieving net-zero emissions from their operations by 2050
- This comprises of coordinated efforts of the entire industry and significant government support, enabled by CORSIA
- To address emissions from international aviation, the International Civil Aviation Organisation (ICAO) adopted the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), marking the first time a single industry agreed to a global-market based measure in the field of climate change

Sustainable Markets Initiative

IATA

ICAO • OACI • ИКАО

Opportunities for the sector..

- The insurance industry could explore opportunities to form sector-based partnerships which encourage behavioural change to better support the EU taxonomy objectives, or other sustainable goals such as the UN SDGs
- Funding and financial de-risking for the promotion of continued innovation and research into Sustainable Aviation Fuels (SAF) is required
- Improving efficiencies requires joint efforts from a large group of stakeholders but an opportunity exists for the ITF to collaborate with the Aviation Task Force (ATF) to accelerate fuel efficiencies
- Potential opportunities for insurance companies:
  - Traditional coverage for SAF producers (e.g., biofuels distributors)
  - Insurance for SAF supply chain disruptions for airlines
  - Liability coverage for failing carbon offsets
- Similarly, by having insurance solutions in other areas such as coverage for alternatives such as high-speed railways, can reduce the demand on aviation, further reducing emissions
- Decarbonisation for aviation is for now focused on purchasing offsets to compensate emissions so growth in carbon market offerings could increase coverage in hard-to-abate sectors

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Notes & Sources (1)

Page number	Source	Notes
44	McKinsey; IEA; Princeton University; Global Business Travel Association; SMI	1. Numbers in the heatmap refer to number of solutions from SMI Insurance Task Force members, with some solutions in multiple pillars or lines of business; 2. Change Vs. reference case in 2050
45	SMI: Agribusiness Task Force; European Institute of Innovation and Technology	
46	McKinsey; IEA; Princeton University; Global Business Travel Association; SMI; IMO; UN Global Compact; ICS	1. Numbers in the heatmap refer to number of solutions from SMI Insurance Task Force members, with some solutions in multiple pillars or lines of business; 2. Change Vs. reference case in 2050
47	McKinsey; IEA; Princeton University; Global Business Travel Association; SMI; IMO; UN Global Compact; ICS	1. International Chamber of Shipping; 2. International Transport Workers' Federation; 3. United Nations Global Compact; 4. International Labour Organization; 5. International Maritime Organization
48	McKinsey; IEA; Princeton University; Global Business Travel Association; International Air Transport Association (IATA); SMI	

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