LLOYD'S

ClimateWise Annual Reporting 2017-18

Our progress against the ClimateWise principles

Contents

ClimateWise reporting

Lloyd’s is a specialist insurance and reinsurance market. More than 50 insurance companies, over 200 registered Lloyd’s brokers and a global network of nearly 4,000 local coverholders operate in and bring business to the Lloyd’s market. Much of the capital available at Lloyd’s is provided on a subscription basis through syndicates:

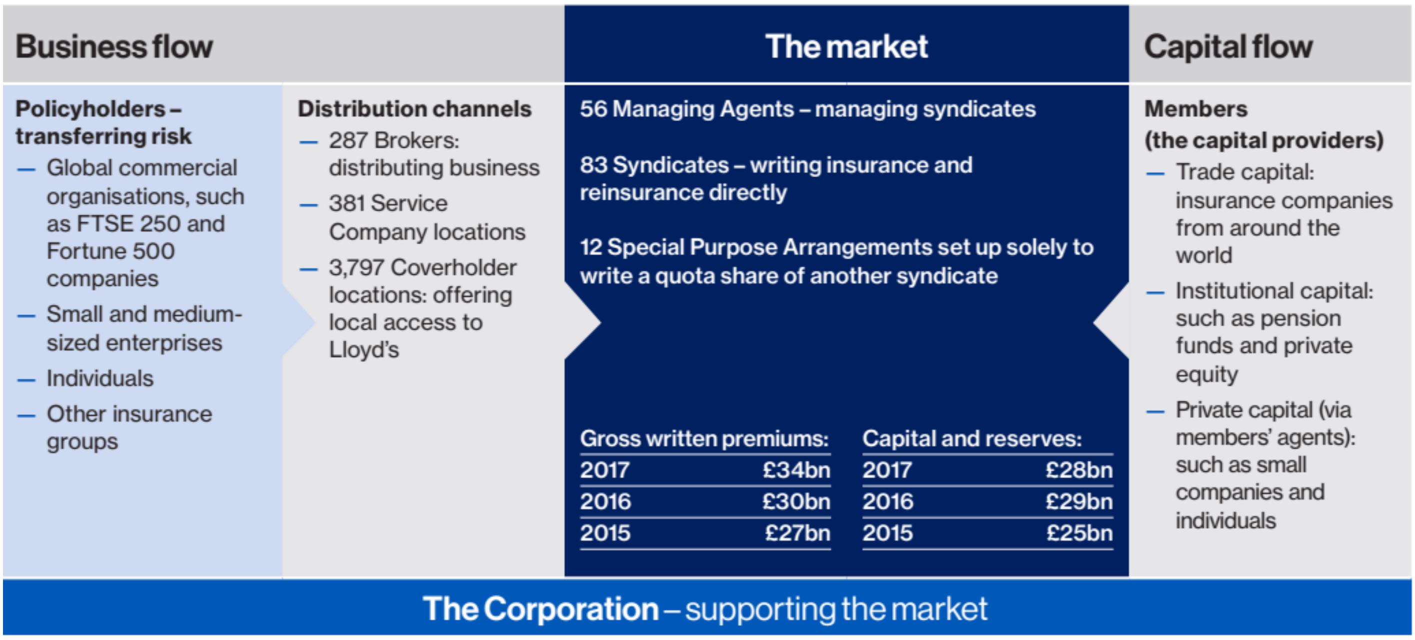
– A Lloyd’s syndicate is formed by one or more members joining together to provide capital and accept insurance risks. Most syndicates write a range of business lines across multiple areas of expertise. Each syndicate sets its own appetite for risk, develops a business plan, arranges its reinsurance protection and manages its exposures and claims.

– A managing agent is a company set up to run one or more syndicates on behalf of the members. They have responsibility for employing underwriters, overseeing their underwriting and managing the infrastructure and day to day operations.

– Lloyd’s is a broker market in which strong business relationships, backed by deep expertise, play a crucial part. Brokers facilitate the risk transfer process between policyholders and underwriters. Much of this business involves face to face negotiation.

– Syndicates can also authorise third parties, known as coverholders to underwrite business on their behalf locally around the world. Service companies are wholly owned by a managing agent or a related group company and are authorised to enter into contracts of insurance for members of the associated syndicate.

Behind the Lloyd’s market is the Corporation of Lloyd’s, that is not itself an insurer but an independent organisation and regulator that acts to protect and maintain the market's reputation and provides services and original research, reports and analysis to the industry’s knowledge base.



After a number of relatively benign catastrophe years, the frequency and scale of the disasters that struck around the world in the second half of 2017 saw major claims costing the Lloyd's market £4.5bn, more than double the previous year (2016: £2.1bn). This significant loss activity generated an underwriting loss of £2bn for 2017, resulting in a combined ratio of 114.0% (2016: 97.9%) (*see Annual report 2017*).

In the second half of 2017 hurricanes Harvey, Irma and Maria, along with other catastrophes, caused tragic destruction and loss of life. Lloyd's is proud to have already paid insured losses in the region of $3.5bn and expects to pay more to help alleviate some of this devastation (*see Annual report 2017, p13*).

As a result, 2017 was above the Lloyd's long term average for claims from major losses. While this has affected profitability, the market is well prepared for such losses and there is no indication that they have affected our solvency. As at year end 2017 financial year, the market was capitalised at 144% of its solvency capital requirement, which was well within risk appetite.

The Lloyd's market has worked hard to pay claims to policyholders as quickly as possible throughout the year. A total of £18.3bn in claims gross of reinsurance was paid out by the Lloyd's market during 2017, demonstrating the critical role the market plays in helping businesses, communities and countries recover quickly after disasters.

As part of work to promote Lloyd's claims, analysis by the Corporation shows that over the past five years, the market has paid out $85bn in claims, an average of $43m per day paid to policyholders around the world.

The Lloyd's market has met these substantial commitments without any significant impact on total resources which remain strong at £27.6bn. Lloyd's capital position remains robust and our ratings with the leading ratings agencies remain at A (excellent) from A.M. Best, A+ (strong) from Standard & Poor's and AA- (very strong) from Fitch.

Understanding Lloyd's reporting

For the purpose of this report, case studies evidencing activities carried out under the ClimateWise principles have been split into two groups to reflect the structure of Lloyd's. For example:

- The Corporation of Lloyd's / Support and undertake research

  The Corporation oversees and supports the Lloyd's market, ensuring it operates efficiently and retains its reputation as the market of choice for specialist insurance and reinsurance risk.

- The Lloyd's market / [market member name] / Support and undertake research

  The majority of business written at Lloyd's is placed through brokers who facilitate the risk-transfer process between clients (policyholders) and underwriters.

Reporting is made publically available online each year by the Corporation on behalf of the Lloyd's members, along with a news story summarising the key strengths highlighted by PwC in their review.

Scoring year-on-year

In last year's reporting, Lloyd's retained its fifth place ranking in the ClimateWise members table and communicated this publically as part of our commitment to the principles.

2014-15	**2015-16**	**2016-17**
72%	77%	74%

In 2017-18 reporting Lloyd's has scored 78% and sits joint second in the table.

The Corporation of Lloyd's

As a founder member of ClimateWise, the Corporation of Lloyd's continues to publically recognise effects of climate change and the direct impact on the business community and is in regular dialogue with insurers, businesses and policy makers to address the challenges of climate change, both for our industry and for society.

As recognised in the environment section of the risk updating in Lloyd's 2017 annual report (*see Annual report 2017, p13*), industrialisation combined with a growing population has resulted in rising levels of CO_2 and other greenhouse gas emissions that cause global warming. Global risks are changing and the potential consequences are severe. Increased frequency and severity of major weather events mean that climate change has increased the risks and costs of insurance.

Climate change leads to increases in precipitation variability, giving rise to more extreme cycles of flooding and drought in semi-arid and arid regions. Many of the world's large cities are located on coasts, and sea level rises threaten a significant proportion of the world's population. Water scarcity and related food insecurity are already a major global geopolitical risk aggravated by climate change, and could lead to further instability.

The Corporation of Lloyd's commitment to areas described by the ClimateWise principles is supported by Lloyd's strategy and vision, which is to maintain and enhance the benefits of placing business and operating at Lloyd's, thereby ensuring Lloyd's policyholders are provided with valued products and services.

The Lloyd's market

There are ten managing agents that operate within the Lloyd's market that have signed up to the ClimateWise principles.

Case studies evidencing their compliance with the principles and actions against them are included to provide an overarching submission from Lloyd's, and provide a public account of progress year-on-year.

Each case study is written by the named market member, and reflects the group views, policies and practices of that entity only:

ClimateWise members in the market

ARGO GROUP — Get there together; beazley; CHUBB; HISCOX; MS Amlin; Navigators; QBE; RenaissanceRe SYNDICATE 1458; TOKIO MARINE KILN; XL CATLIN

Hiscox also reports independently as an individual member.

1 Lead in risk analysis

1.1 Support and undertake research on climate change to inform our business strategies and help to protect our customers' and other stakeholders' interests. Where appropriate share this research with scientists, society, business, governments and NGOs in order to advance a common interest.

The Corporation of Lloyd's / Support and undertake research

Research activities : In previous years the Corporation of Lloyd's described ongoing efforts to provide a comprehensive analysis of natural hazards and extreme events, illustrating how the Corporation of Lloyd's has been working on using research and data to inform understanding of risks and capital and reserve requirements.

The Corporation of Lloyd's believe that sharing the research we generate strengthens the industry. The Corporation of Lloyd's continues to work towards improving the analysis and quantification of less or non-modelled regions and risks, including climate and environmental issues.

Examples of this include:

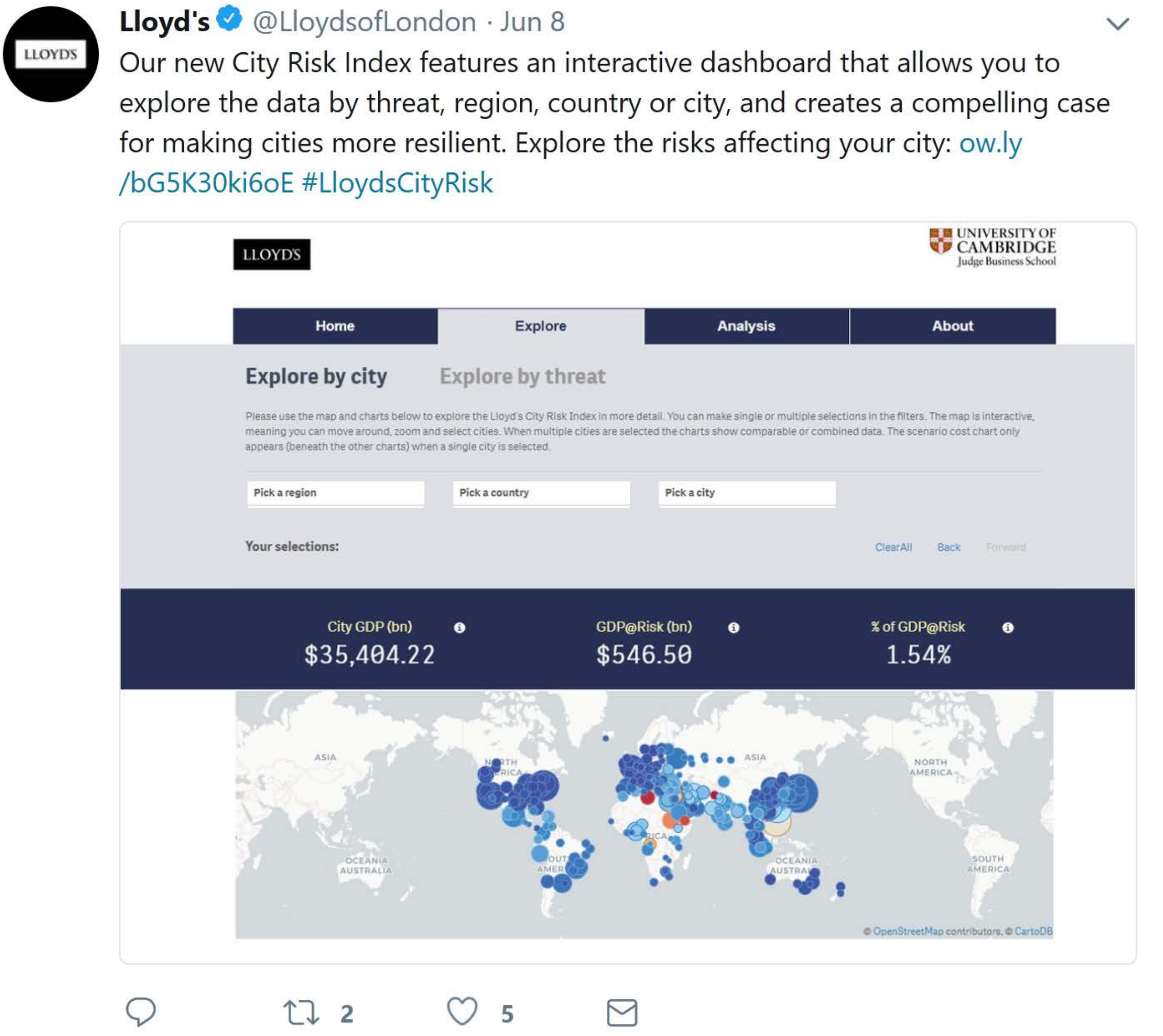
1. *The Lloyd's City Risk Index, which was first published in 2015 and covered in the Corporation of Lloyd's 2015-16 reporting cycle. The first site was a static dataset, and work has been underway and reported in material shared with PwC on an updated version with more capabilities.*

   The Lloyd's City Risk Index, built in collaboration with Cambridge University, is a unique study measuring the impact of 22 threats on 279 cities' projected economic output. It has been relaunched as a microsite that is interactive and allows users to query datasets through a mapping interface to gain insights.

   The index reveals that 279 cities across the world – the key engines of global economic growth with a combined gross domestic product (GDP) of $35.4 trillion – risk losing on average $546.5bn in economic output annually (GDP@Risk) from all 22 threats. This comprises $320.1bn to man-made risks and $226.4bn to natural catastrophes.

   The analysis included breakdowns of the different drivers of risks, and climate change was identified and flagged up as a major risk driver that is communicated throughout the press release, social media assets, and launch materials that were presented at an event hosted at Lloyd's in June 2018:

   > *Climate-related risks together account for $123.0bn of GDP@Risk and this sum is expected to grow as extreme weather events become increasingly frequent and severe. The costliest climate events are windstorms which account for $66.3bn of GDP@Risk and flood that puts a further $42.9bn of economic output at risk.*



Future planning: The content will be presented throughout the Lloyd's regional offices over the coming year to provide insight into the local story and raise awareness of risks with market stakeholders and clients. The aim is to promote the insight to a wider audience.

The redesign of the site has specifically been designed to provide a modular framework, and further features will be released and are currently underway.

2. *In 2016-17 reporting, the Corporation covered the Future Cities collaboration with Arup explored the topic of resilience in the city context, and produced a new framework to help city officials and insurers improve infrastructure resilience. The report, 'Future Cities: Building Infrastructure Resilience' found that while risk management remains a priority for cities, it is not enough on its own, or on an asset by asset basis.*

The Innovation team have continued to promote the work along with the global Lloyd's Country Manager network. The team have been using the insights surfaced in the project to develop activities around raising awareness of the importance of city resilience for our customers, and the need for product development and risk understanding to meet these needs.

The work was also presented to the London Climate Change Partnership at the October 2017 meeting, where the Corporation holds a position on the steering committee. This activity was carried out to promote the findings, inform the partnerships thinking around interconnected risk, and to gain feedback from key stakeholders who are dealing with the issues raised in the project.

3. In 2016-17 private reporting, the Corporation of Lloyd's informed PwC of a research project on crop (re)insurance in India. The topic was surfaced from the Innovation teams' horizon scanning process due to a number of contributing factors:

   - India is the world's second largest agricultural economy with an Agriculture Gross Domestic Product of $392 bn, yet crops are vulnerable to a wide-range of weather events and more than 60% remain uninsured.
   - With agricultural risk increasing from a growing population coupled with the related impacts of land use changes, water scarcity and climate change, governments around the world are increasingly interested in building more resilient agroecosystems. (Re)insurance can play a key role in this by transferring risk.
   - The Government of India introduced a crop insurance scheme to tackle the protection gap which will require the capacity and resources of the international (re)insurance market, and the Lloyd's India office was scheduled to open in early 2018.

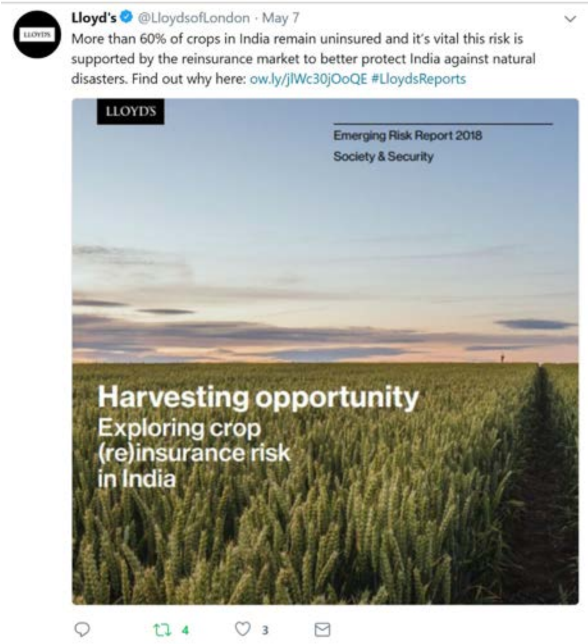
   The project was developed in partnership with Risk Management Solutions (RMS), and aims to provide insurers interested in reinsuring crop business schemes in India with:

   - An overview of the (re)insurance market
   - A detailed description of the impact of weather (monsoon and extreme events) on crop yields and losses
   - A description of the benefits of using probabilistic crop models to quantify India's crop risks

   The report was aimed at underwriters and exposure managers who are or will be exposed to crop risks in India. By understanding Indian (re)insurance crop risks better, insurers can improve their portfolio exposure management, set appropriate limits and gain the confidence to expand into this fast-growing market.

   Findings around the topic of climate change included the need to include it across all sectors to avoid unexpected losses, and commentary around the warming climate intensifying the hydrological cycle in the tropics, contributing to more severe extreme rainfall events over India. See pages 9, 15, 50, 58, 59, 60, 61, 65, 111, and 112 in 'Harvesting opportunity: exploring crop (re)insurance in India' for further references of climate change insight to inform readers.

   The report was launched across the Corporation of Lloyd's social media channels to promote the findings, and support the KPI for the brand and communications team around increasing engagement and mentions. KPIs are agreed on an annual basis, with the strategy set on a three year rolling basis by the Corporation of Lloyd's Executive Committee, Board and Council.



4. The Corporation of Lloyd's strategy focuses around the concepts of protect, promote and provide. The following study is centred around protect and provide, and involves a research partnership with Gordon Woo, Risk Management Solutions around surfacing insight on 'events not in data'.

   Whenever an event occurs that takes the insurance market by surprise, questions are asked how the loss might have been averted or reduced. It is also useful for insurers and other interested parties to ask how the loss might have been worse. This approach, known as downward counterfactual analysis is the subject of 'Reimagining History', a study produced by the Innovation team.

   The report aims to encourage insurers to think about risk in a different way by highlighting counterfactual analysis' potential to mitigate data bias, test model results, analyse tail risk and identify potential high impact events. It also details how counterfactual analysis can be carried out in practice and acts as a starting point for future research.

   Where catastrophe models do exist counterfactual risk analysis can be used to benchmark modelled loss estimates against scenarios that are plausible and easy to understand. In particular, this supplementary analysis would be instructive in guiding and informing expert judgment, and in prescribing extreme scenarios.

The fact that downward counterfactuals are anchored to actual historical experience, rather than being hypothetical future scenarios, facilitates coherent explanation, deeper understanding and more effective communication. In addition, a downward counterfactual exemplifies the Prudential Regulatory Authority concept of an ‘ENID: Event Not In Data’ (*see p10*).

It may not be clear or convincing to the Board how realistic a future abstract scenario actually is. By contrast, a downward counterfactual may be explained succinctly as a historical scenario that might have happened if things had turned for the worse. A clear example of how research can be used to improve insight for decision making.

For example, windstorm catastrophe models have progressively increased in resolution over the past several decades. But no matter how large the stochastic event set is for an Atlantic hurricane model, the event set cannot span the entire dense space of possible hurricane trajectories.

The report was launched across the Corporation of Lloyd’s social media channels, and material has been integrated into the central slide deck used by the Innovation team in promoting thought leadership and expertise.

5. Also in this theme, the 2017 hurricane season generated losses of large magnitude in a number of different classes of insurance and from different types of loss events. This highlighted the need for the Corporation to look back at the events of last year to understand what lessons could be identified and shared with internal teams and the Lloyd’s Market.

Analysis was carried out by the Corporation of Lloyd’s Class of Business team, who made a strategic decision to hire a dedicated Research Manager in 2016 to develop insight to enhance Lloyd’s capabilities in the insurance product space by focusing on thought-leadership, best practice and efficient use of data.

The ‘After the Storms’ report was made publically available and shared over the Corporation of Lloyd’s social media channels. The report included specific insight for stakeholders around climate change and the potential for rising sea level around associated losses from flood, presenting research and evidence to advance thinking and interest in the market:

The report also highlighted the importance of strong portfolio management, a sensible catastrophe underwriting philosophy and strategy, and sophisticated modelling frameworks are increasingly important if insurers are to remain competitive in catastrophe-affected classes of insurance.

6. *Lloyd’s Tercentenary Research Fund (LTRF) is funding a two year research project that started in in March 2017, led by the Smithsonian Tropical Research Institute (STRI). The project is titled ‘Agua Salud: Science to advance risk mitigation and land use management strategies in tropical watersheds and landscapes.’*

STRI and project partners at Harvard Forest have been funded to develop science-based scenarios for the future of the Panama Canal Watershed. STRI aim to leverage decades of hydrological and forestry research and data sets describing other ecosystem services in the watershed to map out the future and assess risks inherent in a variety of land use scenarios.

Although relevant to Panama, this project will advance understanding of large-scale and long-term implications of land-use choices throughout the tropics and will aim to create a science-based tool to better-inform choices that can minimise negative environmental and economic impacts.

The aim of the project is to increase stakeholder and decision maker understanding of the relationship between land management and water-related and other ecosystem services in view of a more sustainable future.

This is also relevant to principle 2.1 and 2.2 reporting, and will be shared with the Lloyd’s market and wider stakeholders as part of the Corporation of Lloyd’s aim to advance common interest. Information about the project is found in the LTRF section of the Lloyd’s website.

The LTRF trustees meet throughout the year to discuss the programmes of work they support, and to discuss potential future projects. An update on the Agua Salud project was provided to the Board on 6 March 2018 on the current state of progress, future deliverables and impact. The trustees are responsible for signoff and provide input and insurance knowledge and connections to industry experts where requested.

7. *In 2015-16 and 16-17 reporting the Corporation of Lloyd's has provided information on the LTRF partnership with the US-UK Fulbright Commission. The partnership was renewed for a further three years from the 2016/17 academic year and expanded the programme to a fund one Postgraduate Award, as well as two Fulbright - Lloyd's of London Scholar Awards on an annual basis.*

   Scholarships are available for UK academics or professionals to undertake research in the US on a risk-related subject to further insight. For more information on the awards, see the LTRF pages.

   The LTRF provides a list of suggested research areas that are agree by the LTRF trustees. For the academic or professional award this includes the following topics that are relevant to reporting:

   - Big data analytics/machine learning: how can these emerging technologies be harnessed to improve the understanding of risk?
   - Climate change: mitigation and management of risk
   - Energy risks and insurance: development of green technology and related risks, e.g. offshore windfarms
   - Geographic information systems and remote sensing: how can these be harnessed to deliver risk transfer solutions for developing countries?
   - Human disasters such as epidemics and famines
   - Risk accumulation over multiple extreme natural events
   - Reputational harm: frameworks for measuring threats and exposures

For the Postgraduate award this includes the following topics that are relevant to reporting:

- Emerging and evolving risks
- Social media and insurance
- Impact of globalisation on supply chain risk
- Climate change
- Risk management

Through the partnership, Lloyd's Tercentenary Research Foundation is supporting three academics to carry out risk related research during the 2017/18 academic year, and will aim to share the outcomes with the market and internal Corporation teams to support risk understanding:

Professional award

- Sandra Chapman, Studying data analytics and space weather
- Mark Farrell, An Actuarial Science Research Study into the Opportunities & Challenges of Self-quantification Consumer Health Data

Postgraduate award

- Laurence Warner, Computational Social Science MA
- Laurence Warner is looking forward to taking part in University of Chicago's innovative MA in Computational Social Science, a programme in only its second year of existence which seeks to apply modern computer science and statistics tools to data sets across the social sciences.

8. Lloyd's Charities Trust: as well as commissioning research, the Corporation has made a strategic decision to fund charity partners through Lloyd's Charities Trust. Insurance plays a valuable role in creating a more confident and secure world and the Corporation believe that our charitable funding should extend this role in relevant ways.

   The Lloyd's market is recognised for working with nations, businesses and communities to help them reduce risk before disasters strike and for paying billions in claims to help them recover after catastrophes (*see Lloyd's Strategy*).

   This is supported by Lloyd's Charities Trust, which aims to help the global communities most at risk from disasters and emergencies in the following ways:

   - Give to charities responding to disasters and emergencies, to help relieve suffering and rebuild lives
   - In areas prone to natural disasters, fund disaster risk reduction initiatives aiming to build resilience into these communities

   The day to day running of Lloyd's Charities Trust is undertaken by the Responsible Business team at the Corporation of Lloyd's, and is overseen by trustees from across the Lloyd's market.

   Partner charities are required to establish work plans with targets and timelines, and present these to the trustees. Further examples are provided under principle 3.4. See evidence for Build Change and RedR, both of which provided updates to the LCT Board during the 2017-18 reporting period.

9. As well as funding research, the Corporation of Lloyd's also supports industry associations and partnerships. One example is the Geneva Association, and over the past reporting year the Corporation of Lloyd's has:

   - Participated in a study on underinsurance, contributing material, research, and participating in working group meetings to provide comments on the report drafts. Further details on the project can be found on the Geneva Association website. Flemmich Webb, Manager, Speech and Studies, represented the Corporation in the working group.

   - Participated in five meetings of the Extreme Events and Climate Change working group, contributing thoughts on the research programmes and providing insight back to the Corporation.

   - Inga Beale, Chief Executive Officer, attended the annual Geneva Association General Assembly in May 2018, and attended calls during the reporting year on projects across the partnership. Insights from the Assembly were fed back to Corporation teams to be integrated into horizon scanning.

   Also in this area, the Corporation hosted the Chief Investment Officer's meeting of the Geneva Association, from 4-5 September 2017. During the event Beale provided a keynote speech around the meeting themes, which included a preview of the 'Climate Change and the Insurance Industry: Taking Action as Risk Managers and Investors' report that was later publically launched in January 2018.

   The report is an example of research approved by Beale in her position as member of the Geneva Association Board.

10. The Corporation of Lloyd's also holds a position on the ClimateWise Managing Committee, attended by Lucy Stanbrough, Innovation team, and the Insurance Advisory Council, held by John Parry, Chief Financial Officer.

    ClimateWise Managing Committee: over the reporting period, Stanbrough attended Committee meetings, representing the Lloyd's membership, provided input into the research programmes for ClimateWise and the Insurance Advisory Council projects.

11. Insurance Advisory Council: over the reporting period, John Parry, Chief Financial Officer attended Council meetings and reviewed and signed off the paper on 'Navigating the transition : modelling the materiality of transition risk for infrastructure investment portfolios'.

12. Building on past reporting, the Corporation of Lloyd's continues to run the Special Interests Group, which brings together Lloyd's market representatives to discuss and feedback on emerging risks that could affect Lloyd's on a range of different timescales. The group is available to Lloyd's market Managing Agents only and topics are raised from market members and the emerging the Innovation team horizon scanning process.

    The Special Interests Group was formed in May 2007 to act as a bridge between the Lloyd's market and the then Corporation of Lloyd's Emerging Risks team to identify key emerging risks that are of current and potentially future interest to the market. Meetings are centred on sharing research and engaging the market in topics that may influence their business strategy.

    Meetings usually consist of an update on emerging risk topics from the Innovation team, alongside a presentation from an expert external speaker on topics relevant to the group. Feedback and questions from the group are fed into the teams' horizon scanning process, which informs the research strategy for forthcoming years.

    Over the last reporting year, three meetings were held and the July 2017 session was centre around the topic of ocean warming. The session was attended by 53 people, and featured presentations from XL Catlin in regards to the Deep ocean survey programme that they have reported against in their ClimateWise reporting.

    The topic was identified by the horizon scanning process maintained by the Innovation team, who keep a watching brief on 'risks which are yet to be fully understood that may have significant consequences for the insurance industry.'

    Following on from the meeting, details of the Ocean Risk Summit were shared with the 151 members of the Special Interests Group mailing list, with details of the conference and registration information. The Corporation of Lloyd's is unable to track how many attended.

Evidence also applies to principle(s): 1.1, 1.3

Source: The Corporation of Lloyd's

The Lloyd's market / ArgoGlobal / Climate Change Research

ArgoGlobal has considered the effect of climate change on historical US hurricane landfall rates by region and category. Studies have examined trends in the historical record, climate model runs, and physical dynamics to conclude that it is likely that the total Atlantic basin hurricane event frequency decreases with increasing global temperature, but that the frequency of the strongest events increases.

Hence, there is a likelihood that Cat 1-2 hurricanes are overrepresented in the historical landfall record, and Cat 3-5 hurricanes are underrepresented. However, as climate change is also integral to climate variability and model calibration frequency adjustments, we are unable to explicitly isolate the effect of climate change in order to quantify its effect on losses.

Argo Group staff regularly participates in conferences and debates on climate related subjects, both as speakers and attendees. Most recently at an extreme events & climate risk forum entitled ‘How Will Risk Modelling Shape the Future of Risk Transfer?’ Argo Group employees provided commentary on matters related to next generation risk models.

ArgoGlobal investigated options for flood modelling and selected the ‘Katrisk’ proprietary flood model to help inform its modelling of flood risk and increase its understanding of the associated exposures. This model has now been adopted and implemented for risk selection, pricing and aggregation purposes.

There is recognition of the impact of increased ambient temperature and ArgoGlobal continues to review its risk appetite for flood risk in certain US zones. Dr. Federico Waisman, SVP and Head of R&D analytics at Argo Group presented a webinar in November 2017, at Lloyd’s of London, highlighting different flood models and the challenges associated with model selection and use.

Evidence also applies to principle(s): 1.1, 1.3

Source: ArgoGlobal – Syndicates 1200 & 1910

The Lloyd's market / Beazley / Disaster risk finance

Through our involvement in the Lloyd’s Disaster Risk Facility, Beazley is commited to finding insurance market solutions to address underinsurance in the world’s most vulnerable regions, and to support climate change resilience. Our commitment to the facility includes recognition that, in order to properly understand and price risks in vulnerable areas, we must proactively pursue the development of accurate data collection and modelling.

As well as our financial commitment to the consortium, we are actively participating in wider efforts to develop greater risk management and resilience measures. In particular we have engaged with the UK Department for International Development’s new Centre for Global Disaster Protection, sending representatives to an Innovation Lab on financing for resilience, and contributing to follow-up discussions.

Evidence also applies to principle(s): 1.3, 1.4

Source: Beazley

The Lloyd's market / Chubb / Chubb Risk Management Process

As the world's largest publicly traded property and casualty insurance company, Chubb has a responsibility not only to provide solutions that help clients manage environmental and climate change risks, but also to control our own ecological impact and contribute to environmental causes. Chubb also believe that the well-being of the society depends on a healthy environment and that a proper ethic strives for a sustainable balance between development and preservation.

As a global insurance company, assessing risk is a core competency for Chubb. Standard & Poor’s rating of Chubb’s enterprise risk management process as “Strong” in its April 2017 ERM rating report places the company among the top 19% of North American and Bermuda insurers.

Our approach to risk management is to identify all known and emerging risks that could have an impact on overall capital levels and financial results. Regarding the potential effects of catastrophe losses, we closely monitor our catastrophe risk accumulations around the world.

Because the potential physical effects of climate change present a significant risk to the company, they have been integrated into Chubb’s overall risk management process. In addition, Chubb continually assesses the potential business impact of the changing climate and, if appropriate, develops new procedures, products and/or services. New offerings could be in the form of products, entry into industry segments, risk engineering services or claims services.

Modeling

Chubb is a leading proponent and user of catastrophe models to quantify natural catastrophe risk for product pricing, risk management, capital allocation and to simulate and estimate hurricane losses. Chubb uses models to aggregate and closely monitor natural catastrophe exposures across its global portfolio and to ensure that its capital base is sufficiently strong to meet the expectations of regulators, rating agencies and policyholders and to provide shareholders with an appropriate risk- adjusted return.

Modeling is a valuable tool in identifying possible market opportunities. At Chubb, risk management modeling and underwriting practices have been adapted to the developing risk exposures attributed to climate change. Since the earth's climate appears to be changing in ways inconsistent with the historical record upon which catastrophe models draw data, Chubb has adopted a shorter-term view of event frequency that is higher than the long-term historical frequency.

Chubb invests continually to upgrade and refine its risk management tools for catastrophes such as floods and hurricanes. Through the use of catastrophe models, Chubb manages severe weather risk to indirect client exposures throughout the world. Special emphasis is given to areas where Chubb has significant exposures and the inherent risk from extreme weather events — such as tropical cyclone and other windstorms — is deemed to be high, such as the coastal United States, Southeast Asia and U.K./Europe.

To aid in prioritizing management focus on extreme weather events, each peril region is classified as either Tier 1, 2 or 3 according to the exposures and risk combination present. Tier 1 regions are the highest priority areas for the company as they present the greatest risk profile and are the most carefully managed. Tier 2 and 3 regions are also closely managed at the regional and business unit level.

In addition to modeled peril regions, we focus on non-modeled perils, such as flood and wildfire, which present a risk in many of the developing areas of the Chubb insurance portfolio. Several major natural catastrophes in recent years, such as Hurricane Harvey in Texas, the Kumamoto earthquake in Japan, flooding in Europe and wildfires in California, were non-modeled events or involved difficult-to-model coverages (e.g., business interruption). These types of losses have not typically been considered in the risk and pricing model framework used by the insurance industry to project natural catastrophe losses and this has led to an overall rise in the industry's perception of risk.

The natural catastrophes of 2017 included both modeled and non-modeled losses. For example, the insurance industry's flood models for Houston did not correctly anticipate the extent of flood risk: the city suffered three one-in-100 year floods in an 18-month period, including Hurricane Harvey. As Mr. Greenberg has noted, "Models provide an organized framework for thinking; they don't represent truth."

The lessons learned from such events — new assessments of building performance and improved understanding of how a convergence of conditions can increase losses in a severe catastrophe — enable us to incorporate the latest knowledge in our modeled loss estimates.

Chubb accounts for the potential impact of catastrophe and climate risks on the company's own facilities and operations. Direct risk to Chubb's business operations exists if such weather events occur where Chubb has offices. Severe weather events have tested Chubb's business continuity program and operations have functioned effectively. Chubb's risk analysis ranges from the known (based on definitive historical loss experience) to the hypothetical (based on a probable maximum loss (PML) calculation).

Pricing

Chubb incorporates risk mitigation services through its risk management and site surveys, specification of terms and conditions in policies and the development of sound underwriting guidelines into the underwriting of catastrophe-exposed products (e.g., property, energy, marine or crop coverage). Chubb's modeling and underwriting approach allows for risk — and hence price — differentiation across our client base.

Clients that mitigate risk — through retrofitting buildings to comply with updated building codes, installation of hurricane shutters and relocating exposures away from coastlines and flood plains — will have lower insurance costs than those that do not. Chubb also makes use of terms and conditions, such as sub-limits, coverage restrictions and deductibles, to ensure appropriate risk selection and potentially reward certain policyholder behavior.

The company is also actively engaged with regulators to ensure that pricing is actuarially sound and can be adapted to meet new and emerging climate change risks and the capital implications of these risks. For Chubb to continue to offer coverage under climate change conditions, pricing must always be set at sound actuarial rates that cover loss costs, expenses and risk margins on exposed capital. Thus, pricing must be flexible over time and by geography.

Unfortunately, many regulatory regimes impose the functional equivalent of price controls, which are not built to respond to developments in risk assessment and signal the wrong incentives to consumers and businesses that are encouraged to increase exposures.

Reinsurance

We mitigate our exposure to climate change risk by actively hedging catastrophe risk in both the reinsurance and capital markets. In addition, our investment portfolio, which backs the loss reserves and claims-paying ability of our insurance businesses, is highly diversified by risk, industry, location, and type and duration of security.

Successful risk transfer from policyholders to insurance and capital markets also requires industry standards around exposure data. We are committed to helping the industry improve standards that will ultimately help increase risk transfer capacity and provide additional incentive for risk mitigation behavior by policyholders.

Supporting Solutions

Chubb continues to participate in and support scientific-based research to enhance the loss modelling response to climate change and is participating in leading environmental information forums.

Evidence also applies to principle(s): 1.1, 1.2, 1.3, 1.4, 2.1, 2.2, 6.1

Source: Chubb

The Lloyd's market / MS Amlin / Partnership with Oxford University

MS Amlin recognises the value of using external models to help guide risk management and decision making and in doing so, it distinguishes itself by reviewing and questioning the use of modelled output and the risk posed by the growing reliance and use of these models.

MS Amlin and the Oxford Martin School have been working together to research and promote the understanding of Systemic Risk of Modelling (SRoM) across the re/insurance industry to the benefit clients, stakeholders, insurance experts, and regulators. Systemic risk of modelling is increasingly relevant due to the growing level of globalisation, interconnectedness, and speed of business transactions in the world. MS Amlin has been collaborating with Oxford University in order to invest in thought leadership to increase the industry's awareness around the SRoM and to seek to further the industry's understanding of such risks posed by catastrophe models in light of increasing usage from a relatively small number of model providers.

In 2017, a joint paper authrored by MS Amlin's Underwriting Modelling team and the Future of Humanity Institute at Oxford University's Oxford Martin School (OMS) introduced the SRoM Risk Scorecard to help firms and regulators to measure the amount of systemic risk introduced from modelling.

The next phase in 2018 is to develop an Agent-Based Modelling (ABM) of the Insurance Industry in collaboration with Oxford University's Institute of New Economic Thinking [INET] department to model and examine the impact of various macro-factors on the system as a whole, for example, market cycle (soft / hard) conditions and the extent to which the regime of setting of regulatory capital e.g. Solvency II creates pro-cyclical behaviours.

Forward planning and deliverables of the SRoM project until September 2019:

1. The ABM of the insurance sector will be improved and finalised during H1 2018, with:
   - Validation and calibration using historical data on insurance firm performance.
   - Quantitatively reasonable output for the profits and losses of insurance firms as a function of time.
   - Competition between firms.
   - Insurance cycle with realistic amplitude and timescale.
   - Initialization to match the current position in the cycle and how this should impact the aggressiveness of policy writing.
   - Quantitative implementation of Solvency II and a quantitative analysis of its problems.
   - Users interface for the ABM so that it can be used without any programming knowledge.
2. A research paper drafted and submitted to an industry journal presenting the quantitative model and its policy recommendations.
3. Presentation on the findings of the SRoM project will be arranged to the academic and industry audiences. Feedback will be provided to the insurance industry stakeholders including regulators, insurance companies, and rating agencies.
4. An additional brochure will be produced describing the results of the improved model and their implications for the insurance industry in general.

Evidence also applies to principle(s): 1.1, 1.3, 1.4, 3.1

Source: MS Amlin, See Computer models: friend or foe and Calculating risk

The Lloyd's market / QBE European Operations / Understand risk to inform business strategy

Climate-related risks and opportunities constitute a key topic affecting core business for QBE and the insurance sector in general. "This includes the physical risks from changing frequencies and intensities of weather-related perils as well as transitional risks from the reduction in insurable interest and liability risks where insurance companies have exposure to companies with a high degree of climate risk."[a]

We believe that it is important that we understand current and emerging environmental trends that impact our stakeholders. This knowledge allows us to build sustainability considerations into our risk management and decision making process and to help our customers to manage risk through our products and services.

Across QBE's global operations, we are committed to applying a disciplined approach to risk management and ensuring our risk management practices and systems are robust, independent and aligned with global best practice.

QBE's Enterprise Risk Management Framework is outlined in the QBE's Group Risk Management Strategy, and is supported by frameworks for each risk class, including strategic, insurance, operational, credit, market, liquidity and group risk. Climate-related risks are assessed and managed through this integrated framework.

QBE operates risk forums across the Group to identify and assess the impact of existing risks which develop in new and unexpected ways, and new risks. Many of the transitional climate-related risks are considered in these forums.

QBE has established a senior cross-functional and cross-divisional Climate Change Working Group to coordinate our approach to managing climate-related risks and opportunities, with representatives from Underwriting, Investments, Finance, Risk and Operations. The Working Group supports management and the Board by providing an integrated view of the risks and opportunities related to climate change and and building a clear pathway for management and disclosure.

QBE has been involved in a range of environmental, social and governance (ESG) initivatives over several years, including being a member of the United Nations Environment Programme Finance Initivative (UNEP FI) and a signatory of the UNEP FI Principles of Sustainable Insurance (PSI), and continue to integrate these principles into decision making and risk management processes.

QBE has also recently affirmed its commitment to the Task Force on Climate-related Financial Disclosures (TCFD) recommendations released in June 2017 and will commence reporting in line with the TCFD recommendations as part of the 2018 Annual Report to be released in 2019.

[a] Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures, June 2017

The QBE Group Underwriting Standards incorporate principles of responsible underwriting and support our commitment to the PSI including:

- Identifying and integrating ESG issues into risk management and underwriting decision-making processes;
- A commitment to developing products and services that reduce risk, positively impact ESG issues and encourage better risk management; and
- Working with clients and business partners to raise awareness of ESG issues, manage risk and develop solutions.

This is supported through QBE's Global Risk Solutions Practice, a global community comprising of risk engineers, risk management consultants and scientists, which aims to improve knowledge exchange and provide expertise to underwriters and insureds including environmental management.

Central to the Risk Solution Practices is the risk database QRisk, which is used to manage all information from surveys and risk assessments and provides underwriters with richer insight and a strong foundation for the use of data analytics to drive a better understanding of the risks that QBE insure, including environmental considerations.

QBE's Global Emerging Risk Group, supported by the divisional emerging risks groups including the European Operations Emerging Risk Group, play a fundamental role in examining the impact of changing risks (including climate change and technological change) by assessing their potential impact and developing strategies to mitigate and/or exploit them.

Evidence also applies to principle(s): 1.3, 1.4, 3.1

Source: QBE 2017 Sustainability Report, QBE Insurance Group – Notice of Annual General Meeting (2018), QBE Insurance Group Limited 2017 Annual Report

The Lloyd's market / Tokio Marine Kiln / Disaster modelling and climate change

Tokio Marine Kiln is a core member of Lloyd's Oasis Loss Modelling Framework, a not-for-profit company backed by Lloyd's Corporation and a community of (re) insurers and brokers in the UK, Bermuda, Zurich and the US. A number of enterprises from around the world have also joined as associate members, including the UK Met Office, University College London, Karen Clark & Co, JBA Risk Management and Perils AG.

The Oasis Loss Modelling Framework provides members with an alternative source of catastrophe risk models to the small number of proprietary software vendors which exist to date. The Oasis project deliberately concentrates on perils and geographies that are not so well covered by other proprietary models. TMK is represented at the Oasis Committee and has contributed significant resources (dataset, modelling capability, man-hours, financial) to-date, particularly in the implementation of the ARA US Windstorm catastrophe model through Oasis.

In addition, TMK is represented at the Lloyd's Exposure Management Committee. Through this Committee, our views, experiences and internal research materials on climate related risks such as El Nino, La Nina, Polar Vortex, are shared with the other Market participants. TMK also supports Lloyd's on relevant publication in relation to climate change, where possible.

Evidence also applies to principle(s): 1.2, 1.3, 1.4, 2.1

Source: Tokio Marine Kiln

1.2 Support national and regional forecasting of future weather and catastrophe patterns affected by changes in the earth's climate.

The Lloyd's market / Beazley / working with partners

We continue to explore opportunities to work with external parties to support climate data collection and modelling, and for example are currently discussing potential linkages and research projects with the UK Met Office.

Evidence also applies to principle(s): 1.3, 1.4

Source: Beazley

The Lloyd's market / Hiscox / Informing and influencing business practice - pricing

We publish our research where appropriate and participate in industry events and other collaborations to share what we have learnt. We also inform and update customers, investors and policymakers by a number of communication channels. For more details on our approach to communications please see section 2 for policy making and section 3 for customer communications.

In January 2017 we worked with other insurers, brokers, reinsurers, Lloyd's, rating agencies, regulators and HM Treasury to collectively test the London Market's ability to withstand major catastrophes through a 'dry run' exercise. Hiscox was proud to lead this industry-wide initiative, as we felt it had been many years since the industry had experienced a market-turning event and that much had changed during that time, with new regulators (the FCA and PRA replacing the FSA) and a different regulatory framework with Solvency II.

The dry run scenario tested our response to an unprecedented cyber event, a highly destructive hurricane, one of the largest ever stock market declines and a major reinsurer default with consequent delays in reinsurance payments – all resulting in global insurance losses of approximately $200 billion, the largest in history.

Full details of the exercise and the conclusions draw from it can be found in the resulting report, 'London Market looks ahead: Preparing for the next big insurance event.'

This exercise proved to be timely. 2017 will be remembered remembered as one of the most costly years in history for natural catastrophes as a result of hurricanes Harvey, Irma, Maria and Nate, Mexico earthquakes and California wildfres. The total cost of these events to the industry is estimated at in excess of US$140 billion, and Hiscox established net reserves of US$225 million to cover the expected losses from them.

Recent Hiscox publications

Hiscox Global Insight online published a number of articles covering a range of climate and catastrophe-related topics including:

- How combined large events like Hurricanes Harvey and Irma can create secondary industry problems dealing with large numbers of claims, for example due to a shortage of US loss adjusters; and solutions for how this could be fxed;
- Advances in computer modelling of wildfres and increasing numbers of larger fres which are affecting the US market especially in California, causing some insurers to withdraw. This is an analogous situation to the recent gap in US and UK flood insurance markets and presents a similar opportunity to create a new market solution, similar to FloodRe or FloodPlus, for wildfre insurance;
- Why in recent years fewer hurricanes have made a US landfall, and which global and regional climate factors changed in 2017 to create Harvey and Irma;
- New research into earthquake prediction and how one earthquake can affect the likelihood and size of others occurring in nearby faults or even around the globe by relieving or building pressure in other faults.

Evidence also applies to principle(s): 1.1

Source: Hiscox

The Lloyd's market / MS Amlin expands into natural catastrophe modelling research

With the appointment of Dr Tina Thomson as Research Manager in the Catastrophe Modelling team in the past year, MS Amlin is taking first steps towards advancing its own view of natural catastrophe risk.

MS Amlin has set out its research strategy and prioritised an agenda of peril-regions to understand how well the catastrophe models represent them. Dr Thomson is leading an analysis programme to improve the group's global knowledge of hazards and natural catastrophes and to implement, within the MS Amlin governance framework, its own view of catastrophe risk.

MS Amlin's research work will be aided by MS Amlin's first Academic Advisory Panel, which consists of experts from different institutions across the fields of:

1. Seismology: Geo-physicists to aid the scientific understanding around earthquake modelling.
2. Hydrology: Hydrologists to support the evaluation of flood science, such as the underlying modelling techniques, and the latest scientific hydraulic and hydrological developments.
3. Meteorology: Meteorologists to advise on wind-related perils, climate change impact and atmospheric science in general.
4. Engineering: Structural engineers to support the scientific analysis of property damage functions and business interruption.

The panel launched with on 28th March 2018, with the aim to define its framework for the forthcoming year. The purpose of the Panel is to discuss scientific trends and mutual research interests between MS Amlin and the participating academic members.

It will offer objective advice scientific advice, information to develop MS Amlin's internal knowledge culture as well as our proprietary view of natural catastrophe risk. In addition, the research programme will offer valuable insights to MS Amlin's clients and enable contributions towards market-wide scientific discussions at conferences.

Most recently, at the 5th Annual CAT Risk Management & Modelling Europe conference, Dr Tina Thomson was invited onto an expert panel to discuss the retrospective of the Mexico earthquakes in 2017. Topics within this complex and seismic active region were wide ranging and covered the seismicity of the events, observed versus modelled damages, local insurance market and the triggering of cat bonds.

In October 2017, Dr Thomson organised a Lloyds Breakfast Briefing, together with market peers to share knowledge and insights into how the (re)insurance industry can use satellite technology to calculate and manage earthquake risk. 'Earthquakes from Space', an MS Amlin sponsored event, was a rare opportunity to bring together leading figures in catastrophe modelling, earth observation and academia to share their views on earthquake imagery from space and its application to (re)insurance.(

The scientific and natural catastrophe modelling topics are wide ranging, and with the help of the Research Manager MS Amlin have introduced a focussed agenda to differentiate itself in this arena. Dr Tina Thomson also continues her collaboration with Imperial College, London which is using data from the Carlisle flood of 2015 to develop a localised flood response model.

Evidence also applies to principle(s): 1.1, 1.3, 1.4, 3.1

Source:MS Amlin, See Earthquakes from space and How insurance models are improving flood prediction

The Lloyd's market / RenaissanceRe Syndicate Management Ltd / NatCatDaX: the Natural Catastrophe Data and Analytics Exchange Alliance

The Natural Catastrophe Data and Analytics Exchange (NatCatDAX) Alliance was launched at the 7th International Symposium on Catastrophe Risk Management organised by NTU, is an industry-led catastrophe data and analytics platform for Asia.

The Alliance is a partnership with Nanyang Technological University (Singapore's Institute of Catastrophe Risk Management), Aon Benfield, Mitsui, Risk Management Solutions and PERILS, with support by the Monetary Authority of Singapore (MAS) RenaissanceRe is a founding member of the Alliance with representation on the governing Board.

The Alliance will generate a rigorous database by tapping into national and industry data. Such high quality data, market analytics and product innovations are currently lacking in the region, and the output of this Alliance can be used to help analyse key cities and regions within Asia to understand both the insurance exposure to a loss as well as the economic exposure more generally as a result of an event.

In 2016 Jon Paradine, Principal Officer, Singapore Branch, Renaissance Reinsurance Ltd and DaVinci Reinsurance Ltd, said:

"Fostering a shared, scientifically sound understanding of catastrophic risk in Asia will help to better protect people from the increasing risk of natural disasters, while expanding the penetration of insurance coverage will improve financial resiliency for our communities. This ground-breaking initiative will further enhance Singapore's position as a strong, innovative financial centre and RenaissanceRe is honoured to be a founding sponsor."

Jon Paradine is a current member of the International Advisory Board (IAB) for the Institute of Cat Risk Management (ICRM) at Nanyang Technical University in Singapore. The mission of the ICRM is multi-disciplinary research projects in science, engineering, finance, technology, economics and socio-political aspects related to catastrophe risk and to help the community to better understand the fundamental characteristics of risks related to natural and non-traditional disasters such as earthquakes, tsunamis, typhoons, volcanic eruptions, floods, droughts etc. The IAB comprises of globally leading academics, researchers and representatives from the industry, academia, research organizations and government agencies to guide the ICRM's strategic plans.

Jon Paradine also serves as the Chairman of the ILS alternative risk transfer working group, which is a group comprising of industry experts in the ILS space and has been established by the MAS. The group will continue to advise the MAS on initiatives that aim to develop Singapore as an ILS hub and to create a framework to allow ILS to provide risk financing solutions in developing and developed countries.

Evidence also applies to principle(s): 1.1, 1.3, 1.4, 2.

Source: RenaissanceRe Syndicate Management Ltd, MAS[1], NTU[2], Clyde & Co.[3], Institute for Catastrophe Risk Management[4].

The Lloyd's market / Tokio Marine Kiln / Joint research on climate change with universities

The TM Group has partnered with the following research groups to improve responses to climate change and natural disaster risks. In March 2016, the group publicly presented achievements to date on earthquake and tsunami risk assessment, tsunami evacuation research and disaster prevention education, and awareness training:

- Atmosphere and Ocean Research Institute at The University of Tokyo
- Hydrospheric Atmospheric Research Centre at Nagoya University
- Graduate School of Engineering
- Disaster Prevention Research Institute at Kyoto University

TMK is represented on the ClimateWise Insurance Advisory Council. In conjunction with the University of Cambridge, the Council has launched the research on 'Transition Risk Project' and is evaluating the feasibility of another research piece on 'Physical Risk'. The Transition Risk Project involves undertaking compelling and multi-disciplinary research to demonstrate materiality to determine the financial performance of infrastructure over a relevant time period. This will inform investment strategies and thinking by supervisory organisation to ensure appropriate risk management steps are taken.

Further information can be found in the group CSR section of the website.

Evidence also applies to principle(s): 1.1, 1.3, 1.4, 2.1

Source: Tokio Marine Kiln

1.3 Use research and improve data quality to inform levels of pricing, capital and reserves to match changing risks.

Lloyd's / The Corporation of Lloyd's / Market oversight

The nature of Lloyd's, as a market of independent businesses backed by the Central Fund, requires the Corporation of Lloyd's to play an active oversight role. This role covers performance management, capital setting and risk management. It is important that market oversight is valued by all stakeholders and is supportive of sustainable profitable growth and innovation, while managing the risk of impact on the Central Fund and protecting policyholders' interests.

The Corporation must act in the best interests of Lloyd's as a whole, which requires us to be robust and thorough in challenging managing agents' business plans and operations to ensure they meet our expectations. The Corporation achieves this by monitoring individual syndicate and aggregate market performance and exposure, and through the approval and oversight of coverholders.

The principles underpinning the Corporation's oversight role are that:

- It should be risk based, with focus on poor performers and those that represent material risk to the Society
- It is built on minimum standards to which managing agents adhere
- It must be clear and transparent so that all stakeholders understand what we do, why we do it and the reasons behind the decisions taken; and
- It must be proportionate, neither too light touch nor unduly burdensome

The Corporation recognises that supervision activity takes place by other parties: the firms themselves, their parent companies (in many cases), and by the Prudential Regulation Authority and the Financial Conduct Authority as well as by regulators in overseas jurisdictions.

It remains a key objective for the Corporation to be as efficient as possible in the oversight process, and to minimise duplication with work undertaken by these parties.

1. Market oversight: 2017 saw a series of significant events. It is anticipated that market conditions will see some hardening of pricing and terms and conditions in loss-affected classes. There are some signs that underwriting discipline is improving but managing agency boards must remain vigilant in their challenge of the business.

Effective portfolio management is the key to mitigating the impact of volatile market conditions. Lloyd's Performance Management Director Jon Hancock has been working with the Market to ensure that it focuses on maintaining strong underwriting discipline and profitable lines of business.

Competition within the insurance industry remains intense with capital, including from alternative sources such as hedge funds and institutional investors, gravitating to the (re)insurance industry. Mergers, acquisitions and broker initiatives are expected to remain features of the industry as participants pursue scale and relevance as well as looking to reduce acquisition costs.

Whilst the recent catastrophe activity will impact pricing levels and adequacy in affected regions and lines, it remains to be seen what, if any, the impact will be in other areas. There are still underperforming lines written in the Lloyd's market that are impacting overall market performance.

It is expected that Market volatility will dominate the array of risks facing general insurers; coupled with the challenge of low investment returns, managing agents must seek to return their portfolios to profitability and ensure that underwriting discipline and effective cycle and portfolio management are priorities.

Maintaining underwriting discipline remains vital as the industry experiences a return to more normalised catastrophe activity. The prevailing environment means managing agents must be agile and flexible, showing a willingness to withdraw from lines of business and innovate in terms of distribution, new markets and products. Cycle management, underwriting discipline and strict adherence to the Board approved risk appetites remain key.

Corporation of Lloyd's oversight activities during 2018 will focus on cross class post-hurricane analysis, Marine Hull, Property, Overseas Motor, with follow up work on Non US Professional Indemnity. In hurricane affected classes this will include an actual vs estimated rates analysis as at 01 January.

Hurricane Claims: The 2017 hurricane season did not trigger Market Turning Event (MTE) protocols. The Corporation of Lloyd's issued guidelines during 2017 on MTE covering how agents should prepare for such events and how the Corporation will deal with the resultant changes. The Corporation have highlighted to the market that it is important that agents re-visit this guidance and consider creating an MTE internal plan (including resourcing of claims surge) to assist with a prompt consideration of underwriting opportunities should an MTE occur.In 2018, Corporation of Lloyd's oversight activities will include a focus on catastrophe loss response, delegated claims handling performance and enhancements to customer experience.

2. Catastrophe Exposure: Lloyd's protects people and businesses around the world from a wide variety of catastrophe risks including hurricanes, earthquakes, flooding and wildfires. The Lloyd's Market routinely models these and submits information to Lloyd's to form a comprehensive view of catastrophe risk within the Market. This feeds into the calculation of the necessary size of the Central Fund and also to member capital calculations.

   The catastrophe and other models used in this process help the Market assess risk levels based on strong scientific and engineering principles in a statistically sound manner. The models contain many key parameters and assumptions; they also rely heavily on the quality of the exposure data to which they are applied. Therefore the calculated values are subject to uncertainty.

   Corporation of Lloyd's Minimum Standards require illustrations of this uncertainty be communicated to the managing agency Boards to ensure that they and capital providers appreciate the potential for mis-estimation. The Corporation of Lloyd's needs to maintain tight understanding and control of catastrophe risk throughout 2018. Agents need to be mindful of both their own catastrophe risk appetite and that of the aggregation of catastrophe risk across the whole Market (and therefore the Lloyd's own appetite). Further details can be found in the 2018 Market Oversight Plan.

3. Strategic priorities and KPIs: The Corporation of Lloyd's oversight activities during 2018 will focus on close monitoring of managing agents' catastrophe-exposed business as reported, including completeness of non-modelled risks in syndicate models, to ensure that syndicates remain within forecasts agreed by the Corporation of Lloyd's during Capital and Planning Group (CPG) approval.

4. The KPIs can be found in the 2018-20 Strategy, which are used to determine remuneration for Corporation of Lloyd's employees.

5. See principle 1 for further examples as using research and improving data quality is mentioned throughout the case study examples.

Evidence also applies to principle(s): 1.1, 1.3

Source: The Corporation of Lloyd's

The Lloyd's market / ArgoGlobal / Evaluation of Evolving Climate Risks

Argo Group considers the impact of climate risk in its modelling of risks and exposures for the relevant product lines and insurance coverages that it offers. Argo Group also considers the influence of climate change risk in its relevant underwriting decisions.

ArgoGlobal investigated options for flood modelling and selected the 'Katrisk' proprietary flood model to help better model flood risk and understand the associated exposures. This model has now been adopted and implemented for risk selection, pricing and aggregation purposes. There is recognition of the impact of increased ambient temperature and ArgoGlobal continues to review its risk appetite for flood risk in certain US zones. Dr. Federico Waisman, SVP and Head of R&D analytics at Argo Group presented a webinar in November 2017, at Lloyd's of London, highlighting different flood models and the challenges associated with model selection and use.

Climate risk is implicitly included in Argo Group's catastrophe reinsurance considerations through the use of catastrophe modeling. Allowance for uncertainty in climate change risk is provided for through the use of Argo Group's Stress & Scenario Testing Framework (SSTF) and economic capital modeling processes. These stress tests together with our approach to non-modeled risk (NMR) and emerging risk processes provide the ability to consider the wider economic capital implications for Argo Group's solvency in respect of climate change -related risks.

The Argo Group emerging risk monitoring process includes scanning available resources for information regarding climate change related current events, litigation, regulation, legislation, the political environment and industry groups actions that may have an impact on the Argo Group Climate Change Policy and/or strategy. 'Stranded assets' have been specifically identified as a potential material risk factor. Utilizing the Lloyd's of London report entitled "Stranded Assets: the transition to a low carbon economy - Overview for the insurance industry", Argo Group has maintained stress test scenarios that consider the potential impact of high-carbon assets within its portfolio on its capital adequacy. The results of this study were combined with other scenarios within the wider Stress & Scenario Testing Framework (SSTF).

Evidence also applies to principle(s): 1.2

Source: ArgoGlobal – Syndicates 1200 & 1910

The Lloyd's market / Beazley / TCFD

We are undertaking internal research to evaluate our exposure to climate change, as recommended by the Task-force on Climate-related Financial Disclosures (TCFD).

We assess and manage climate-related risks and opportunities in our re/insurance business using a variety of tools and methods

The group sets out the exposure that it is prepared to accept in certain territories to a range of events such as natural catastrophes and specific scenarios. This is monitored through regular calculation of realistic disaster scenarios (RDS). The aggregate position is monitored at the time of underwriting a risk, and reports are regularly produced to highlight the key aggregations to which the group is exposed.

Where possible the group measures geographic accumulations and uses its knowledge of the business, historical loss behaviour and commercial catastrophe modelling software to assess the expected range of losses at different return periods.

The three largest weather related natural catastrophe RDS's that could have impacted Beazley in 2017 were:

Unaudited	**2017**	
Lloyd's prescribed natural catastrophe event	Modelled PML* (before reinsurance) $m	Modelled PML (after reinsurance) $m
Gulf of Mexico windstorm (2017: $112bn)	609.0	163.3
Florida South East windstorm (2017: $125bn)	514.7	145.4
US Northeast windstorm (2017: $78bn)	489.5	147.6

*(*PML = Probable Maximum Loss)*

The above figures are calculated by taking into account expected weather activities, the value of insured items and their vulnerability to these weather activities and the amounts of indemnity provided to our insureds. Changes in the RDS figures are monitored on a regular basis and show the development of our climate risk exposure. This could be due to a number of factors including climate change (increased frequency and strength of hurricanes as an example), our business plan or the value and vulnerability of our insured's property.

Evidence also applies to principle(s): 1.3, 1.4

Source: Beazley

The Lloyd's market / MS Amlin / Use research and improve data quality to inform levels of pricing, capital and reserves to match changing risks

Non Modelled Risks White Paper

The Association of British Insurers (ABI) published an industry White Paper on Non Modelled Risks ("Non Modelled Risks: A guide to more complete catastrophe risk assessment for (re)insurers") with contributions from David Singh, MS Amlin's Head of Exposure and Portfolio Management. This paper defines Non Modelled Risks as "Any potential source of non-life insurance loss that may arise as a result of catastrophic events, but which is not explicitly covered by a company's use of existing catastrophe models."

Building on this initiative, MS Amlin developed a methodology for enhancing the modelling of these risks in the Internal Model. The approach is based on a historical catalogue of world-wide natural disasters and industry loss publications. When combined with the source data using actuarial techniques it provides an estimated total damage which can be used to develop market-share models for each Non Modelled Peril/Region inthe Internal Model.

Industry Working Group

David Singh has also contributed to Lloyd's Minor Model Change guidance for Catastrophe Risk on model completeness. Lloyd's' intention is to understand the proposed material changes in the view of natural catastrophe risk within the Internal Model that fall under the syndicate's definition of a minor model change.

David is also a member of the LMA's Exposure Management Working Group which is assisting Lloyd's on a new Standard Formula data collection exercise for setting Lloyd's Brussels SCR (Solvency Capital Requirement) for trading in 2019.

Evidence also applies to principle(s): 1.1, 1.3, 1.4, 3.1

Source: MS Amlin

The Lloyd's market / Navigators Underwriting Agency Limited / Lead in risk analysis

Future proofing engineering design

Navigators' Risk Engineers continue to maintain a dialogue with climate change modelling specialists and Energy clients alike to better understand the potential impact on an offshore structure or onshore facility from a natural hazards perspective projected 40 plus years to consider the potential impact of climate change, with a view to building a more resilient design, whilst at the same time understanding increased and changing exposure to existing assets and, affording clients the insurance coverage they require.

Examples discussed in the 2017 submission included consideration of ‘air gap’ (*the distance between the underside of the cellar deck and the crest height of an extreme wave for a given return period*) requirements for offshore platforms against a projection of rising sea-levels, and elevation/location of critical onshore infrastructure such as electrical sub-stations in an environment of changing flood levels.

For an Energy Operator, this requires a highly proactive approach, with projects needing to make investment decisions today with potentially more conservative and by definition more costly design approaches that will only provide benefit in future decades. In the absence of such an approach, there is an increased risk to future operations, with potential costly loss of production in addition to property damage that could at that future time only be avoided by expensive retro-fitting. Future proofing the design would need to be demonstrated as cost effective, with suitable financial analysis in line with ‘life-cycle’ approach engineering.

In this reporting period, we have continued to provide coverage and work with clients with ageing offshore assets, some of which have become victim to creeping change both in design standards and in some cases foundation subsidence, and also revised and often more severe metocean data. All of these have increased risk to offshore structures. Such continued coverage is vital to clients as they work through expensive and lengthy projects to retrofit improvements to such assets.

Navigators, through our NavTech Risk Engineering resource, have also provided on-going advice to a cross industry Natural Hazard project aimed at providing Energy infrastructure designers, constructors and operators within the UK improved information to better understand the implications to critical Energy infrastructure from extreme weather, seismic and volcanic events.

Research and data analysis – CAT exposure and modelling

Navigators continue to use aggregation platform Exact Advantage version 3.7. This software allows Navigators to capture static exposure for all lines of business contributing to our CAT exposure. The mapping capability within Exact allows underwriters to view exposure on individual desktops.

Navigators will be renewing their CAT modelling license again this year. Additional capabilities include additional earthquake regions in Europe. Also new this year in the CAT Management department is the ability to model inland US flood. This is a new model for Navigators and we will be testing throughout the year.

Navigators will be holding two NatCat Summits this year, one in London and the other in Stamford, CT. These summits are held to inform underwriters and other internal stakeholders what is new in the modeling and aggregation world.

Evidence also applies to principle(s): 1.1, 1.2, 1.4

Source: Navigators Underwriting Agency Limited (Navigators)/NavTech

The Lloyd's market / QBE European Operations / Use of technology and stress testing to assess climate risk

QBE uses stress and scenario testing to better understand our risk profile under a range of different scenarios. Assessing the impact of extreme but plausible events helps us better prepare for such situations and ensures that our risk exposure is acceptable to the Board. QBE uses a range of modelling techniques to estimate potential losses, manage exposure and assist in making decisions regarding risk management and coverage. This capability is critical to managing our exposure to possible events, such as natural catastrophes and extreme weather events.

As mentioned above under 1.1.1, QBE has a cross-functional Climate Change Working Group in place, including representatives from Underwriting, Investments, Finance, Risk and Operations to develop a coordinated approach across the various business functions.

QBE uses data and analytics to help us improve claims management and underwriting decisions. During 2017, QBE continued to invest in emerging technologies and new tools, insurance data and analytics to assess trends and ultimately benefit our customers. For example, in the QBE North American Operations a loss calculation prototype engine was developed, which uses national weather data to enable us to notify agents of the likely payouts sooner, providing our customers with reassurance about claims progress and resolving claims faster.

Furthermore, QBE is always experimenting with technology to improve our catastrophe claims response, supported by QBE's digital innovation lab located in Sun Prairie in the United States, which analyses how digital technologies can be applied in the insurance context.

In Australia, drones were used for the first time to visually inspect areas affecbed by Tropical Cyclone Debbie. QBE now has plans to use high-resolution aerial imagery to view widespread damage caused by cyclones and are trialling several platforms to enhance the claims triage process. The QBE Innovation Lab is in the experimental phase of using satellite imagery to accelerate disaster response.

Evidence also applies to principle(s): 1.1, 1.4, 3.1 and 3.3.

Source: QBE 2017 Sustainability Report, QBE Insurance Group – Notice of Annual General Meeting (2018), QBE Insurance Group Limited 2017 Annual Report

The Lloyd's market / Tokio Marine Kiln / Use of researching in pricing, capital and reserving

Natural catastrophe risks and exposure play a dominant part of Tokio Marine Kiln's (TMK) insurance portfolio. Therefore it is critical that we have in-depth knowledge and understanding of the modelling of different portfolios and perils we write.

Whilst we rely on third party models to deliver the raw materials of portfolio management and specific peril analysis, TMK spends considerable time on model validation and improvement. We continuously look for additional industry data to supplement our existing models. For example, we have used data from JVA on UK flood and Spacial Key to enhance our models on floods. TMK is also a core member of the Lloyd's Oasis project and views this initiative as another useful source of industry models.

To date the future impact of climate change has been widely considered by our risk and exposure management, capital and reserving and pricing teams. Emerging climate change issues from El Nino, La Nina and Polar Vortex have been discussed in length amongst the teams in weekly meetings and internal research papers have been produced by the Modelling Valuation team within Exposure Management each month. Where relevant, the output of this research have been considered and incorporated in the capital and reserving of the portfolio.

TMK works closely and shares knowledge and intelligence on climate change via TM Tech. TMK's CRO participates in the conferences held by TM Tech, where the latest thoughts on climate change are discussed across the different operations. We then utilise the group know-how in conducting sensitivity testing in the models.

Evidence also applies to principle(s): 1.1, 1.2, 1.4,2.1

Source: Tokio Marine Kiln

1.4 Evaluate the risks associated with new technologies for tackling climate change so that new insurance products can be considered in parallel with technological developments.

Lloyd's / The Corporation of Lloyd's / New technologies

Research activities : In previous years the Corporation of Lloyd's described ongoing efforts to provide a comprehensive analysis of natural hazards and extreme events, illustrating how the Corporation of Lloyd's has been working on using research and data to inform understanding of risks and capital and reserve requirements.

The Corporation of Lloyd's believe that sharing the research we generate strengthens the industry. The Corporation of Lloyd's continues to work towards improving the analysis and quantification of less or non-modelled regions and risks, including climate and environmental issues.

Examples include:

1. 'Innovative finance for resilient infrastructure' project: More can be done to strengthen resilience and speed-up recovery from disasters, and the Centre for Global Disaster Protection, in partnership with the Corporation of Lloyd's, convened experts from across the financial services, development, humanitarian and engineering communities to catalyse new thinking on how innovative financial instruments can help respond to the global resilience challenge.

   The Innovation Lab brought together experts from the public and private sector, in an open format, to generate and incubate new solutions to meet identified problems. The first Lab of the Centre was held in January 2018 to investigate financial products and structures that incentivise risk reduction and resilient rebuilding by bringing together elements of project financing and risk transfer.

   Four broad ideas emerged from the Innovation Lab. These range from ideas that have already been developed but which can be re-purposed for these challenges which could be brought to market relatively quickly, through to ideas that, although further from current practice, hold significant potential. These ideas will be developed further in the coming months and a full report will follow in Q3 2018. Further details can also be found in principle 2.

2. Preliminary findings were launched at an event at the Commonwealth Heads of Government meeting on 16 April 2018, with introductory remarks outlining the Corporation of Lloyd's position that were made by Inga Beale, Chief Executive Officer, that were shared publically after the event as part of the Corporation's work to communicate messaging:

   The event was organised by the Corporation of Lloyd's, Department for International Development and the World Bank, and featured speeches by:

   – Rt. Hon Penny Mordaunt MP, Secretary of State for International Development, on DfID's strategy and activities

   – Hon Roosevelt Skerrit, Prime Minister of Dominica, on the impact of the recent storms and a call for action

   A panel session on the challenge space and opportunities to drive action:

   – Isaac Anthony, CEO, Caribbean Catastrophe Risk Insurance Facility SPC

   – Stephen Belcher, Chief Scientist, UK Met Office

   – Ivo Menzinger, MD, Client Partnerships Swiss Re & Chair, IDF TAF Working Group

   – Emma Radcliffe, UK Project Manager – Emerging Markets, XL Catlin

   – Nicola Ranger, Senior Disaster Risk Finance & Insurance Advisor, DfID

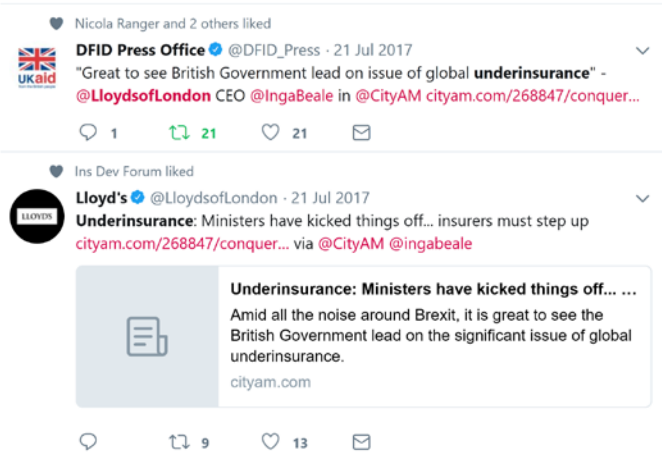
A world cafe style networking section that offered a platform for attendees to hear about research, opportunities, and product development by:

- UK Space Agency / NERC
- Met Office
- Centre for Global Disaster Protection Innovation Centre (DfID/RMS)
- Disaster Risk Facility at Lloyd's
- START Network

Lloyd's market ClimateWise members were invited to the event, which was attended by 100+ representatives of the market, public policy makers, and decision makers. The report was shared with attendees and subscription lists held by the Corporation. Statistics for both are tracked and evaluated by the Brand and Events teams towards annual KPIs focused on driving impact.

3. Following on from work reported privately to PwC in the 2016-17 reporting, the Corporation of Lloyd's shared details on an opinion piece from Beale due to be published in City A.M., in support of the Centre in July 2017. The article can be found here, was reposted on the Lloyd's.com website, and outlined the Corporation of Lloyd's position around climate-change driven extreme weather events, and the need for collaboration across stakeholders to drive solutions.

   The release was coordinated with the Department for International Development, and shared across social channels where statistics and impact are tracked for annual KPIs. This example is also relevant to principle 2.2 reporting as evidence of promoting and engaging in the debate for action.



4. Innovation Lab: In February 2018, the Corporation of Lloyd's publically announced the formation of the Lloyd's Lab. This was not covered in private reporting last year as it was kept strictly confidential at the time, but does represent progressive work by the Corporation of Lloyd's to consider what role we can play in facilitating innovation, both for and with the market.

   The initiative will focus on designing technology-driven solutions to meet the unique and rapidly changing needs of the Lloyd's market, and will aim to enable new concepts and ideas to be tested in a fast-track, fast-fail environment with the support and active involvement of Lloyd's market participants.

   This also complements and runs in parallel to wider work being carried out across the Corporation to increase efficiency, surface more data, encourage digitalisation, and facilitate developments that will ensure we share our centuries of collective experience and knowledge with start-ups who have new ways of thinking.

   The Lab has been backed and approved at Board and Council level, integrated into the strategy with associated KPIs, and is being promoted and developed in conjunction with stakeholders in the market.

   Speaking publically about it, Inga Beale, Chief Executive Officer said:

   > *"There are a host of advanced technological solutions involving data analytics and artificial intelligence that enable a better understanding and predictability of risk. By creating a Lloyd's Innovation Lab, designed to bring in creative talent from around the world to work in partnership with Lloyd's businesses and the Corporation, we can ensure the market continues to innovate as the world moves into an increasingly digital, data-driven future."*

   Vincent Vandendael, Chief Commercial Officer, also said:

   > *"Following the creation of the Innovation team under Trevor Maynard, the Innovation Lab represents a significant next step in driving a cohesive yet nimble approach to idea generation and implementation for the benefit of the Lloyd's market."*

Details of the Lab are publically available in a dedicated microsite, where the first four themes of the Lab are outlined:

- Enhancing the customer experience
- Building a relationship-driven culture for the digital age
- Powering data-driven underwriting with new insight sources
- Creating smart insurance products
- Wildcard – completely open

Lab associates, L-Marks and Boston Consulting Group, are currently in a scouting phase to identify entrepreneurs, alongside early and growth stage companies operating in the InsurTech space worldwide.

Lloyd's Lab is not exclusively for insurance-focused ventures. The Corporation of Lloyd's are also interested in working with products and services from outside of insurance that could have applications in the industry. For example, if a partner had data analytics platform, they could work with the Lab to see how it could help Lloyd's to understand new risk markets.

Forthcoming milestones are:

- 3 September 2018: pitch day for shortlisted entities
- 8 October 2018: cohort 1 finalised
- 12 December 2018: demo-day, with cohort presenting their outcomes

There will be an initial four cohorts over a two year period, with further individuals asked to showcase their innovations on the Lloyd's underwriting floor. The Corporation of Lloyd's would welcome ideas that would help the Lloyd's – the Corporation and market – around sustainability, climate change, and solutions for our customers.

Evidence also applies to principle(s): 1.1, 1.3

Source: The Corporation of Lloyd's

The Lloyd's market / ArgoGlobal / New Technologies and Insurance Products

ArgoGlobal have a stochastic wildfire model with US and Canada coverage. This was constructed as a reaction to the increased frequency of wildfire event that has been seen over the last few years, with a view to assess the materiality of and price for the peril. This model has been calibrated with observed experiences and has considered possible climate change related variables within its calibration. The model has also been updated for lessons learnt during the 2017 fire season.

Argo International continues to support an initiative sponsored by the Rockefeller Foundation – World Bank Disaster Risk Finance and Insurance Program (DRFIP) partnership. The purpose of this initiative is to explore innovative financial solutions relative to climate change and disaster risks in Asia. Specifically, under consideration is the ability to offer parametric flood coverage to countries in Asia where this type of risk has increased due to climate change.

Evidence also applies to principle(s): 1.1, 1.3

Source: ArgoGlobal – Syndicates 1200 & 1910

The Lloyd's market / Chubb / Global 100 Cleantech

The renewable energy sector is a major product area for Chubb. The desire to develop clean, efficient alternative sources of energy is leading to the planning and construction of renewable energy projects around the world. These projects take many different forms: biomass/biofuel, biogas, energy from waste, fuel cell, as well as solar, wind and hydro energy. Chubb addresses risks that occur in the two main phases of a typical renewable energy project— construction and operation. Construction risks range from delay in start-up to public or employer liability, whereas operation risks range from business interruption to premises pollution.

In addition, Chubb insures over one third of the Global 100 Cleantech, which are the largest private innovation companies operating in the sustainable technology industry. The insurance protection Chubb provide to these companies indirectly supports the research and development, production and commercialisation of specific technologies that have the potential to reduce GHG emissions.

Evidence also applies to principle(s): 1.1, 1.2, 1.3, 3

Source: Chubb

The Lloyd's market / QBE European Operations / Development of new products alongside technological developments

As outlined in 1.3.1 above, QBE explores new digital technologies in our Innovation Lab, including technology to improve QBE's catastrophe claims response process. Data and analytics are also used to help make more informed underwriting and claims decisions, supported by QBE's Global Risk Solution Practice providing expertise including environmental management and the QRisk database, providing a strong foundation for the data and analytics work.

In terms of product development, QBE European Operations is an underwriter to Lumos Global, a Dutch company offering clean and affordable solar power to a market of 1.3 billion potential customers who live off the electricity grid. Lumos Global seeks to enable people in some of the poorest countries in the world to replace hazardous and expensive kerosene generators and lanterns with modern solar electricity that can power lights, cellphones and small electronic devices. Lumos Global offers home and small businesses a simple and affordable way to pay for clean electricity in small instalments using their mobile phones.

QBE is also exploring product development opportunities with climate-related implications arising from the shift towards electric and autonomous vehicles. QBE's Australian and New Zealand Operations is working with Tesla and Marsh Advantage to underwrite policies issued in Australia under the InsureMyTesla programme, a comprehensive motor vehicle insurance programme for Tesla owners.

Evidence also applies to principle(s): 1.1, 3.2

Source: QBE 2017 Sustainability Report, QBE Insurance Group – Notice of Annual General Meeting (2018)

The Lloyd's market / Tokio Marine Kiln / Insurance products innovation in response to climate change

Tokio Marine Kiln has been providing insurance support to new technologies which serve to work against climate change. We have highlighted some examples as follows:

One TMK Digital Exchange

TMK continues to migrate products to its One TMK exchange. There are four products available for UK: Cargo 10, Cargo SS, UAS and Construction; and two for the US: Construction and Flood. One of the purposes of this is to reduce the amount of paper involved in getting a TMK insurance policy – all quotes, binding and documentation is paper free.

Furthermore, the platform allows brokers to conduct business with us anywhere and anytime. This reduces the significant chains of brokers that can develop in order to get access to the Lloyd's market. In addition to this, the Lloyd's market still operates on a face-to-face basis and the use of the platform reduces the necessity of transportation for brokers and underwriters to conduct business in this way. Overall, the use of technology will contribute positively to climate change.

Unmanned Aerial System (UAS)

The UAS industry indirectly provides solutions that help counter climate change as they are a greener alternative to operating a conventional aircraft, with many UAS systems operating via batteries and even solar power rather than the usual polluting fuels used in manned aircraft. With its leading expertise, TMK is supporting the increase usage of UAS through the coverages it provides.

In May 2015, TMK has successfully launched the first comprehensive insurance product of its type for Unmanned Aerial Systems (UAS) in the Lloyd's market. The product, "One Unmanned" offers clients, ranging from UAS operators, manufacturers and service providers, protection under a single wording featuring multiple coverages, which the client can tailor to best suit the needs of their business.

In recognition of TMK's contribution to the industry, the "One Unmanned" product was shortlisted for the category "most innovative product" in the inaugural Lloyd's Innovation award in 2015.

In 2017, TMK won an award in the inaugural Tokio Marine Group CSR initiative for all the group companies globally. The award recognises UAS as a greener option of insurance product in various commercial sectors. The submission highlighted how carbon heavy practices such as helicopter flights are being replaced by UASs in various commercial sectors, reducing carbon emissions. TMK's product supports the increase in usage of UASs.

Crop

In 2017, TMK hired a team of crop underwriters which will allow TMK to underwrite international crop reinsurance business. The indirect benefit of this is that TMK's insurance capacity helps support the agriculture sector, especially in high risk areas where there is significant agricultural impact of natural disasters, particularly in Latin America and Asia.

Renewable Energy

TMK is a pioneer in the renewable energy insurance space and has been underwriting since 2002, by supporting one of the largest and long established managing agency in this area. To-date, TMK still leads the Renewables line slip with a share of more than a third, covering comprehensive property insurance coverage for transit, construction and operational risk associated with wind, solar, hydroelectric and wave and tidal energy generation across developed and developing countries. We have seen the mix of portfolio shifting over the years with the emergence of new sources of energy and increasing exposure to emerging countries such as Latin America, South Africa, Asia.

Given our participation in this area over the past decade, we have access to extensive technical data and this has been used for risk management and understanding of key trends. The managing agency whom we have supported often hosts workshops / conferences for its customers. These conferences aim to provide key lessons learnt from new technologies, risk management best practices as well as key market trends and emerging risks. TMK is represented in all of these workshops/conferences.

Building on TMK's expertise in this field, the Tokio Marine Group has leverage the size of its balance sheet in providing insurance coverage on larger renewable energy projects and supporting our clients globally. A few notable examples include the Fukushima floating offshore wind farm project in Japan and MHI Vestas in Scandinavia.

Evidence also applies to principle(s): 1.1, 1.2, 1.3, 2.2, 4.1, 4.3

Source: Tokio Marine Kiln

2 Inform public policy making

2.1 Work with policy makers nationally and internationally to help them develop and maintain an economy that is resilient to climate risk. This should include supporting the implementation of emissions reductions targets and where applicable supporting Government action that seeks to enhance the resilience and reduce the environmental impact of infrastructure and communities.

The Corporation of Lloyd's / Senior leadership engagement

In previous reporting the Corporation of Lloyd's has provided evidence of the commitment to effect positive change by being seen as a leader in its responsible business approach. This is reflected in the Corporation of Lloyd's business practices as well as its work with community and charity partners.

In the 2017-18 reporting cycle this has included a range of examples that are also relevant to principles 5.4 and 6:

1. *In 2016-17 reporting cycle, John Parry, Chief Financial Officer, joined the ClimateWise Insurance Advisory Council and attended the two council meetings to provide input on potential projects that may be funded by the group:*

   "I firmly believe we can help society accept the risks of climate change as a given and immediate concern, and use our horizon scanning and understanding of risk to devote resource to loss resilience. I want to drive global responses now, not when it is too late."

   - John Parry, Chief Financial Officer, Lloyd's

   The Council's purpose is to draw on the University of Cambridge and its partners' expertise to help strengthen the industry's response and inform regulators, policymakers and other stakeholders on how to promote more systematic responses to climate change across the financial system. Terms of reference may be found here.

   Involvement in the ClimateWise Insurance Advisory Council requires participants to:

   – Provide strategic oversight for relevant multi-disciplinary analysis that the Council identifies as necessary for achieving the objectives (subject to appropriate resourcing). This will include meeting two (2) times per year as well as occasional informal interactions.

   – Engage with regulators and other industry bodies at key summits and events (not anticipated to exceed 2-3 per year).

   o This has included reviewing and signing off the 'Navigating the Transition: Modelling the materiality of transition risk for infrastructure investment portfolios'

2. Parry's engagements over the reporting year have also included a video interview with the Economist Intelligence Unit on the topic of 'changes on the institutional investment horizon'. This formed part of a study by EIU examining how institutional investors are adapting to changing market conditions.

   During his interview, Parry spoke about stranded assets and ESG investments (*see timing 1:13 onwards*). This forms part of Parry's responsibilities under his management function in Lloyd's Terms of Reference, to:

"promote the Corporate and Social Responsibility (CSR) agenda and specifically to progress Lloyd's CSR objective of using its position and voice to inform and encourage appropriate action on global social and environmental issues of relevance to insurance, such as climate change, whilst ensuring its internal practices support its external messages."

The Terms of Reference are updated on a continual basis where required (last update July 2018), and set out the terms of the delegation of authority to the Franchise Board and other committees, panels, boards and persons and permit for sub-delegation including to the Executive team.

3. Throughout the 2017-18 reporting year, senior Corporation staff continued to speak publicly about the issue of climate change and to present work on mitigation and adaptation to seek opportunities to promote and protect the brand for the benefit of the market.

The following speeches represent examples of speaking engagements throughout the reporting year where the Corporation's Executive team have mentioned pieces relevant to ClimateWise reporting:

Senior speaking engagements mentioning climate change

Date	Event	Title	Speaker
29/9/2017	Lloyd's 2017 Interim results	Keynote speech to the market Talking points included: the need for governments to be better prepared for the impacts of climate change, and the role of insurance in supporting preparedness and rebuilding; research on city resilience and supporting the transition to a low carbon economy	Bruce Carnegie-Brown, Chairman
18/10/2017	ICMIF Meeting of Reinsurance Officials (MORO)	Keynote speech on 'leadership challenges in a responsible industry' Talking points included: underinsurance, ClimateWise principle 3.4 and examples of Lloyd's work towards this, Insurance Development Forum membership	Inga Beale, Chief Executive Officer
7/11/2017	Onshore Energy Conference, London	Keynote speech Talking points included: climate change trends, ClimateWise membership, examples of Lloyd's market developing insurance products to provide businesses and governments with the confidence to invest and progress with renewable energy projects	Vincent Vandendael, Chief Commercial Officer
5/6/2018	City Risk Index launch	Welcome speech: Talking points included: commitment to working with businesses, governments and policy holders to supporting resilience, global underinsurance,	Inga Beale, Chief Executive Officer

4. *In 2015-16 and 17-18 reporting, the Corporation of Lloyd's covered activity by Inga Beale, Chief Executive Officer, and the acceptance of a place on the Insurance Development Forum (IDF) steering committee. This commitment formed part of a wider programme of work that is reported against through this document on the topic of resilience, disasters and communities and is part of the overarching work towards Vision 2025.*

   During this reporting cycle Beale has continued to maintain a position on the IDF steering committee and took part in two meetings in September 2017 and April 2018.

   Staff from across the Corporation of Lloyd's aim to continue to be involved in supporting this work stream, and work with stakeholders across the IDF is featured throughout reporting as evidence of the Corporation's activities to support the initiative.

   This includes speeches, research, and work on facilitating product development through partnerships such as the London Centre for Global Disaster Protection with DfID.

5. *In 2015-16 and 16-17 reporting, the Corporation has reported activity by Shirine Khoury-Haq, Chief Operating Officer, on her sponsorship of the Environmental Working Group, which forms part of her work towards supporting climate change and activity by the Corporation as required by Lloyd's Terms of Reference.*

   In November 2017, Khoury-Haq was invited to provide one of three keynote speeches at the ClimateWise 10 year anniversary event, which the Corporation offered to host for ClimateWise, sponsoring the cost of the room and providing support in promoting the event.

   The speech covered work by the Corporation and Market over the last ten years, and flagged up work currently in progress, such as the responsible investment policy described in principle 4.

6. The Corporation's international staff also support work in this area, and in July 2017, Angela Kelly, Country Manager Singapore and CEO Lloyd's Asia, participated in the Singapore ESG (Environmental Social Governance) Round Table Green Finance Launch.

   The event, sponsored by the MAS and SIIA (Singapore Institute of International Affairs), was attended by over 100 people from the finance, insurance and banking industries. The discussion focused around positioning Singapore as a leading hub for green finance in the Asia region.

   A key outcome of the meeting was a report published for the Singapore Government, which document the current position and make recommendations for future initiatives.

   Through Lloyd's participation, the team were able to share the Corporation's approach to ESG, particularly in relation to initiatives such as ClimateWise and confirm ours and the insurance industry's commitment to working to foster sustainable growth.

   Kelly attended two further roundtable meetings, and provided a write-up on the Corporation's intranet to highlight her work.

Evidence also applies to principle(s): 1.1, 1.3, 1.4, 2.2, and 3.1

Source: The Corporation of Lloyd's

The Lloyd's market / Beazley / UNCCC

We remain commited to supporting the global emissions reductions targets as laid out in the UN Climate Change Agreement of 2015, which we expressed with our signing of the Paris Pledge for Action, the formal initiative for non-state organisations at COP21.

We are pursuing this through our sustainability initiative, participation in broader industry initiatives, and internal environmental activities, as laid out elsewhere in this submission.

Evidence also applies to principle(s): 1.3, 1.4

Source: Beazley

The Lloyd's market / MS Amlin / Internal Policies and Procedures

MS Amlin has a number of policies and procedures in place to ensure that our position on climate change is made aware to suppliers, employees and the general public. The Corporate Responsibility (CR) policy was reviewed in July 2017 and the associated working group meets regularly throughout the year to make decisions and drive actions.

As part of the MS&AD Group, MS Amlin is comitted to supporting our parent organisations CSR and environmental policies and standards. The overarching mission of our parent, the MS&AD Group is : 'To contribute to the development of a vibrant society and help secure a sound future for the earth, by bringing security and safety through global insurance services business.'

The MS&AD Group is commitment to the United Nations seventeen sustainable development goals, createing shared values that include:

- Deal with new risks
- Create safe mobility in society
- Strive for resilient community development
- Support “good health and longevity”
- Contribute to climate change mitigation and adaptation
- Strive to improve sustainability of natural capital
- Work toward “leaving no one behind”

Evidence also applies to principle(s): 1.1, 1.3, 1.4, 3.1

Source: MS Amlin

The Lloyd's market / QBE Europen Operations / Engaging with policy makers

QBE’s commitment to sustainability is long-term and we build on our approach each year in response to a rapidly changing environment. We belive it is important to understand current and emerging ESG trends that impact our stakeholders.

As outlined in 1.1, QBE has been involved in a range of ESG initiatives over several years including our membership of the PSI and PRI. We have work underway to enhance our disclosures in line with the TCFD pathway, beginning in our 2018 Annual Report. We have further strengthened our commitment by signing the Statement of Support for the TCFD recommendations. This will include implementing the recommendations across all four thematic areas including governance, strategy, risk management, and metrics and targets.

During 2017, QBE Group joined the Responsible Investment Association Australasia (RIAA), demonstrating our continued commitment on responsible investments. We engage with industry and government discussions to help promote action on sustainability, including responsible investments, and contribute to governmental submissions, research papers, forums and panels.

Furthermore, in 2018, QBE Group joined the Investor Group on Climate Change (IGCC) and the Actuaries Institue’s Climate Change Working Group.

QBE engaged and worked with government, regulators and other stakeholders on a range of sustainability issues throughout 2017, including in the instances outlined below:

- QBE European Operation’s British Marine business was one of several leading marine insurers that committed to act on pirate fishing. This unlawful practice costs the global economy tens of billions of dollars every year and contributes to overfishing and the destruction of vital marine habitats and ecosystems. By becoming a signatory to a sustainable marine insurance initiative by the PSI and Oceana (an international ocean conservation organisation), British Marine committed to not knowingly insuring or facilitating the insurance of vessels that are blacklisted for pirate fishing.
- QBE made a submission to, and appeared before, an Australian Senate Economics References Committee inquiry into elements of the insurance industry, including the increase in home, strata and car insurance costs over the last decade. Our submission highlighted the impact of the frequency and severity of catastrophic events on industry pricing and expressed support for “coordination at all levels of government to tackle complex issues, particularly in relation to land development, risk awareness and mitigation initiatives for exposure to natural peril events for certain areas and risks in Australia.”

Evidence also applies to principle(s): 2.2

Source: QBE Sustainability Report 2017, QBE Insurance Group – Notice of Annual General Meeting (2018)

The Lloyd's market / RenaissanceRe Syndicate Management Ltd / Insurance Development Forum (IDF)

RenaissanceRe has long been active in promoting risk mitigation and disaster preparedness to save lives and increase the economic resiliency of cat-exposed communities. Our goals are to help develop new insurance markets and give people and governments incentives to mitigate risks. Ultimately, these efforts hope to reduce the severity and frequency of claims our clients receive, create demand for our products, and are simply good corporate social responsibility.

The IDF was formed in April 2016 following the UN Sendai Framework which highlighted that the key foundation needed in order to assist emerging nations’ uninsured populations, is first helping them in understanding risk. Therefore, the IDF initiative grew out of the climate change underpinnings of Sendai. RenaissanceRe played a key leadership role in the creation of the IDF, alongside the United Nations, World Bank and insurance industry.

IDF aims to:

- Incorporate insurance industry risk measurement know-how into existing governmental disaster risk reduction frameworks.
- Build a more sustainable, resilient insurance market in a world facing growing natural disaster/climate risk.

Today in the developing world, more than 90% of economic costs of natural disasters are uninsured; this is known as the Protection Gap. The IDF Mission is to better understand and utilize risk measurement tools that will help governments apply that knowledge at multiple levels in order to better deploy governmental resources targeting resilience to protect people and their property.

In July 2017 the UK government announced the creation of the London Centre for Global Disaster Protection. This has been a project involving the IDF, the World Bank and the Department for International Development and uses UK and international expertise to help build reliance finances in emergencies to benefit the poorest people[5].

The Risk Modelling and Mapping Group (RMMG)

The RMMG is a sub-group of the IDF co-chaired by Ian Branagan, Group Chief Risk Officer and Senior Vice President, RenaissanceRe Holdings Ltd and Alanna Simpson (Global Facility for Disaster Reduction and Recovery - GFDRR, World Bank).

The core goal of the RMMG is to expand access to credible and consistent natural hazards risk data, models and expertise. The RMMP team has focused on understanding the “problem space” of why there is currently limited collaboration across government, intergovernmental, academia and the insurance industry to work to close the insurance protection gap in developing countries.

The RMMG involves circa thirty organisations and aims to achieve methods and practices which are repeatable, scalable and efficient, thereby reducing duplication of activity. This will also serve to remove the persistent reinvention of models, data and information.

The RMMG proposal to the IDF in September 2016 has been endorsed and the RMMG has been recognised by the IDF as having a central role in the IDF’s priorities on climate and nature hazard resilience. The key workstreams from the RMMG include understanding the problem space, cataloguing risk models, the development of an exposure database, model validations and consistent data standards and the end to end development of an open risk model for a number of pilot countries.

The strategic direction of the group has recently been reformed to connect its resiliency efforts with various gloval climate related funding streams, such as The Green Fund and also the UK government industrial strategy.

Understanding the problem space

One of the core workstreams for the RMMG as referenced above is trying to understand the problem space. The group is developing a framework for user questions on hazard and risk with responses provided which identify the data and the models required to answer the question.

For example, for flood at a local level the following questions might be relevant:

- How high should defences be built to protect against a 1:100 year flood
- What type of improved construction standards would protect more lives and what is the cost-benefit?
- How much rain is expected in the next month?

While these questions are at the local level, the same data that is needed to answer these questions is also needed to build catastrophe models.

Data Standards, interoperability and Model validations

Another key workstream is the development of consistent data standards for risk data which will assist in the interoperability of models. The previous inconsistent development of data, models, methods and language has resulted in reduced confidence in risk modeling outputs and a reduced ability to coordinate, share and communicate about risk. The harmonization of language, approaches and standards for risk modelling will help to promote rather than restrict innovation.

Open risk model

The development of an end to end open risk model for a number of pilot countries will consolidate the other activities of the other RMMG workstreams. This project will help to test the practical challenges with data standards, understand the limitations of open data and also test the benefits of having different hazard, exposure and vulnerability modules to better understand model uncertainty. This project will involve a number of different organisations, government agencies, insurance companies and academics and through this process new risk data would be available to pilot countries and the international community to use of insurance development and disaster risk management.

Sri Lanka has been one of the countries to form part of this pilot. The IDF has been working with the German Development agency in connection with InsuResilience work initiated by the G7 to help develop risk financing solutions for the Sri Lankan government to help finance recovery following a natural hazard. A similar project is also being piloted for Pakistan.

RenaissanceRe has also been instrumental in the setting up of the Lloyd's Disaster Risk Facility which involves several syndicates providing a pot of capital for under-insurance, which currently stands at $445mn.

Evidence also applies to principle(s): 1, 3.
Source: RenaissanceRe Syndicate Management Ltd.

The Lloyd's market / Tokio Marine Kiln / Social contribution through participation in international initiatives

Tokio Marine Group supports and respects the Universal Declaration of Human Rights, OECD Guidelines for Multinational Enterprises, ILO Core Labour Standards, UN Guiding Principles on Business and Human Rights, as well as ISO 26000. Tokio Marine Group endorsed the United Nations Global Compact (UNGC) in 2005 and has promoted initiatives based on the UNGC's ten principles in the areas of human rights, labour, the environment and anti-corruption. We also place great importance on the social role and responsibilities that the insurance industry is expected to fulfil, while Tokio Marine & Nichido is a signatory to the Principles for Sustainable Insurance (PSI) advocated by the United Nations Environment Programme Finance Initiative (UNEP FI)) and is undertaking initiatives to create a sustainable society through its insurance business. Additionally, three Group companies, beginning with Tokio Marine Asset Management, are signatories to The Principles for Sustainable Insurance (PSI) of the UNEP FI and are also making efforts for creating a sustainable society through investments.

Tokio Marine Group will continue responding to environmental, social and governance (ESG) issues as well as continue to be a company that serves a useful purpose during times of need. Accordingly, we have defined our Diversity Policy as the creation of an environment that enables employees, who are working to solve social issues worldwide, to play active roles regardless of their nationality, gender, age or whether they have disabilities to further raise corporate value and realize sustainable growth. We will implement the Diversity Policy to promote diversity across the entire Tokio Marine Group. Although only at the midpoint, a variety of our initiatives have already been recognized. For example, Tokio Marine Holdings was selected by the Ministry of Economy, Trade and Industry and the Tokyo Stock Exchange as a Nadeshiko Brand for fiscal 2015.

To realize the philosophy that "health management is the starting point for creating a "Good Company," Tokio Marine Group is creating mechanisms that enable customers and employees to live healthily both physically and mentally. These efforts were widely recognized and Tokio Marine Holdings was selected as a "2017 Health & Productivity Stock" (second consecutive year since 2016) by the Ministry of Economy, Trade and Industry and the Tokyo Stock Exchange.

With the aim of fostering a corporate culture in which each employee engages in CSR as his/her own issue and ensure this contributes to the community and helps create corporate value, the "Tokio Marine Group CEO Recognition for CSR" was established in 2015 and commends and announces outstanding CSR initiatives by all Group companies and their employees in Japan and overseas. By promoting CSR with the participation of all employees, in fiscal 2016 the employee participation rate (total) in community social contribution activities for Tokio Marine Group (domestic) was 139%. We therefore achieved the fiscal 2016 annual target of 100%.

Tokio Marine Group also enhances CSR/ESG information disclosure, which includes the publication of its Integrated Annual Report mainly targeting investors in August 2017 as it communicates its initiatives for the Group's sustainable value creation.

Tokio Marine Group is a global insurance group with a dedicated, energetic and proactive workforce and organization, which is the wellspring of its competitiveness in each country and region and a crucial asset for contributing to the development of a sustainable society. TM Group's mission is none other than to make Tokio Marine Group a "Good Company" that works to resolve issues facing society and earns the widespread trust of its customers and society. This can only be achieved by harnessing the comprehensive power of the Group together with its employees and interacting and cooperating with its various stakeholders.

Further information can be found in the Tokio Marine Sustainability Report 2017 – Strengthening CSR Management.

Evidence also applies to principle(s): 1.1, 1.2, 1.3, 4.1, 4.3

Source: Tokio Marine Kiln, see: CSR 2017

2.2 Promote and actively engage in public debate on climate change and the need for action.

The Corporation of Lloyd's / Promotion and engagement

In 2016-17 reporting the Corporation of Lloyd's presented work by Corporation regional offices to engage in public debate on climate change and the need for action.

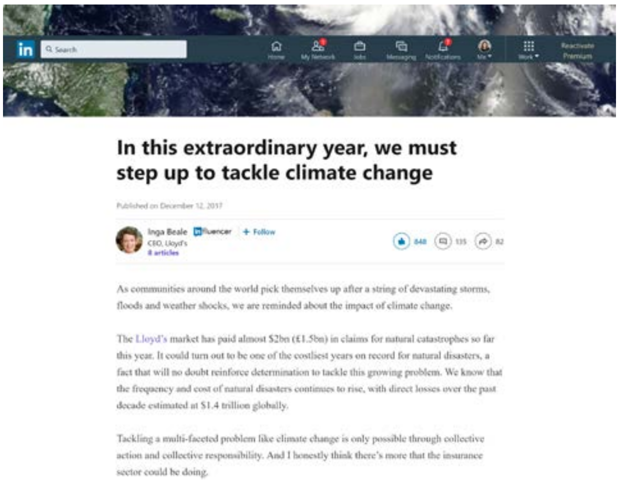
The following examples outline a sample of activities undertaken during this reporting cycle:

1. In October 2017, in a news story to mark the United Nations 'International Day for Disaster Reduction', staff from across the Corporation's international offices provided reflections on the active natural and climate catastrophe events of the year, and the efforts to respond to them, as well as considering what this says about climate change and managing future risks. This is also relevant towards principle 5.4 reporting in terms of engaging staff in climate change.
2. In November 2017, the Corporation of Lloyd's was represented at the United Nations Framework Convention on Climate Change Conference Of Parties 23 (UNCCC COP23) by Jan Blumenthal, Country Manager for Germany and Austria and Lloyd's General Representative for Germany.

   Blumenthal was invited by the UK Department for International Trade to speak at the UK Pavilion, to give a presentation on Climate Risk and Resilience, demonstrating how the Corporation of Lloyd's uses its experience and expertise to help communities around the world build resilience against disasters.

   The presentation was supported by the Innovation team, and showcased thought leadership reports on food system shock, stranded assets and future cities, as well as introducing the Disaster Risk Facility at Lloyd's and our ClimateWise membership.

3. On 12 December 2017, Inga Beale, Chief Executive Officer shared an opinion piece first published in The Telegraph Business segment with her 25,000 LinkedIn followers. The piece was in response to the impacts of the climate driven catastrophe events of 2017, and focused on the need for collaboration to act action against the impacts of climate change.



In this extraordinary year, we must step up to tackle climate change

Published on December 12, 2017

Inga Beale Influencer + Follow
CEO, Lloyd's
8 articles

As communities around the world pick themselves up after a string of devastating storms, floods and weather shocks, we are reminded about the impact of climate change.

The Lloyd's market has paid almost $2bn (£1.5bn) in claims for natural catastrophes so far this year. It could turn out to be one of the costliest years on record for natural disasters, a fact that will no doubt reinforce determination to tackle this growing problem. We know that the frequency and cost of natural disasters continues to rise, with direct losses over the past decade estimated at $1.4 trillion globally.

Tackling a multi-faceted problem like climate change is only possible through collective action and collective responsibility. And I honestly think there's more that the insurance sector could be doing.

The article covered Beale's thoughts around the role of insurers in recognising and rewarded resilience measures, and in helping the transition to a low-carbon economy, and forms part of the Corporation's activities to publically engage in the debate on climate change. Both articles were shared on the Corporation's social media channels and tracked for impact.

4. In December 2017, the Corporation of Lloyd's hosted a meeting between representatives of the Military Advisory Board of the CNA, an American non-profit research and analysis organisation, and 15 representatives from the Lloyd's market to discuss some of the key geopolitical risks confronting our world today. Trevor Maynard, Head of Innovation, shared a selection of thought leadership projects the Corporation had undertaken around climate change.

   There was further discussions around the CNA's latest report, "The role of water stress in instability and conflict" which the group presented to attendees that raised important questions for insurers about how water stress can act as a threat multiplier and an accelerant of instability. The meeting closed by discussing more broadly the future of the sector with underwriters and brokers contributing their thoughts on how risk is quantified in the London market.

5. In December 2017, the Corporation of Lloyd's hosted a knowledge exchange session with a delegation from Colombia comprised of FINAGRO (Fund for the Financing of the Agricultural Sector), the Prosperity Fund and Department for International Trade. The visit was organised by Juan Carlos Realphe, Country Representative, Colombia, in response to work to support local stakeholders around market development.

   The meeting involved a sharing of research and insight from both sides on the current risk landscape in Colombia, and discussed areas of common interest around disaster risk, food security, and the protection gap.

6. In April 2018, the Corporation of Lloyd's responded to a request by International Association of Insurance Supervisors (IAIS) on draft Issues Paper on a draft paper on 'Climate Change Risks to the Insurance Sector'.

   The Corporation believes that it is important that supervisors, insurance undertakings and others in the global insurance market have a good understanding of the nature and scale of the risks arising from climate change and provided a response in support of the work that the IAIS proposes to carry out on this subject.

Evidence also applies to principle(s): 1.1, 1.3, 2.1, and 5.4

Source: The Corporation of Lloyd's

The Lloyd's market / ArgoGlobal / Industry Contribution to Debate on Climate Change

Argo Group staff regularly participates in conferences and debates on climate related subjects, both as speakers and attendees. Most recently at an extreme events & climate risk forum entitled 'How Will Risk Modelling Shape the Future of Risk Transfer?' Argo Group employees provided commentary on matters related to next generation risk models.

Other examples include conferences organized by Lloyds' and the Work Bank Group on disaster risk financing and the launch meeting for whitepapers related to Investing for Resilience, which looked at how ESG (environmental-social-governance) indices are being used by institutional investors and the potential for a Resilience Index being developed. Argo also participated in webinars including a 'ClimateWise' seminar on flood protection and insurance industry responses to climate-related flood events.

Argo Group has supported establishing an International Insurance Leaders Advisory Council for Climate Change. The purpose of this Council is to bring leaders from the insurance industry together with global regulators to coordinate a more systematic response to Climate Change within the financial services sector. The Council has overseen two projects during the period, specifically, with the subject matters of Transition Risk associated with investment portfolios and secondly Physical vulnerability and resilience to flood exposures. The Group Chief Risk Officer represents Argo Group on this Council.

ArgoGlobal continues to support an initiative sponsored by the Rockefeller Foundation – World Bank Disaster Risk Finance and Insurance Program (DRFIP) partnership. The purpose of this initiative is to explore innovative financial solutions against climate change and disaster risks in Asia. Specifically, under consideration is the ability to offer parametric flood coverage to counties in Asia where this type of risk has increased due to climate change.

Argo Group continues to incorporate a sustainability focus as an integral part of its corporate sponsorships by partnering with organizations with strong sustainability credentials. Argo Group is supporting the Vestas 11th Hour Racing team in the 2017-2018 Volvo Ocean Race, with the aim of supporting the most sustainable team in this particular competition. "Sustainable sports don't exist in large numbers, but we found this match and we think it's perfect for us," said Gary Grose, Argo Group producer management and marketing leader. "The focus on sustainability is a priority for Argo and the message resonates with our clients and our prospects." Argo Group is also supporting the Formula-E Dragon Racing team, which has established and maintains a sustainable and team-driven innovation message which is intended to differentiate its racing program from that of other popular racing programs, such as Formula One.

Forward planning

Argo Group has provided its financial support to STEM (science, technology, engineering and mathematics) education by providing a $10,000 matching Power Grants sponsorship. This money will sponsor two Robotics Teams, supporting them financially as well as encouraging them to get their communities invested in STEM's educational programs. Argo Group believes its investment in STEM students may one day lead to positive, innovative change in the insurance and technology space.

Evidence also applies to principle(s): 1.1, 5.4

Source: ArgoGlobal – Syndicates 1200 & 1910

The Lloyd's market / MS Amlin / Formula E

Our sponsorship of formulaE team, MS Amlin Andretti, contines to promote the credible alternatives in fossil fuel free motorsport and zero emission motoring. Before the race on December 2 and 3 2017 in Hong Kong, MS Amlin commissioned a poll of over 500 18 to 35-year-olds to initiate a conversation and gain insight into the key socioeconomic issues faced by this demographic.

To young Hongkongers, climate change is *more threatening* than: rising cost of living (60%); availability of affordable housing (58%); and the impact of China's government policies on Hong Kong (51%). Although climate change concerns (46%) are considered more of a threat, socioeconomic concerns such as the rising cost of living (69%); their health and that of family/friends (65%); and the future for themselves and family/friends (61%) are still more often on the mind of young Hongkongers on a daily basis.

The MS Amlin poll also shows young Hongkongers are committed to tackling climate change on a personal level. A large majority of young Hongkongers are aware of the consequential impact and effect of climate change, as nearly all of them said that they think climate change will impact them in their lifetime (94%) and that they have already taken action to reduce personal contribution to climate change (97%). Efficient waste management and reduced energy consumption are one of the biggest changes being made; close to three-quarters (73%) recycle waste materials to reduce their personal contribution to climate change and a similar number (72%) are trying to reduce personal and family energy consumption.

Young Hongkongers have also made a conscious decision to use public transportation whenever possible (69%) and many (58%) have said they would consider buying an electric/hybrid vehicle, however, only a small number (13%) have adopted alternative fuel transport systems, such as switching to an electric/hybrid vehicle

Evidence also applies to principle(s):

Source: MS Amlin, See Formula E

The Lloyd's market / QBE European Operations / Promoting and engaging in debate

In addition to the work outlined under 2.1, QBE representatives attended and spoke at business roundtables, events and seminars on sustainability topics, including climate change, sustainable communities and sustainable finance throughout 2017. Examples include:

- In November 2017, QBE representatives attended an event organised by PSI and Munich Re in the United States, which focused on the North American sustainable insurance agenda and promoting action on building resilient and sustainable communities and economies. As a result, QBE is exploring potential opportunities to contribute to coastal resilience and enabling communities to plan for the impacts of climate change.
- QBE attended the 2017 Accounting for Sustainability (A4S) summit in London, by invitation only event hosted by HRH The Prince of Wales. A major focus of this summit was climate change and the need for companies to disclose how they are governing and managing climate-related risks. Following on from the summit, QBE invited the A4S Executive Chairman to present to the QBE European Operations Finance team.
- In 2018, QBE attended several sessions hosted by A4S including a debt finance roundtable on exploring risks and opportunities and implementing the TCFD recommendations. Following on from these events, QBE invited A4S Executive Chairman to present to the wider QBE Group and Australian Division teams which included representatives from Finance, Risk, Operations, Legal and Compliance, and Marketing and Communications.

Evidence also applies to principle(s): 2.1, 5.4

Source: QBE Sustainability Report 2017

The Lloyd's market / RenaissanceRe Syndicate Management Ltd / Risk Sciences Foundation

RenaissanceRe have nominated Stephen Weinstein, SVP Group General Counsel, to participate on the ClimateWise Insurance Advisory Council. Stephen serves as RenaissanceRe's Chief Legal Officer, with responsibility for legal, regulatory, government affairs and compliance matters on a global basis. Stephen's participation as a representative for RenaissanceRe on the ClimateWise Insurance Advisory Council, involves attendance at formal meetings, plus additional engagement on an ad hoc basis when necessary or relevant.

Stephen also currently serves as Chairman of RenaissanceRe's Risk Sciences Foundation, which was created to support advanced scientific research in natural catastrophes, the development of risk mitigation and adaptive techniques to safeguard communities, efforts that reduce the economic turmoil following disasters, and organizations that preserve coastal and other risk-exposed habitats.

The Foundation focussed on climate-related risk in 2017. In November 2017 RenaissanceRe hosted a Risk Mitigation Leadership Forum event in the Old Library at Lloyd's of London to discuss improving natural catastrophe resiliency. The event centred on the role of insurance versus intervention, and including policymakers and industry experts, including the RenaissanceRe CEO, Kevin O'Donnell and U.S. Representative Dennis Ross who was the co-sponsor of a U.S. private flood insurance bill.

Evidence also applies to principle(s): 2.1, 6.1.

Source: RenaissanceRe Syndicate Management Limited

The Lloyd's market / Tokio Marine Kiln / Insurance Advisory Council

TMK is represented on the ClimateWise Insurance Advisory Council. In conjunction with the University of Cambridge, the Council has launched the research on 'Transition Risk Project' and is evaluating the feasibility of another research piece on 'Physical Risk'. The Transition Risk Project involves undertaking compelling and multi-disciplinary research to demonstrate materiality to determine the financial performance of infrastructure over a relevant time period. This will inform investment strategies and thinking by supervisory organisation to ensure appropriate risk management steps are taken.

Evidence also applies to principle(s): 1.1, 1.2, 2.1, 3.1, 4.3

Source: Tokio Marine Kiln

3 Support climate awareness amongst our customers

3.1 Inform our customers of climate risk and provide support and tools so that they can assess their own levels of risk.

The Corporation of Lloyd's / Informing customers

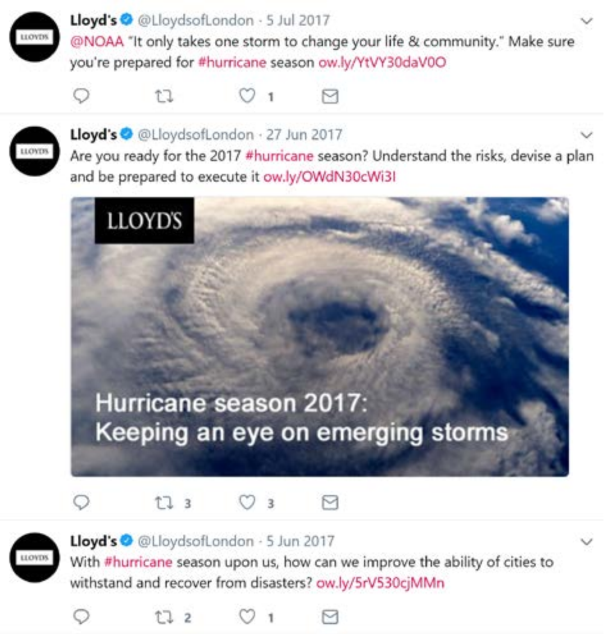
1. *The Lloyd's City Risk Index, which was first published in 2015 and covered in the Corporation of Lloyd's 2015-16 reporting cycle. The first site was a static dataset, and work has been underway and reported in material shared with PwC on an updated version with more capabilities.*

   The Lloyd's City Risk Index, built in collaboration with Cambridge University, is a unique study measuring the impact of 22 threats on 279 cities' projected economic output. It has been relaunched as a microsite that is interactive and allows users to query datasets through a mapping interface to gain insights. See principle 1 for further details.

2. *In past reporting the Corporation of Lloyd's has highlighted research studies that include 'Coastal communities and climate change', that have investigate the impact of sea level rises, the effect of wind speed on storm surges and changes in land use on a number of properties or areas. Last year we also reported on our annual pre-hurricane season awareness campaign.*

   As part of the work towards informing Lloyd's market customers of climate related risks, the Corporation of Lloyd's publishes an annual page of information for those who may live or work in areas at risk of hurricanes that includes details on regional forecasts, three guideline thoughts for considering risk, and a link to the policyholder enquiry form to assist with understanding and any claims.

   The information has been shared on the Corporation of Lloyd's twitter account.



   Each post is embedded with tracked links to establish impact to work towards annual KPIs on promoting the Lloyd's value proposition and brand.

3. This campaign was also followed up with press releases and further communications as the season unfolded, including a communication for International Day for Disaster Reduction, where the Corporation of Lloyd's was able to highlight the speed of payment of claims, with $738m paid by the Market by 12 October 2017:

Commending the responsiveness of the Lloyd's market, Inga Beale, Chief Executive Officer, said:

> *"It is heartening to see the Lloyd's market swing into action in this way. As the UN marks International Day for Disaster Reduction, these events serve as a stark reminder of our duty and ability to assist people, businesses and governments when disaster strikes. We must continue to be mindful of the difficult circumstances that policyholders find themselves in and do everything in our power to pay claims as quickly as possible."*

Jon Hancock, Performance Management Director, added:

> *"When you get three catastrophic weather events as well as earthquakes in Mexico and flooding in Asia all happening so close to each other, it's essential to make sure the market's claims response moves as quickly as possible to help people rebuild their lives.*
>
> *"Lloyd's is living up to its reputation for paying claims quickly. We have made advance payments on a range of reinsurance programmes for local insurers to make sure they have the funds to pay claims locally – both in Texas and the Caribbean. Lloyd's has also made advance insurance payments to businesses so that they have funds to kick start re-builds and get back on their feet."*
>
> *"In one case Lloyd's advanced tens of millions of dollars to a Florida Keys hotel chain within days of it suffering severe storm damage. This has enabled that business to begin repairs so that it can resume business as quickly as possible. Imagine what a relief that is for this company trying to get their business up and running again."*

Trevor Maynard, Lloyd's Head of Innovation, added:

> *"In a climate changing world, this is exactly what we should expect. We should expect to be surprised and we should expect records to be broken. Such events starkly highlight the need for urgent and rapid action as well as strong leadership both politically and in the business world."*

This example is also relevant to principle 2.2 reporting on promoting and engaging on the topic of climate change and the need for action. The full story can be read here.

4. In parallel to these activities, the Corporation of Lloyd's also responded from a Responsible Business perspective in supporting customers with their recovery and response needs:
   - By working with the US Insurance Industry Charitable Foundation to deploy $25,000 to the Hurricane Harvey Disaster Relief Fund
   - Donating a further $25,000 to the International British Red Cross relief efforts with a specific focus on the response in Antigua and Barbuda
   - and through the partnership with international disaster relief charity, RedR, the Corporation of Lloyd's has been supporting the training of international aid workers and local responders in communities hit by recent disasters. Work has been ongoing in response to Irma, as well as the devastating floods in South Asia in 2017

5. *In 2015-16 and 16-17 reporting the Corporation of Lloyd's provided evidence on the Lloyd's Global Development Centre (GDC). The Centre designs, develops, co-ordinates and delivers programmes of educational and networking events that promote Lloyd's as the world's specialist insurance market, and communicate Lloyd's strategic priorities. GDC Programmes are intended to educate participants about the key role that Lloyd's plays in global insurance and reinsurance. They also showcase the expertise and innovative thinking to be found in the market.*

   The GDC actively engages and co-ordinates with the Lloyd's market Association (LMA), London & International Insurance Brokers' Association (LIIBA) and their members to create customised programmes to meet the requirements of specific audiences and showcase Lloyd's and the London market.

   GDC supports Promote and Provide strategic objectives by providing brokers and their clients with access to knowledge, insight and thought leadership from the Corporation, the market and beyond. This is reinforced by promoting Lloyd's as the global centre for specialist insurance, reinsurance and innovative risk solutions, particularly working closely with the Innovation Team and Claims Team to highlight their campaigns and research.

Following the Corporation Operating Model review the GDC now sits within Global Marketing in Commercial, with support from the Events Team. As part of this there has been progress on tracking impact, and this year we are able to report on statistics that will be gathered on a continual basis and published against calendar years. A full report of feedback from the 2017 programmes is available here, and we anticipate being able to provide content in the next reporting cycle:

Example content from 'RIMS Risk Management Academy at Lloyd's 2017, 28 – 30 June – Q2'

During 2017, the Corporation of Lloyd's welcomed 326 participants from 45 countries across the world to learn how the Lloyd's market works and to receive presentations from market brokers, underwriters and experts across a wide range of cases of business including: aviation, cyber, and marine classes of business, and innovative products. Participants included brokers, risk managers, Managing General Agent Associations, and cedants. There were also a further 245 attendees from ad-hoc programmes run throughout the year.

One example of a presentation programme delivered during the reporting period was the Spring Worldwide Programme, held in May 2018 – one of the two annual flagship programmes. The programme was themed around "NatCat and City Resilience", and was comprised of a variety of presentations, box visits and networking opportunities that were designed to give attendees the chance to make new connections as well as develop relationships with fellow delegates from around the globe on the topic.

The following examples are a small selection of sessions where the topic of climate change and insurance was covered in presentations to offer attendees an overview of some of the thought leadership work the Corporation of Lloyd's is involved in relating to the topic, and to share knowledge with Lloyd's customers – whether that is participants in the market for the Corporation, or insureds such as risk managers or internal brokers for the Market:

- 4/7/2017 German in-house broker programme – brokers
- 24/9/2017 Andrew Beazley Broker Academy at Lloyd's – brokers (included an interactive scenario workshop with outputs integrated into the Innovation team's horizon scanning process)
- 13/2/2018 AIRMIC – risk managers (included an interactive scenario workshop with outputs integrated into the Innovation team's horizon scanning process)
- 14/03/2018 Managing General Agents' Association – wholesale insurance professionals
- 25/04/2018 ASEAN Insurance Training and Research Institute, held in Kuala Lumpur and delivered by Kent Chaplin, CEO Lloyd's Asia-Pacific – regional training seminar for insurance supervisors

Forward planning: In the next reporting cycle the Corporation of Lloyd's aims to deliver two further 'Worldwide' programmes, one in October 2018 centred around new technologies and risks, and one in April 2019 (topic TBC), for senior decision makers in the insurance industry.

These presentations are expected to continue to talk about the Corporation of Lloyd's climate change research and ClimateWise initiative as part of ongoing engagement in this area.

Evidence also applies to principle(s): 1.1, 1.3, 1.4, 2.1, 2.2, and 3.1

Source: The Corporation of Lloyd's

The Lloyd's market / ArgoGlobal / Solutions

Argo Group maintains a Clean Energy Risk Solutions (CERS) team dedicated to developing and distributing insurance and risk financing solutions related to clean technologies that are intended to reduce the overall carbon footprint.

CERS provides long-term performance and technology insurance products in support of solar power, thermal bioenergy (gasification) and biomass (digester), fuel cell, battery storage and 'smart' energy efficiency applications, among others.

For solar, long-term certainty of performance is insured for modules on a stand-alone basis, as well as the entire solar energy delivery system. This enables businesses to position themselves for organisational success by promoting sales, attracting finance lenders/better terms and validating new technologies to the market.

Argo Surety has supported Covanta in terms of providing surety bonds required for the comprehensive refurbishment of a waste-to-energy facility in Pinellas County Florida. The refurbishment work includes approximately $240 million worth of repairs and upgrades and Covanta was required to bond much of this work. Argo supported this undertaking with the provision of the surety bonds, which ultimately protects the tax payers' investment into critical and environmentally friendly infrastructure.

This Argo Surety business opportunity was part of an existing relationship with this client and the refurbishment work ensures that this environmentally sensitive means of disposing of household waste will continue to operaten safely and efficiently for many years to come. The Pinellas County Waste to Energy Facility is reducing the volume of waste it receives by 90% while generating over 500 kilowatt-hours of electricity for each ton of waste processed.

Evidence also applies to principle(s): 5.4

Source: ArgoGlobal – Syndicates 1200 & 1910

The Lloyd's market / Chubb / Chubb Environmental Risk Products and Services

Chubb is committed to developing insurance products and risk management services that facilitate market-based solutions to current and pending environmental and climate-related issues.

Chubb is one of the largest and most advanced global underwriters of environmental liabilities and pollution risk, with environmental risk units in North America, Europe, Asia and Latin America. In the U.S., we are a leader in meeting the insurance and risk engineering needs of clean technology companies, including renewable and alternative energy providers, manufacturers and software and hardware companies.

Chubb's products and services, which fall primarily into the areas of environmental risk, renewable energy coverage, Clean Tech and "green" initiatives, touch on virtually all lines of coverage worldwide. The full range of environmental and sustainability property and casualty products and services include:

Chubb remains committed to developing insurance products and risk management services that facilitate market-based solutions to current and pending environmental and climate-related issues. Our products and services, which fall primarily into the areas of Environmental Risk, Renewable Energy and "Green" initiatives, touch on virtually all lines of coverage worldwide.

The full range of environmental and sustainability property and casualty products and services include:

- Environmental Risk Products (including environmental Professional Indemnity, Premises Contractors, Tank Safe, Offshore, Construction, Healthcare, Transportation & Business Interruption)
- Global Weather Insurance
- Green Property Insurance
- Political Risk and Trade Credit
- Renewable Energy Construction, Technical Lines, Energy and Marine Insurance.

Green Initiatives

The renewable energy sector remains another major product area for Chubb, particularly in light of the increased global attention on climate change.

These projects take many different forms: biomass/biofuel, biogas, energy from waste, fuel cell, as well as solar, wind and hydro energy. Chubb addresses risks that occur in the two main phases of a typical renewable energy project – construction and operation. Construction risks range from delay in start-up to public or employer liability, whereas operation risks range from business interruption to premises pollution.

Chubb Provides Cleantech Insurance Solutions:

Chubb's Cleantech business sits within the Industry Practice team, an area of our business that also Technology, Life Sciences, and Entertainment.

Cleantech provides bespoke insurance solutions to companies that are creating new technology and driving innovation. This global business within Chubb has dedicated underwriters, risk engineers and claims examiners who specialise in handling clean technology clients.

Cleantech clients face differing exposures through the development, or lifecycle, of their business. Chubb's bespoke insurance solutions cover companies as they move from start-up, including research and development, to pilot projects to commercialisation. The exposures faced by these clients stem from complex supply chains, the globalisation of their product, intellectual property rights and environmental liability. Our Risk Engineers are able to provide clients with risk management advice in all of these areas.

Any company involved in the following activities would fall within our Cleantech business:

- Deriving power from renewable sources
- Creating energy efficiency
- Addressing the scarcity of natural resources

Chubb has joined Cleantech Associations and sponsored European events to enable direct access to the local Cleantech ecosystem.

Such engagement enhances product development because we can translate our understanding of client exposures into new, bespoke coverage.

This approach ensures that our insurance solutions tailored for this fast-paced, innovative segment remain relevant.

We have entered into the following associations and sponsorships;

- The Cleantech Group – Sponsorship of the European Forum 2017 in Helsinki, Finland

Bio Gas and Solar Package

In July 2016, we launched our new package policy designed for the Biogas and Solar industries. This product is a seamless package solution which covers the project from construction through to operation, including Environmental Liability.

Chubb Online Quoting Platform for Environmental Liability Risks

The ongoing Chubb Online Environmental Liability product is designed to offer broad, flexible and affordable protection for environmental risks arising out of a client's entire business operations, whether undertaken at their own premises or at third-party locations.

Chubb Launches Renewable Energy Environmental Protection in the UK and Ireland

The renewable energy sector continues to be another major product area for Chubb, particularly in light of the increased global attention on climate change. The desire to develop clean, efficient and alternative sources of energy is leading to the planning and construction of renewable energy projects around the world.

Chubb Renewable Energy Environmental Protection covers the full spectrum of environmental risks faced by renewable energy companies, providing seamless coverage, from the start of construction of renewable energy plants through to their operation

Loss mitigation and crisis management costs

The market-leading product features of this cover are supported by a team of highly qualified environmental scientists and engineers in addition to crisis management support for all risks, ensuring that companies are best equipped to respond when they suffer a loss -- and minimise its impact on their business.

Emma Bartolo, Environmental Risk Manager in the UK and Ireland for Chubb, said:

> *"While renewable energy and environmental risks have been in the news for many years now, many brokers and their clients in the sector are still unaware of the environmental risk exposures that they face. With increasing regulation and third-party costs, they could potentially face expensive and damaging claims. What they will get with Chubb's Renewable Energy Environmental Protection is the peace of mind that they have comprehensive, market-leading cover and benefit from the experience of our specialist underwriting and claims teams."*

Energy and Marine Insurance

The continuing use of energy and marine insurance products and services allows for the direct or indirect reduction of GHG emissions in many instances.

Value added Engineering Services

Chubb Environmental Risk continues to offer insureds a built-in opportunity to enhance existing risk management programmes with access to a global network of best-in-class engineering consultants. Chubb call upon these same industry experts to conduct the majority of our environmental due diligence work.

Consulting Services

Chubb clients also receive a full complement of traditional environmental consulting in the following categories: wastewater management, waste management, air quality management, emergency preparedness and response, reporting, environmental management systems including ISO 14001, as well as sustainability and environmental impact analysis and reduction.

Chubb provides services such as industrial hygiene assessments; regulated and hazardous materials management and remediation oversight; environmental due diligence; and Leadership in Energy and Environmental Design (LEED) and regulatory compliance consultation. Customized Environmental Protection Agency (EPA) and Occupational Safety and Health Administration (OSHA) compliance training programs and services are also provided. Programs in asbestos, lead-based paint and microbial management, and water intrusion prevention are also offered.

Accredited compliance staff are also available to augment clients' environmental, health and safety personnel at their locations as necessary to meet their health, safety and the environment (HSE) objectives. Other services offered by our personal lines unit includes wildfire defense services and infrared camera scans of clients' homes to identify areas of improved energy efficiency.

Green Building Restoration

Chubb works with public and private stakeholders worldwide to develop risk transfer and risk management services that allow for innovative responses to the additional risks associated with implementing green initiatives.

Chubb's Green Property Insurance policy provides coverage for commercial businesses that desire to rebuild to a "greener" standard in the event of a loss to an existing building. This includes: energy-efficient appliances, electronics, heating and cooling systems, interior plumbing systems and lighting fixtures; low volatile organic compound (VOC) paints, primers, solvents, finishes and adhesives; low emissions carpet and floor coverings; or Forest Stewardship Council (FSC) certified wood.

There are also premium credits available to customers that buy "preventative measures" coverage, which provides the policyholder up to a certain amount of money if the insured has certain mitigation features in place. These policies encourage actions from Chubb's customers that help to reduce GHG emissions.

Chubb Crisis Management

The potential physical risk effects of climate change – the frequency and severity of natural catastrophes, particularly those involving high winds and flooding – present potential positive financial implications for Chubb. Clients are provided with insurance protection from the impact of weather events that may be more frequent or severe due to climate change.

Chubb Attaches Crisis Management Services to its European Environmental Risk Insurance Products

Chubb partners with an assistance company continues to provide its clients with specialised crisis readiness and response services that will allow them to streamline their communications and processes, have access to critical specialist resources when facing a serious environmental incident and, as a result, to help preserve their reputation and bottom line. Chubb offers their clients and brokers comprehensive insurance cover combined with the reassurance of access to critical services that can help them navigate the immediate aftermath of a serious environmental incident.

Chubb ALERT Application

Another innovative product that continues to be provided is Chubb Environmental Risk's Chubb ALERT application, which facilitates more rapid dispatching of incident-response contractors as well as real-time monitoring of clean-up costs. This programme has demonstrated it can both reduce environmental damage and lower claim costs by as much as 20% to 25%.

Thought Leadership' Publications

Chubb produces a number of publications labelled 'Thought Leadership' throughout the year that are distributed to key clients that are from industries that have been identified as likely to have gaps in their insurance coverage. This can be done in many forms papers are given to key brokers or they are published in industry magazines or Chubb's own press release page.

Many small businesses are likely to have gaps in their environmental cover such as agriculture, wineries, breweries and cold storage. Chubb believes this is simply due a lack of awareness that there are environmental risks associated with their respective industries or practices. Chubb hopes that by producing these reports and articles that their clients will be more informed ofthe risks and will take steps to mitigate them.

In Partnership with Clyde & Co, Chubb has published an article explaining the risks associated with running a multinational organisation where it comes to environmental liability. Even within regions with unified regulations, such as the EU, there can be huge variation in how those regulations are enforced. Chubb now offers multinational insurance programmes, which will allow those organisations to centralise their risk management regimes and ensure consistent coverage across their operations. The publication can be found here.

Independent Broker Team Meetings

As the majority of Chubb's business is conducted via brokers, it follows that ensuring brokers are fully aware of the risks their clients may be facing is key to ensuring the end customer is aware of and able to address them. Every few months, Chubb invites the members of its independent broker team to seminars on risk identification; particularly in relation to environmental damage, be it air, water, soil or biodiversity, as a result of their operations. These independent brokers largely represent Chubb's mid market customers, making up approximately 40% of Chubb's business.

Chubb believes that using every tool available is crucial in order to ensure your message gets through to everyone, and as such Chubb regularly produces material in a variety of formats to aid in product selection. In 2017, Chubb published a comprehensive video on its website which outlines the majority of risks an organisation faces, and why standard liability insurance will not cover them. In addition, Chubb regularly publishes items on its social media platforms to highlight particular risks customers may be facing unknowingly.

Evidence also applies to principle(s): 1.1, 1.3, 2.4, 3.1, 3.2, 3.3, 3.4

Source: Chubb

The Lloyd's market / MS Amlin / Inform our customers of climate risk and provide support and tools so that they can assess their own levels of risk.

As part of our ongoing campaign to provide clients with innovative and practical risk management solutions. In 2017 our Risk Engineering team launched a **Flood Toolkit.**

The toolkit features the latest thinking on Flood Risk Assessment, Emergency Planning and Flood Resilience and was developed in conjunction with leading industry experts to assist in creating a flood mitigation strategy for businesses including:

- Accurately assessing the level of risk from flooding
- General pre-flood preparation
- Improving the flood resistance of properties at risk
- Selecting competent contractors
- Preparing for a claim
- Recovering from a flood

Evidence also applies to principle(s): 1.1, 1.3, 1.4

Source: MS Amlin

The Lloyd’s market / Navigators Underwriting Agency Limited / Support climate awareness amongst our customers

For Navigators, Principle 3 is the one we consider we have the most ability to raise climate awareness amongst our clients, and provide insurance solutions for risks that are directly or indirectly impacted by climate change. We provide an update against the business lines described in our previous submission.

Navigators Recycling

One of the more significant ClimateWise related changes for Navigators in this report period has been a change to the commercial arrangement with Solon Underwriting Limited, where previously we had, through our Lloyds Syndicate 1221, underwritten coverage provided by Solon on an All Risks basis for Recycling and Waste Facilities in the European Union.

Solon has been incorporated within Navigators, with a view to both business sector growth and ensuring continuity in provision of coverage to the Recycling and Waste Industries, by creating Navigators Recycling.

Navigators Recycling is a dedicated underwriting team, insuring recycling, bio-energy and related businesses in the United Kingdom, the European Union and selected global territories.

Coverage is underwritten by Navigators International Insurance Company Limited (NIIC), and covers property damage and business interruption for fire and extend perils across the recycling and bio-energy (including refuse derived fuel) sector.

Limits of coverage provided makes this product ideally suited to small privately run businesses, supporting regional and individual country waste recycling initiatives and providing a valued risk transfer mechanism for this growing business sector.

Navigators Recycling has differentiated itself by offering risk engineering services as part of the servicing, to support a culture of greater risk awareness within this diverse sector, and provide pragmatic risk engineering advice for mutual benefit.

Opportunities are being explored with industry trade institutions, not only for direct commercial benefit, but also to share good risk engineering practice with regards to loss prevention and mitigation in the sector, through education and training or waste management professionals. There are opportunities also for wider use of a Navigators Recycling semi-quantitative risk assessment to provide clients with a ‘risk score’ and greater clarity of areas where further risk improvement could be had, and further, link this to a more bespoke insurance and coverage product for the client.

Upstream Energy

Navigators maintains a position of leadership to provide financial security to Upstream operations and construction projects in the light of greater regulatory requirements on a worldwide basis to provide a higher degree of environmental protection in oil/gas well design, well drilling and production operations and well/platform decommissioning.

Over a two year period, a sustained oil price recovery has seen confidence slowly being returning to this industry sector, and Operators and contractors having been forced to look critically at operating and capital costs to maintain financial viability, are arguably in better financial shape to look at new conventional oil and increasing gas exploration opportunities, as well as increasing research and investment into alternative hydrocarbon energy forms.

Navigators is providing risk transfer solutions by way of insurance coverage for clients active in the exploration of such alternatives, including, gas hydrates and carbon sequestration projects.

Navigators also provides property damage coverage for offshore windfarms, including projects making use of HVDC (high voltage direct current), a more efficient way to transmit electrical power.

In the previous reporting period, Navigators continued to offer support for innovative renewable energy projects and environmentally focused research. Such examples include technical support for potential insurance coverage for a tidal power platform project and extended coverage provision and associated risk reduction for the on-going operational activities for an ocean research vessel engaged in a range of projects looking at climate change, deep life, planetary dynamics and geohazards.

In this reporting period, there has also been increased interest from Energy clients and brokers in the area of Geothermal Drilling to support the rapid growth in electrical power derived from geothermal energy, this coming from both existing power producers and new opportunities in developing countries. This form of power production has carbon footprint advantages over many renewable energy sources, and it is not weather dependent like solar or wind power generation. It still however represents <0.5% of global power generation capability, and based on Geothermal Energy Association data, has a current tapped potential that is still under 10%.

Navigators has over this period worked with clients to better understand root causes to recent claims associated with Geothermal Drilling, and also to develop internal training material to better define and differentiate Geothermal Drilling from conventional oil and gas drilling.

Downstream Energy

Environmental compliance with regard to airborne, aqueous and solid emissions and that of fuels and product specifications from the refinery and petrochemical sector continues to play a major role of the operational needs of our clients in this sector. In this reporting period we continue to see producers in developing countries tighten their own fuel and product specifications, for domestic requirements or to ensure they can export fuels into markets such as Europe and North America.

It is noted that changes we have seen over recent decades to fuel specifications and environmental compliance have, in themselves, resulted in less flexibility within refinery operations, and an increased risk of volatility and larger liability to the insurer, specifically with regard to business interruption.

Provision of All Risks insurance coverage to the Biodiesel sector has largely remained static in the last reporting period.

Navigators has over this reporting period continued to play a significant Contract Leader role both in single client and through an Underwriting Facility arrangement to specifically support the US Midstream sector, which amongst others are increasing export of natural gas liquids (NGLs), and specifically ethane, much in demand on a global basis to improve the economic and environmental viability of petrochemical and power production operations. There has been noted increase in the activity in the last reporting period, as US gas producers have cut drilling and operating costs to be able be economically viable in an environment of lower gas prices (relative to 2014), and gas processing projects come on-stream.

Power Generation

Navigators continue to support fired operations where cleaner feedstocks such as biomass and gas are being introduced to meet regional emissions targets, especially with regard to management of carbon dioxide emissions.

Our Power portfolio also provides risk transfer opportunities to conventional renewable power generation such as hydro-electric, and also solar, geothermal and some wind when in larger portfolios.

More recently, we have been asked to provide indicative terms for future power generation capacity in Rwanda, where there are plans to further exploit trapped methane at depth in Lake Kivu for electrical power generation purposes.

Construction Projects

In the previous reporting period Navigators had chosen to withdraw from the onshore Energy & Power construction insurance market. Whilst we continue to support projects insured prior to mid- 2016, we are writing only limited new business in this area.

It is noted that the biggest single Hurricane Harvey loss to Navigators came from the Onshore Energy Construction sector, and illustrates the vulnerability of large projects during the Piping & Mechanical completion phase when installed value is close to 75% of total, and damage factors high for open equipment that is not installed and exposed to flood waters.

Environmental Liability

Navigators have in this reporting period continued to develop its international Environmental Liability products, providing financial security against pollution liabilities for site operators and contractors. Coverage is provided either by annual policy or on a standalone project basis, and can cover pollution events of a sudden or gradual nature. Given the broad and changing nature of environmental law, polices are designed to be robust to this, and reflect as necessary the specific marketed area jurisdictions.

Evidence also applies to principle(s): 1.1, 1,3. 3.4

Source: Navigators Underwriting Agency Limited (Navigators)/NavTech

The Lloyd's market / QBE European Operations / Climate risk related customer support

QBE works with employees, clients and business partners to raise awareness of sustainability issues, manage risks and develop solutions. QBE offers events, seminars and publications that help clients and brokers build their risk management knowledge and sustainability awareness and assist customers in addressing sustainability issues through our products and services.

QBE’s Gobal Risk Solutions Practice for example, which is a global community of risk engineers, risk management consultants and scientists, provides services to customers, including risk profiling and evaluation environmental management, client awareness forums and training materials. The work of the Risk Solutions community is supported by the QRisk database, capturing client engagement activities and providing a foundation for increased use of data analytics to drive better understanding of clients and risk reduction.

Data analytics are also used to improve claims management, including climate related claims. In North America, for example, it typically takes two months or more to pay out crop insurance claims for inadequate rainfall. A prototype loss calculation engine is using national weather data so QBE North America can notify agents of likely payouts sooner. This will give QBE’s farmer customers more reassurance about claims progress, enable faster claim resolution and provide a differentiated customer experience.

Evidence also applies to principle(s): 1.1, 1.3, 1.4, 3.2, 3.3

Source: 2017 QBE Sustainability Report

The Lloyd’s market / Tokio Marine Kiln / Insurance Advisory Council

TMK is represented on the ClimateWise Insurance Advisory Council. In conjunction with the University of Cambridge, the Council has launched the research on ‘Transition Risk Project’ this year and is evaluating the feasibility of another research piece on ‘Physical Risk’. The Transition Risk Project involves undertaking compelling and multi-disciplinary research to demonstrate materiality to determine the financial performance of infrastructure over a relevant time period. This will inform investment strategies and thinking by supervisory organisation to ensure appropriate risk management steps are taken.

Evidence also applies to principle(s): 1.1, 1.2, 2.1, 3.1, 4.3

Source: Tokio Marine Kiln

3.2 Encourage our customers to adapt to climate change and reduce their greenhouse gas emissions through products and services.

The Lloyd's market / Beazley / Sustainability

In early 2018 we have embarked upon a cross-business Sustainability initiative. We have engaged external consultants to run workshops with underwriters from every line of business to explore the environmental and social impacts of our existing business, clients and products. Our goal is to use our influence and expertise to work with our clients to improve outcomes and to incentivise better risk management, risk mitigation or reduced resource intensity.

The workshops have been successful in developing greater awareness among our underwriters about sustainability considerations in their lines of business, which should help to ensure that business decisions are made with environmental and social impacts in mind. They have also generated several interesting ideas for changes to internal practioes and processes, and promising product development ideas.

Evidence also applies to principle(s): 5.4

Source: Beazley

The Lloyd's market / Chubb / Encouraging customers

Chubb encourages its customers to adapt to climate change and reduce their greenhouse gas emissions through products and services in several ways. For example, clients that mitigate risk — through retrofitting buildings to comply with updated building codes, installation of hurricane shutters and relocating exposures away from coastlines and flood plains — will have lower insurance costs than those that do not. Chubb also makes use of terms and conditions, such as sub-limits, coverage restrictions and deductibles, to ensure appropriate risk selection and potentially reward certain policyholder behaviour.

Chubb also plays a role in mitigating clients' supply chain and global operations risks through its risk engineering services. These risk engineering capabilities help organisations identify climate-related exposures and manage environmental challenges caused by climate change. Once a risk has been identified, Chubb will work with the insured to develop a plan to mitigate that risk. For example, clients in flood prone areas may be prompted to install deployable flood barriers to protect their premises thus promoting a climate resilient community.

The company offers "green building" consulting services and a property policy that enables rebuilding to greener standards after a loss. In addition, Chubb offers wildfire defense services as well as property conservation training to clients. Lastly, infrared camera scans of clients' homes in order to identify areas for improved energy efficiency as well as consulting services that aid in the installation of renewable energy sources are offered to clients.

Chubb Plants 32,000 trees in tenth year of American Forests' Sponsorship

Chubb has announced its renewed support of American Forests' Global ReLeaf® programme with the selection of national and international forest restoration projects. In 2017 Chubb sponsored the planting of 32,000 trees, representing one for each environmental insurance policy written globally by Chubb in 2016. Since 2007, Chubb has sponsored the planting of more than 144,000 trees. Chubb's support of the American Forests programme complements the company's environmental programme goals, which include the promotion of a healthy and sustainable environment through corporate philanthropy.

"We are honored to celebrate our tenth year supporting American Forests' efforts to transform, rehabilitate and protect our precious global forests," said Craig Richardson, Executive Vice President, Chubb Environmental. "Chubb and its employees remain committed to helping ensure a healthy environment and a balance between sustainable development and preservation."

"In acknowledgement of Earth Day, I am pleased to announce that Chubb Environmental has continued its partnership with American Forests in donating one tree for every insurance policy bound for an environmental client. We have supported American Forests since 2007 and throughout this time span have planted 112,240 trees around the world. This year, American Forests will plant approximately 2.7 million trees in 67 domestic and global reforestation projects. For 2015, our Chubb Environmental Risk contribution includes 25,500 trees distributed among the following tree planting projects:

Chubb's contribution will support the following international planting projects with American Forests:

- Mississippi (Biloxi and Black Creek): In cooperation with local partners, American Forests will restore the longleaf pine habitat, a 200-acre area selected because of its diverse wildlife, featuring hundreds of unique plant and animal species. This is the first year of a five-year project, and will focus on woodpecker cavity construction, the hatching and raising of gopher tortoise eggs, and the reforestation of longleaf pine ecosystems with 100,000 seedlings.

- California (High Sierra Ranger District, Sierra National Forest): The project will span 600 acres and will plant 128,500 seedlings, a mix of ponderosa pine, Jeffrey pine, sugar pine, white fir and red fir. This forest system is reliant on large, healthy forests to regulate the flow of water throughout the year, and this project will help to make a sizeable contribution to watershed restoration in the Sierra Nevada range.
- Kentucky (Daniel Boone National Forest): Restoring these areas to their former forested balance is complex work. Invasive species must be removed, compacted soils must be ripped, and seedlings must be grown and then planted. In partnership with the U.S. Forest Service, 11,000 trees will be planted across 16 acres including 14 different tree species.
- Texas (Lower Rio Grande National Wildlife Refuge): American Forests has been working in the Lower Rio Grande Valley since 1997, and has since planted more than two million trees. This work is vital to safeguarding the many unique area species, including the ocelot, a rare cat that numbers fewer than 50 surviving in the U.S. today.
- West Virginia (Mower Tract, Monongahela National Forest): From 1880 to 1940 almost the entire Mower Tract area was clear-cut, and what wasn't logged suffered from extreme wildfires. This project will jump-start the regrowth of an area that will eventually restore itself after a few hundred years. In 2017, 75,000 trees will be planted across 1,126 acres.
- Wyoming (Wind River District, Shoshone National Forest): In cooperation with the U.S. Forest Service, more than 40,000 whitebark pines will be planted in Shoshone National Forest, a candidate to be listed under the Endangered Species Act. This is part of the Greater Yellowstone Ecosystem; this 163-acre planting will be year three of a decade-long reforestation project in the region affected by wild fire, blister rust and pine beetles.
- Panama (Pacific Coast of Panama): The Azuero Peninsula was once verdantly-forested Central American foothills. Although it has been inhabited by humans for more than 12,000 years, it was not until recently that clear-cutting for cattle ranching made a big impact upon the landscape. Now less than 7 percent of the land is forested, and the local wildlife – like the Azuero spider monkey – has suffered. American Forests is working with local partners in Panama to plant 4,500 trees in a biological corridor stretching 75 miles and spanning more than 60,000 acres.
- Indonesia (Batang Toru Forest): The Batang Toru Forest in North Sumatra, Indonesia, is internationally recognized as critical habitat for the endangered orangutan, and the forest has been steadily encroached upon by a number of harmful factors such as urbanization and illegal logging. American Forests is working with local partners to plant 28,500 trees across 114 acres in an effort to address multiple environmental concerns while also engaging and educating local communities.

American Forests (founded in 1875) protects and restores urban and rural forests, has served as a catalyst for many of the most important milestones in the conservation movement, including the founding of the U.S. Forest Service, the national forest and national park systems and thousands of forest ecosystem restoration projects and public education efforts. In the past two decades, American Forests has planted more than 50 million trees in forests across the United States and in nearly 50 countries, resulting in cleaner air and drinking water, restored habitat for wildlife and fish, and the removal of millions of tons of carbon dioxide from the atmosphere.

More information can be found here, and for American Forests, please visit www.americanforests.org

Evidence also applies to principle(s): 5.4

Source: Chubb

The Lloyd's market / QBE Europen Operations / Encourage customer to adopt climate change measures

Through our products and services, we assist customers to address sustainability issues. For example, QBE European Operations is an underwriter to Lumos Global, a Dutch company offering clean and affordable solar power to a market of 1.3 billion potential customers who live off the electricity grid. Lumos Global seeks to enable people in some of the poorest countries in the world to replace hazardous and expensive kerosene generators and lanterns with modern solar electricity that can power lights, cellphones and small electronic devices. Lumos Global offers home and small businesses a simple and affordable way to pay for clean electricity in small instalments using their mobile phones.

As another example, we are exploring product development opportunities arising from the shift towards electric and autonomous vehicles. QBE's Australian and New Zealand Operations is working with Tesla and Marsh Advantage to underwrite policies issued in Australia under the InsureMyTesla program, a comprehensive motor vehicle insurance program for Tesla owners.

In addition to the work undertaken through the Global Risk Solution Practices as outlined in 3.1 above, QBE is also encouraging customers to adapt to climate change through resource efficiency initiatives such as by promoting electronic documents or encouraging customers to register for electronic billing and communications.

While not underwriting related, it should also be noted that QBE issued US$300 million in fixed-rate senior notes under a new QBE Green Bond Framework, which is the first green bond to be issued by a global insurance company. The proceeds were materially invested in areas such as renewable energy, low-carbon transportation, sustainable forestry, water efficiency, waste management and pollution controls.

In addition, our Premiums4Good initiative which launched in 2015, allows targeted customers to allocate a proportion of their premium to invest in securities with an additional environmental or social objective, such as social impact bonds, social bonds, green bonds and investments in infrastructure projects with environmental benefits. As at 31 December 2017, we had a total investment of US$455 million invested across 26 securities that meet QBE's investment and impact criteria.

Evidence also applies to principle(s): 3.1

Source: 2017 QBE Sustainability Report

The Lloyd's market / Tokio Marine Kiln / Encouraging our customers to adapt to climate change and reduce gas emissions

Protecting the Earth

Tokio Marine Group undertakes the Green Gift Project for protecting the earth together with its customers as it carries out a variety of environmental protection activities in Japan and overseas through its products and services. Mangrove planting commenced by Tokio Marine & Nichido in 1999 has become a project that symbolizes Tokio Marine Group's CSR activities and now includes volunteer tree planting tours with the participation of members of Tokio Marine & Nichido's management and domestic and overseas Group employees.

Additionally, Tokio Marine Group consumes large amounts of paper resources and energy in its own business activities and is continually aware of the environmental burden of these activities. At the same time, we have implemented the ISO 14001 environmental management system and our unique Green Assist environmental management system as we continually work to reduce consumption of these resources. Tokio Marine Group also promotes a variety of other measures to protect the earth as a global insurance group that gives thought to the future of our planet and acts responsibly.

Creating Value through Products and Services

Tokio Marine & Nichido initiated the Green Gift Project in 2009 based on the concept of "implementing environmental protection activities together with customers," and this project has been the driving force for mangrove planting. In October 2013, the scope of this project was expanded to include natural conservation activities throughout Japan. In this manner, we are protecting the natural environment in Japan and abroad as a member of society together with residents in each community.

In October 2016, TM changed the name of these environmental activities in Japan to the Green Gift Planet GENKI Program. In doing so, we aim to carry out activities that are close to customers and local communities and make further efforts to promote environmental protection. The Group's initiatives for protecting the earth's environment through its main businesses also extend across various nations. As one example, in 2015 U.S.-based Philadelphia Insurance Companies (PHLY) newly commenced the "PHLY 80K Trees" tree-planting program, which contributes to disaster prevention and mitigation in areas with frequent forest fires, inspired by Tokio Marine & Nichido's Green Gift Project.

Reducing the Environmental Footprint and Becoming Carbon Neutral

Tokio Marine Group promotes such initiatives as conserving electricity and energy, raising business efficiency by using tablet devices and promoting paperless operations. At the same time, the entire Group (consolidated basis) achieved carbon neutral status in fiscal 2011 as well as in the four consecutive years from fiscal 2013 to fiscal 2016 by offsetting the CO2 emissions generated by its business activities with CO2 absorption and fixation through means such as the Mangrove Planting Project and acquisition of Tradable Green Certificates. In the future as well, Tokio Marine Group will continue efforts to reduce its environmental footprint and to realize carbon neutral status.

Our Passion Embodied in Mangrove Planting

This year the Mangrove Planting Project marked its 19th year following its launch in 1999, and as of the end of March 2017, a total of 10,103 hectares of mangrove forest have been planted, which has generated economic value exceeding 35 billion yen and brought positive effects to the mangrove forests and the approximately

1.25 million people living in the surrounding regions. Mangroves play a diverse range of roles. These include mitigating the advance of global warming by absorbing and fixing large volumes of CO2 , preserving biodiversity and serving as a habitat for shellfish, shrimps, crabs and fish, and also functioning as green levees that protect communities from tsunamis and storms. Mangroves also provide fishery, forestry resources and other resources indispensable to the lives of residents in local communities and contribute to stabilizing and improving standards of living. Tokio Marine Group aims to continue the Mangrove Planting Project, which protects the future of the earth, for 100 years.

Environmental Awareness and Education
Tokio Marine Group promotes an array of environmental awareness and education activities that include Green Lessons that provide fun learning about global environmental protection and mangrove planting to elementary school children and that are led by employees who are dispatched to schools. We also hold the Children's Environmental Award program that solicits essays and paintings from children across Japan and invites the winners of the contest and their parents to join the Iriomote Island Ecological Experience Tour. Other activities include holding the Marunouchi Citizens Environmental Forum, a social and environmental awareness seminar.

Further information can be found in the Tokio Marine Sustainability Report 2017 – Protecting the Earth.

Evidence also applies to principle(s): 1.1, 1.2, 1.4, 2.1, 2.2, 3.3, 4.3, 5.4

Source: Tokio Marine Kiln, See CSR 2017

3.3 Seek to increase the proportion of non-life claims that are settled in a sustainable manner.

The Lloyd's market / Beazley / Claims model

In 2017 we have shifted to a new claims operating model, whereby claims are split according to their size and complexity, allowing high volume claims to be handled separately and with a different skill-set to the lower volume but higher complexity matters.

We believe that this model will increase efficiency in our services and deliver significant sustainability benefits over the longer term.

Evidence also applies to principle(s): 1.3, 1.4

Source: Beazley

The Lloyd's market / Hiscox / An industry approach to sustainable claims

An industry approach to sustainable claims ClimateWise has worked with the University of Cambridge Institute for Sustainability Leadership (CISL) to develop sustainable claims management guidance. The aim was to recommend how the insurance industry as a whole could increase the sustainability of insurance claims. The resultant report focuses on domestic property claims, takinginto account the lessons learnt from similar initiatives within the motor and commercial property sectors.

It concluded that a sustainable claims process requires the following:

- Identification of priority areas to reduce environmental impact
- A sustainable claims management plan to reduce environmental impacts communication, appropriate to your business, with contractors, suppliers and customers on opportunities to reduce environmental impact
- Standardised annual reporting on progress

In implementing the above guidance, Hiscox recognises that it is diffcult to have direct influence on repair practices as they are managed indirectly through a network of contractors appointed by loss adjusters. However, we recognise that sustainable claims management is an area where we can make a significant difference. We are currently exploring two new pilot technologies which could help us to do this by offering new services to customers.

1. The Leakbot device notifes customers by a mobile app of any changes in their water pressure. It supports them to work through possible issues and fxes, enabling earlier fault detection, which in turn means the potential for less or no damage. By collecting and analysing data they can also improve the service over time, for example providing information to service engineers sent to make repairs. Together these factors should reduce the carbon footprint and cost of any claims, and avoid some damage altogether.
2. Another pilot project we are running this year in the UK, AnyJunk, uses smart technology to partner with local waste collection companies to provide a fast response, low carbon footprint and environmentally responsible service for removing bulky waste. Their digital platform operating model means collections are undertaken by very local teams to minimise miles per job and maximise effcient use of resource. They provide an end to end waste audit trail with an average 94% landfll diversion. This service will help reduce both the carbon footprint and costs of claims clear-up, and improve customer experience by reducing the disruption associated with arranging waste removal.

Further information on Hiscox work in this area, which includes reducing the impact of claims assessment, can be found in our independent submission.

Evidence also applies to principle(s): 2.1, 2.2, 4.1, 4.2

Source: Hiscox

The Lloyd's market / QBE European Operations / Increase sustainability in claims handling process

Apart from promoting a “paperless office” in general, QBE is experimenting with technology to improve the claims handling process, where appropriate. As an example, drones and satellite images are being used to visually inspect affected areas and accelerate disaster response in a sustainable manner.

We also use data and analytics to help us make better underwriting and claims decisions. Aided by emerging technologies and new tools, insurance data and analytics is growing increasingly sophisticated, which ultimately benefits our customers.

Evidence also applies to principle(s): 1.1, 1.3, 1.4 and 3.1

Source: 2017 QBE Sustainability Report

The Lloyd’s market / Tokio Marine Kiln / Sustainable claims settlement

The 2017 losses of Hurricanes Harvey, Irma and Maria (HIM) exposed a significant number of policyholders to losses. In terms of expedited and sustainable claims settlement TMK participated under the LMA with their numerous TPAs to use UAS to look at the extent of the damage in areas affected. Furthermore to ensure swift claims settlement TMK increased the scope of their TPA’s delegated handling authorities and advanced considerable loss funds to ensure prompt payment of claims. Additionally, TMK provided two staff members to work with their TPAs in their offices in California to support the work completed.

Evidence also applies to principle(s): 1.4, 3.1, 3.2, 4.3, 5.2, 5.4

Source: Tokio Marine Kiln

3.4 Through our products and services assist markets with low insurance penetration to understand and respond to climate change.

The Corporation of Lloyd's / Disaster risk activities

Activities in this reporting year have taken place across a range of strategy areas, KPIs, and internal departments. These include:

1. Insurance Development Forum: During this reporting cycle Inga Beale, Chief Executive Officer, took part in two steering committee meetings in September 2017 and April 2018. Staff from across the Corporation of Lloyd's aim to continue to be involved in supporting this work stream to support the Forum aims to:
   – Incorporate insurance industry risk measurement know-how into existing governmental disaster risk reduction and resilience frameworks; and
   – Build out a more sustainable and resilient global insurance market in a world facing growing natural disaster and climate risk.
2. As part of a wider campaign that was set out in KPIs for 2017 continued in 2018, the Corporation of Lloyd's also launched a new campaign to promote its claims service to demonstrate the value of insurance, and assist with market development. This material is also relevant to principle 3.1

   The initiative provides the Corporation of Lloyd's and Lloyd's insurers with new resources to explain the value and workings of Lloyd's claims service to brokers and policyholders, and was created in response to the insurance industry's need to do a better job of explaining its contribution to human development and progress.

   One way to do that is by telling claims stories, which demonstrate of the purpose and value of insurance than in the payment of claims to help communities recover and rebuild. Materials are available from a dedicated microsite, and the stories have been communicated across social media channels where impact and statistics are monitored:

#Lloydsresponds campaign

The campaign required analysis of the history of claims data, and findings illustrated that over the past six years, the Lloyd's market has paid out $85bn in claims – an average of $43m per day paid to policyholders around the world. This messaging has been added to a central database of material is used where relevant.

3. Disaster risk facility at Lloyd's: A group of seven Lloyd's syndicates have committed capacity of $445m towards solutions that address natural catastrophe risks in emerging and developing economies. This is up from the $400m committed in 2016-17 reporting.

   In material shared with PwC in the last reporting cycle, the group were working towards formal consortium documentation, which has been completed during the 2017-18 reporting cycle. Over the reporting year the group have held 10 working group meetings facilitated by the Corporation.

- Group members are also involved with running or contributing to several Insurance Development Forum working groups, which is covered in reporting by RenaissanceRe and XL Catlin. Their activities are covered in their ClimateWise reporting.
- The group has also supported the Corporation with the Commonwealth Heads of Government meeting, by participating in the World Café segment, and providing a member for the discussion panel.
- As well as activities in London, the Lloyd's Singapore platform is home to Chaucer, MS Amlin, and XL Catlin, who are involved in market development work. In support of this the Corporation of Lloyd's team has been supporting regional market conversations, and in May 2018 shared a report on disaster risk in the Pacific Islands by Vivienne Lam.

  Lam spent six months at the Corporation after working for the Monetary Authority of Singapore where she first met the Singapore team, before deciding to complete an MSc in Environmental sustainability.

  The report was shared with the Lloyd's market in a secure market insight area, and outlines the various risks that impact the Pacific and the considerations that should be taken to evaluate the opportunities for the market in the region. The report works towards supporting KPIs around market development.

4. *In the 2016-17 reporting cycle, the Corporation of Lloyd's publically showcased research funded by Lloyd's Tercentenary Research Foundation (LTRF), who had been funding a two-year research project led by the University of California at Santa Cruz on the topic of 'The Role of Coastal Habitats in Managing Natural Hazards and Risk Reduction: A Multi-Disciplinary Approach Across Ecology, Economics and Engineering' that has been focused on delivering two stages of research findings.*

   For those who have not read previous reporting, Lloyd's Tercentenary Research Foundation (LTRF) was established to mark the tercentenary of Lloyd's in 1988. Since then, it has funded over 20 years of academic research in the fields of engineering, science, medicine, business and the environment through the provision of post-doctoral fellowships and business scholarships. The LTRF is an independent charity and not part of the Corporation but, with the exception of audit and investment management fees, the administration costs of the Foundation are borne in full by the Corporation of Lloyd's.

   Both stages of the research findings have now been fully delivered and are publically available from the project page to promote and share the work. On 12 June 2018 The Nature Conservancy (TNC) published a paper titled 'The Global Flood Protection Savings Provided by Coral Reefs' in Nature Communications, which was shared through the Corporation of Lloyd's social media accounts to raise awareness and share insights with our stakeholders:

   This research values how the value that people and property are protected by coral reefs and what is at stake if reefs are lost, and supports evidence towards principle 1 reporting.

   Overall, the study shows that coral reefs cut the cost of all flood-related damages around the world in half, providing useful evidence around about reefs and their importance during the International Year of the Reef, which supports evidence towards publically engaging and supporting public policy makers (See principle 2).

   The findings will continue to be incorporated into centralised messaging where appropriate.

5. *Lloyd's Charities Trust: The charity continues to support RedR to deliver the Red Ready to Respond programme for the current three year cycle (April 2016 – March 2019). The aim of the programme is to increase the ability of over 2,000 individuals and organisations involved in humanitarian action to prepare for and respond to emergencies, especially in urban centres.*

Lloyd's Charities Trust is supporting RedR to:

- develop the skills of local responders in disaster-affected communities through developing and delivering a new e-facilitated learning programme
- subsidise face to face training for international aid workers
- address the technical challenges faced in disasters by providing online technical support and harnessing the expertise of the private sector
- and provide tailored support in the immediate aftermath of a disaster through a contingency fund

The update for the 2016-17 year of the programme fell outside the ClimateWise reporting cycle for last year, and final results for that period were:

An update of outcomes against targets to date was delivered at the May 2018 Lloyd's Charities Trust Board meeting, which forms part of the agreed deliverables. The full paper has been provided to the reviewers as part of further evidence, and since the programme started, the following outcomes have been achieved:

Ready2Respond impact

Programme	Participants
Urban Online Courses	146
Private Sector Outreach - Urban Conference	147
Open Attendance Courses	944
KnowledgePoint[b]	2,412 Registered Users (with 7,730 cumulative returning visitors)
Mentoring	78 (39 pairs working together)

Project targets can be found in the 2016-17 ClimateWise reporting and online on the partner charity page for RedR, and the Corporation anticipates providing further material for reporting in the next ClimateWise cycle.

[b] The online technical assistance platform

6. *[Build Change partnership]: In October 2016 Lloyd's Charities Trust announced via a press release a three year donation of £100,000 per annum to Build Change to help families living in informal settlements in Colombia and the Philippines increase their resilience to natural disasters, such as typhoons and earthquakes, by enabling them to retrofit their existing homes.*

   Project targets can be found in the 2016-17 ClimateWise reporting and online on the partner charity page for Build Change.

   An update of outcomes against targets to date was delivered at the May 2018 Lloyd's Charities Trust Board meeting, which forms part of the agreed deliverables. This paper has been provided to the reviewers as part of further evidence.

Evidence also applies to principle(s): 1.1, 1.3, 1.4, 2.1, 2.2, 3.1, 3.4, 5.1, and 6.1

Source: The Corporation of Lloyd's

The Lloyd's market / ArgoGlobal / Assisting Markets with Low Insurance Penetration

ArgoGlobal continues to support an initiative sponsored by the Rockefeller Foundation – World Bank Disaster Risk Finance and Insurance Program (DRFIP) partnership. The purpose of this initiative is to explore innovative financial solutions against climate change and disaster risks in Asia. Specifically, under consideration is the ability to offer parametric flood coverage to counties in Asia where this type of risk has increased due to climate change.

Evidence also applies to principle(s): 1.1, 1.4

Source: ArgoGlobal – Syndicates 1200 & 1910

The Lloyd's market / Beazley / Disaster risk finance

We participate in the Lloyd's insurance market Disaster Risk Facility, and are actively engaged in seeking to engage with potential new markets to promote the benefits of insurance coverage and originate new business.

Evidence also applies to principle(s): 1.3, 1.4

Source: Beazley

The Lloyd's market / Chubb / Chubb Environmental Reporting

At Chubb, we recognise our responsibility to provide solutions that help clients manage environmental risks, to reduce our own environmental impact and to make meaningful contributions to environmental causes.

Annual Environmental Report:

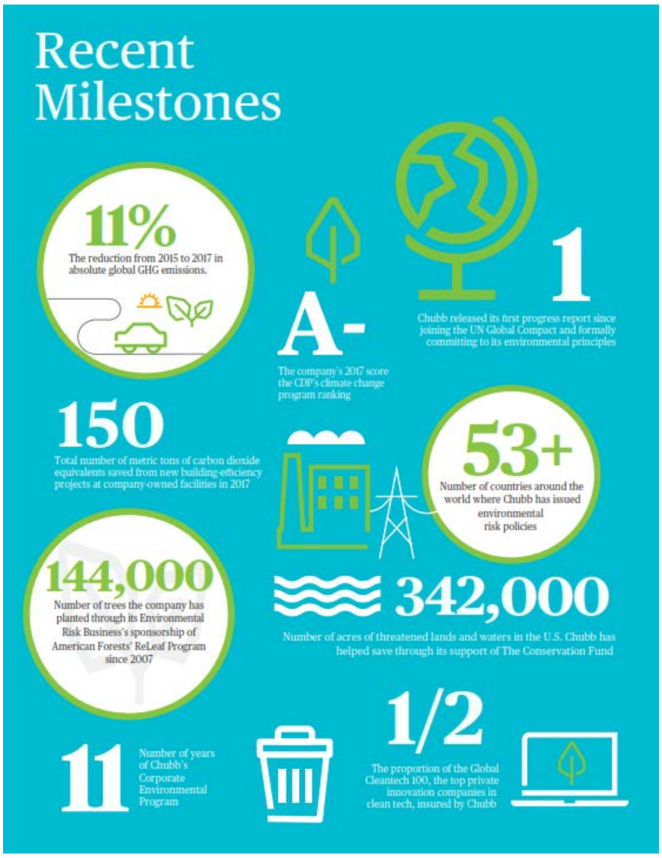
The company produces an annual Environmental Report that outlines the full scope of our commitment and activities to address environmental concerns, including our environmental risk products and services, goals and initiatives to reduce greenhouse gas emissions in our own operations, and our philanthropy and volunteerism. See the full report here.

Environmental Statement:

The company's annual report, filed with the U.S. Securities and Exchange Commission, includes a third-party certified Environmental Statement on the company's GHG emissions program

CDP

The company reports its GHG emissions data and related activities to CDP, an international, not-for-profit organization providing the only global system for companies and cities to measure, disclose, manage and share vital environmental information. In 2017, Chubb earned a score of A-.



Climate change is an important and serious issue for the global insurance industry because it is our business to provide security against many of the property-related risks posed by such change. With Chubb having operations in 54 countries, Chubb's business and operating models are exposed to the full impact of global climate change. At Chubb, we recognise that a changing climate affects everyone — our customers, employees, shareholders, business partners and the people who live and work in the communities we serve. Therefore, climate change is integrated into aspects of Chubb's short and long-term strategies.

The primary objective of Chubb's environmental programme is to measure, record and reduce greenhouse gas (GHG) emissions in the company's own operations. Chubb will continue to deploy the approaches it has used successfully to date, including installing energy-efficient lighting and equipment and more efficient use of office space.

Chubb's Corporate Environmental Programme is now in its tenth year. We continue to be at the forefront in addressing environmental issues and the implications of climate change for all areas of our business. We are proud of the progress we have made and are committed to taking further steps to make meaningful improvements in the environment.

The full Chubb Environmental Report 2017 can be viewed on the Chubb website.

In our operations, Chubb continue to focus on reducing our carbon footprint around the world. In September 2014, prior to ACE Limited's January 2016 acquisition of Chubb and adoption of the Chubb name, the company established a new companywide goal to reduce greenhouse gas (GHG) emissions by 10% per employee from 2012 to 2020.

The commitment followed the successful achievement of the ACE's first emissions reduction goal, which was 8% per employee from 2006 to 2012. Through the end of 2015, ACE reduced its emissions per employee by 5% from a 2012 baseline; about halfway towards achieving the goal. The new Chubb, now the world's largest publicly traded property and casualty insurer, is committed to reducing its overall environmental impact and plans to announce an updated GHG reduction goal for the combined company. From 2015 to 2017, Chubb reduced it's global absolute emissions by 11%.

Philanthropy
The environment is a priority in our corporate philanthropy. Around the world, grants from Chubb's charitable foundation continues to help to preserve sensitive lands and habitats, finance "green-business" entrepreneurs and educate farmers on growing sustainable crops.

"Disaster Relief Matching Gifts - Chubb conducts fundraising campaigns that raise money to provide assistance and matches employees' donations in support of relief efforts in global disasters."

More information can be found on the Philanthropy page.

Evidence also applies to principle(s): 1.1, 5.1, 5.2, 5.3, 5.4, 6.1, 6.2

Source: Chubb

The Lloyd's market / Hiscox / Funding for disaster relief

The frst step in assisting markets and customers in responding to climate change is to understand how it will affect these markets. Accordingly, Hiscox is investing in research to assess the effects of climate change across the developing world, including on hurricanes in the Atlantic and flooding in low lying countries.

We also have strong links with the Insurance Institute of London on ways to deal with climate change risk in emerging economies and poorly modelled countries. Hiscox works with and through local insurers to provide risk management advice, assurance and insurance cover for farmers and farm mutual in many areas of the world, particularly in China and India, against reduced yields due to poor weather conditions during the growing season. This catastrophe protection ensures that the local insurers can continue to provide cover even after major disasters.

We support organisations including farm mutuals, agricultural insurers and government risk pools, enabling farmers to grow food for the world's most rapidly expanding populations.

Funding for disaster relief

Hiscox is supporting the industry approach to assisting the developing world through our membership of ClimateWise, Lloyd's and other relevant industry groups. Hiscox is involved in the Lloyd's Disaster Risk Facility. This initiative involves several syndicates providinga pot of capital for underinsurance, which currently stands at $445 million.

Related work by the Risk Modelling and Mapping Project (RMMP), a subgroup of the Insurance Development Forum (IDF), a sub-group of the Insurance Development Forum (IDF), is focussing on understanding why there is currently limited collaboration across government, intergovernmental, academia and the insurance industry to work to close the insurance protection gap in developing countries.

Supporting the Caribbean

Hiscox continues to support the Caribbean Catastrophe Risk Insurance Facility segregated portfolio company (CCRIF SPC), which in late 2017 released funds to support affected communities in the aftermath of Hurricane Maria. For more details, see section 1.3 of our independent submission.

Evidence also applies to principle(s): 1.1

Source: Hiscox

The Lloyd's market / MS Amlin / Assisting Markets with Low Insurance Penetration

Disaster Risk Facility

MS Amlin is a member of The Disaster Risk Facility (DRF) consortium, a group of Lloyd's syndicates that offers insurance and reinsurance capacity against natural catastrophe. The consortium provides access to the collective underwriting expertise of MS Amlin, Beazley, Chaucer, Hiscox, Nephila, RenaissanceRe and XL Catlin to help developing economies build resilience to disaster, climate and weather risks.

Key benefits of the facility:

- Up to $445m of capacity on a per risk, per region basis
- Ease of access to the pooled knowledge, expertise and resources of the consortium members
- Local contacts through Lloyd’s global platforms

Insurance Development Forum (IDF)

The IDF is aiming to be the leading insurance industry group in coordinating supporters of the UN Sustainable Development Goals and UN 2030 Agreements. The latter includes Sendai (disaster risk), Paris (climate change), Addis Adaba (finance for development) and Istanbul (humanitarian systems). It has formed five working groups and James Few, Global Managing Director, Reinsurance, is a member of the IMRI working group.

The IDF is also involved in establishing the GCDP in conjunction with the UK Government and World Bank (currently recruiting a London team).

Groupwide Public Private Partnerships

To assist markets with low insurance penetration MS Amlin is actively working alongide other companies in the MS&AD Group to promote schemes and develop intelligent solutions for emerging markets.

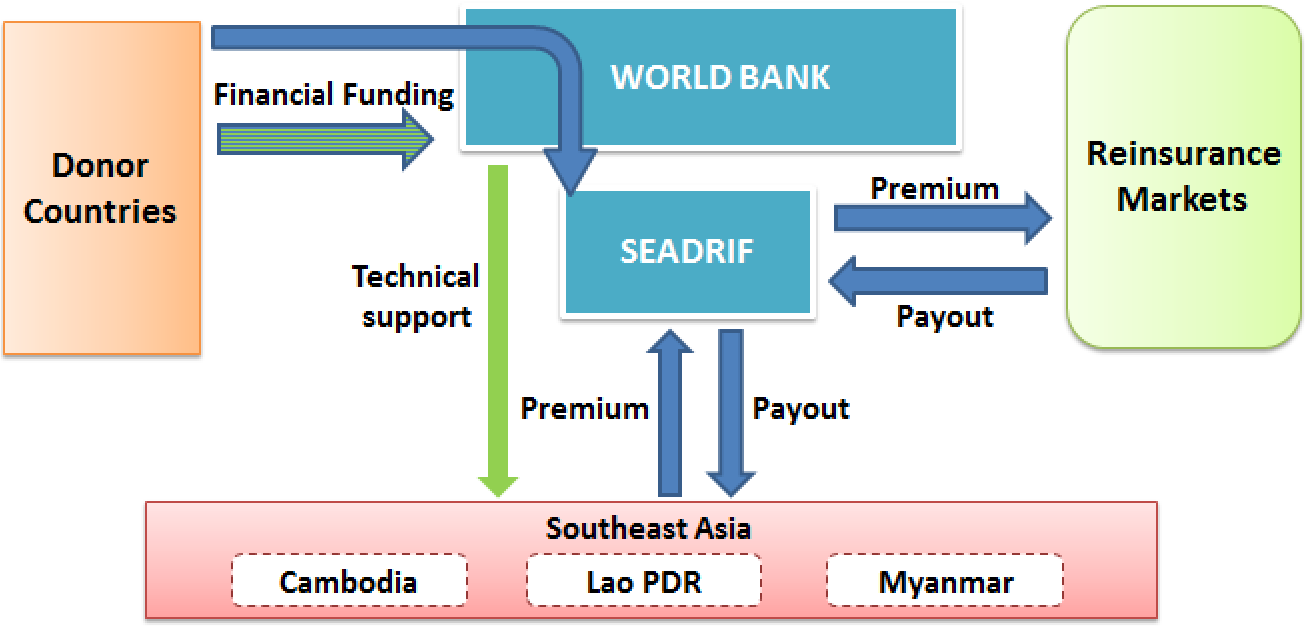
Pacific Catastrophe Risk Assessment and Financing Initiative (PCRAFI)

MSI is underwriting natural disaster risks for the Pacific Catastrophe Risk Assessment and Financing Initiative (PCRAFI) Insurance Facility, which was established jointly by the Japanese government and the World Bank. This facility is designed to finance quick reconstruction funds to nations and regions in the Pacific Islands (Samoa, Tonga, Marshall Islands, Vanuatu, and Cook Islands), where insurance markets have not matured sufficiently, and are afflicted by natural disasters (cyclones and earthquakes) of a certain scale. By participating in this facility, MSI intend to support measures against natural disasters in the Pacific area, and fulfill social responsibilities for the area.

Southeast Asia Disaster Risk Insurance Facility (SEADRIF)

Recurring floods and other natural disasters affecting the livelihoods of large populations are a major challenge in Southeast Asia (SEA) region and often leave governments with a critical need for short- term liquidity to finance response and recovery. Among SEA countries, Cambodia, Lao PDR, and Myanmar face particularly high annual average losses. SEADRIF is a new regional catastrophe insurance program to provide the local government rapid response financing in the immediate aftermath of a disaster. Initially focused on Cambodia, Lao PDR, and Myanmar, SEADRIF could expand to other countries to strengthen regional cooperation and financial resilience.

The World Bank has partnered with ASEAN+3 countries in disaster risk financing and insurance since 2011 and is currently supporting the development of SEADRIF through both technical assistance and comprehensive investment program.



James Few recently presented on the subject of closing the protection gap with public private partnerships. A copy of his presentation is available here

Memberships

Reinsurance Association of America (RAA)

MS Amlin is an RAA member and James Few, Global Managing Director, Reinsurance, is a member of the Executive (former chairman). The RAA is the leading advocacy group for the insurance industry in America and with the vast majority of MS Amlin's peers also members – this makes the market more influential advocating as one.

The RAA provides industry data and offers regular calls on specific areas of the business such as the latest on political bills (Warner-Neal, Biggert-Waters etc). The RAA also offer high quality training courses which MS Amlin utilises for staff training.

Association of Bermuda Insurers and Reinsurers (ABIR)

MS Amlin is also a member of ABIR and Rob Wyatt, CEO MS Amlin AG Bermuda Branch, attends board meetings. ABIR is the industry lobby group for Bermudian interests both locally and in Washington.

Evidence also applies to principle(s): 2.1

Source: MS Amlin

The Lloyd's market / QBE European Operations / Development of markets with with low insurance penetration

QBE European Operations is an underwriter to Lumos Global, a Dutch company offering clean and affordable solar power to a market of 1.3 billion potential customers who live off the electricity grid. Lumos Global seeks to enable people in some of the poorest countries in the world to replace hazardous and expensive kerosene generators and lanterns with modern solar electricity that can power lights, cellphones and small electronic devices. Lumos Global offers home and small businesses a simple and affordable way to pay for clean electricity in small instalments using their mobile phones.

Across the Group, there are several financial inclusion initaitives that QBE is implementing. For example, for the past two years, QBE Mexico has partnered with microfinance institutions to develop products that meet the needs of low-income customer groups that have not previously had access to insurance.

Evidence also applies to principle(s): 1.4

Source: 2017 QBE Sustainability Report

4 Incorporate climate change into our investment strategies

4.1 Evaluate the implications of climate change for investment performance and shareholder value.

The Corporation of Lloyd's / Evaluating implications

In 2016-2017 the Corporation of Lloyd's reported on the aim to use our shareholder power to influence the behaviour of the companies in which we invest – and persuade them to respond more effectively to the impact of climate change. The Corporation uses its position as a shareholder to promote better management of climate change amongst the companies we invest in. John Parry, Chief Financial Officer, is also the internal ClimateWise sponsor, and is involved in activities that generate action, including the Insurance Advisory Council.

The Corporation of Lloyd's believe that we should use our shareholder power to influence the behaviour of the companies in which we invest – and persuade them to respond more effectively to the impact of climate change.

The Corporation of Lloyd's Treasury & Investment Management (LTIM) provide specialist fixed income investment management services to the Lloyd's market, on a discretionary basis to Managing Agents and acts as the manager of Lloyd's centralised trust fund assets and the Central Fund. LTIM manages approximately £9bn of assets; for some of the Central Fund investments the role of the investment manager has been outsourced to external firms.

The Chain of Security

Lloyd's unique capital structure, often referred to as the Chain of Security, provides financial security to policyholders and capital efficiency to members. The Corporation is responsible for setting both member and central capital levels.

There are three links in the Chain of Security:

- Syndicate level assets: All premiums received by a syndicate are held in its premium trust funds and are the first resource for paying policyholder claims from that syndicate.
- Members' funds at Lloyd's: Each member provides Capital to support its underwriting at Lloyd's. Each managing agent produces its own capital assessment in respect of each managed syndicate stating how much capital it considers is needed to cover its underlying business risks with a 99.5% confidence level.
- Central assets: The central assets are available at the discretion of the Council of Lloyd's to meet any valid claim that cannot be met by the resources of any member. It is funded by members' annual contributions and subordinated debt issued by the Society in 2014 and 2017

Several assets		
First Link	Syndicate level assets £51,086m	
Second Link	Members' funds at Lloyd's £24,579m	
Mutual assets		
Third Link	Central Fund £2,043m Corporation £145m Subordinated debt/securities £793m	Callable layer £963m

This distinction is important to remember for the Corporation's Responsible investment strategy, which is outlined in principle 4 and 6.

Communicating our beliefs

The Corporation uses its position as a shareholder to promote better management of climate change amongst the companies we invest in. John Parry, Chief Financial Officer, is also the internal ClimateWise sponsor, and is involved in activities that generate action.

Throughout the reporting year, details of the principle 4 case studies from past reporting have been used to illustrate to external partners and stakeholders the range of activities that Corporation and market members take part in this area. See principles 1, 2 and 5 further details.

Risk Management

In Q3 2017, LTIM developed a new risk framework to better capture and illustrate the ongoing assessment of individual external investment managers. This oversight framework considers a manager's current commitment and approach to Responsible Investment as one of six key areas of risk.

Another key area is Thematic Risk which includes a measure of the exposure to stranded assets of those Central Fund assets the manager is responsible for, according to the methodology set out in last year's ClimateWise submission. Each manager's profile across the six key risk areas is considered on a quarterly basis to produce an overall RAG (Red/Amber/Green) rating for the manager. If the rating is not green, then a more in-depth review of the manager will be scheduled. In-depth reviews can result in a manager being retained or replaced.

Voting and Engagement

LTIM continues to employ the services of an overlay manager, BMO Global Asset Management (BMO), to engage with companies in which Lloyd's Central Fund invests as a shareholder and to exercise the Central Fund's voting rights in pursuit of Environmental, Social and Governance (ESG) goals.

In 2017, BMO voted at 186 company shareholder meetings in respect of the Central Fund's equity investments. BMO engaged with 48 companies in which the Central Fund is invested, leading to 16 instances where the approach to ESG issues was changed, as a result of the engagement.

BMO ESG engagement tracking

	Companies engaged	Milestones achieved
2014	62	25
2015	82	41
2016	64	43
2017	48	16

Note that a company can be engaged with on more than one issue and a milestone is achieved when a company's approach to an ESG issue changes, as a result of engagement.

Further examples have been provided to PwC for review.

Future Planning

Over the next 12 months, The Corporation of Lloyd's Treasury & Investment Management (LTIM) will be looking to expand the risk framework for monitoring external investment managers' approach to responsible investment. At the moment, various data is gathered on a quarterly and annual basis to inform the Corporation of Lloyd's assessment, but it is a somewhat passive exercise.

LTIM have in the past actively engaged with managers on their approach, for example through challenging them on holdings that we perceive to have significant ESG risks, but it has been on an ad hoc basis. LTIM aim to incorporate this active engagement within the more structured scheduled process that feeds into the framework.

In the second half of 2018, LTIM will be extending engagement activities to cover companies where the Corporation is a debtholder not just an equity holder.

Further examples have been provided to PwC for review.

Evidence also applies to principle(s): 1.1, 1.3, 1.4, 3.1, 4.2, 4.3, and 6.1

Source: The Corporation of Lloyd's

The Lloyd's market / ArgoGlobal / Climate Change and Business Operations

During 2017-2018, Argo Group maintained the operation of its regular sustainability-working group. This group is charged with overseeing the organization's internal sustainability policy, which is intended to apply to corporate risk management and investment practices. Argo Group's approach to sustainability includes the following three parts:

- Environment and Climate Change
- Corporate Social Responsibility and Community Involvement
- Diversity and Inclusion

Climate Change has been classified by Argo Group as one of its emerging risks, and it is regularly monitored by the corporate risk management function for the primary purpose of assessing the potential impact of climate change on Argo Group's business operations insurance products and clients.

The Group Chief Risk Officer (CRO) is responsible for coordinating sustainability initiatives including periodic internal reporting. The sustainability-working group, which meets quarterly, supports the CRO by discussing climate change issues and coordinating the corporate activities associated with the Argo Group's sustainability plan.

Argo Group has also established an Enterprise Risk Management (ERM) framework and climate change is included within that framework as a part of the comprehensive risk categories. Sustainability planning, of which Climate Change is a significant aspect, is part of the remit of the Argo Group Enterprise Risk Management (ERM) Steering Committee. The ERM Steering Committee receives a quarterly report from the CRO summarizing the activities of the sustainability working group and outlining progress made with the sustainability action plan, including external trends that may become meaningful.

The Risk & Capital Committee of the Argo Group International Holdings, Ltd. Board of Directors receives periodic updates on material risks, including sustainability related threats and opportunities, as a result of these risk governance arrangements.

Argo Group has outsourced its investment management functions to a variety of investment management firms, who are expected to manage Argo Group's investment portfolio in accordance with Argo Group's investment management guidelines, which includes an expectation that consideration will be given to the impact of environmental issues, when investment strategies are developed and applied. The risk management function has continued to hold discussions with a number of investment managers during 2017-2018 with respect to the implications of the growth in ESG (Environmental-Social-Government) indices and their impact on investor decision making.

The Argo Group risk management function is consulted if it is expected that an environmental issue may have a potential impact upon Argo's business operations and/or insurance products. The intended purpose of such consultation is to identify and discuss potential options for the mitigation, reduction and/or avoidance of risk resulting from an environmental issue.

A strategic risk assessment is maintained which captures the principal threats and opportunities associated with sustainability issues facing Argo Group. This assessment includes a quantified evaluation of the current level of impact and likelihood for each issue as well as mitigation or realization plans and their status. The assessment is reviewed at least once per annum and principal findings shared with the ERM Steering Committee.

Evidence also applies to principle(s): 1.1, 1.4

Source: ArgoGlobal – Syndicates 1200 & 1910

The Lloyd's market / Hiscox / Internal evaluation

The Hiscox investment team directs its third-party managers to evaluate all risks that are pertinent to the return and risk of its assets. There are a multitude of risks that could affect our investments, and climate change affects a number of these directly or indirectly. Its effects are included within the risks we expect our asset managers to review and manage.

Our new CIO has also added to his signifcant experience in asset management, by recently completing a Masters in sustainable energy futures from Imperial College London. Combining the expertise of the overall investment team with the expertise of the new CIO ensures the team make decisions on investments and related climate risks in a pragmatic, practical and useful way for Hiscox.

As good business practice, Hiscox expects its asset managers to invest in companies that have sound environmental, social and governance (ESG) practices. Those companies that do not have such controls are not companies in which we wish to invest.

We are aware that much research has been done to show that those companies that excel in ESG metrics will outperform those that have poor ESG metrics. It is an approach that means the majority of Hiscox investments are in short dated bonds (77.7% at the end of 2017) with a small proportion in cash (14.7%), and the smallest in equity type funds (risk assets 7.6%).

As far as bond funds are concerned, there is little impact that Hiscox can have through its short dated bond funds by targeting climate change issues in the context of its overarching objective of sound investment returns for Hiscox shareholders. Bonds are Government issued and Hiscox is only one of many investors.

On the risk asset side we invest in equities through funds which do have the ability to steer companies, and these fund management companies we expect to be picked through sound ESG factors as well as more traditional risk and return factors.

Hiscox, as an insurance company, sees the impact of climate change through its insurance business and has signifcant expertise in this area. On the asset side, we choose to invest assets to support Hiscox's ability to underwrite risks, including risks associated with climate change, to the best of its ability and generate strong return for its stakeholders.

This does not mean a blanket ban on investing in climate impacting companies or a positive bias to investing in low carbon technologies but an intelligent strategy, taking into account risks including climate change, to make smart investment decisions as climate change has more of an impact on the world economy. Hiscox therefore maintains a robust balance sheet to support individuals, companies and institutions when they are most at need.

Previous analysis by Hiscox of the economics of climate change and the potential impact on our investments has included consideration of the Stern Review on the Economics of Climate Change (UK), the Jorgenson (et al) report on the US Market consequences of Global Climate Change (US), the Garnaut Climate Change Review (Australia), the Mercer Climate Change Report and a number of academic papers exploring social discounting and mitigation costs.

Further information on Hiscox work in this area can be found in our independent submission, which details examples of ESG review of our investments and industry collaboration activities.

Evidence also applies to principle(s): 1.1, 2.1, 4.2

Source: Hiscox

The Lloyd's market / MS Amlin / Holistic approach

We prefer to have a holistic approach rather than a separate ESG strategy. We have long believed that companies who care about their long-term sustainability, their employees, society will tend to perform well. For many years we have encouraged our equity, property and bond fund managers to sign up to the UN Principles and required them to report to us annually on their ESG activities.

Evidence also applies to principle(s):

Source: MS Amlin

The Lloyd's market / QBE European Operations / Investment Initiatives

Task Force on Climate-related Financial Disclosures (TCFD)

QBE supports the TCFD recommendations and has work underway to enhance our disclosures in line with this pathway, beginning in our 2018 Annual Report (to be issued in February 2019).

The Financial Stability Board released the final recommendations of the TCFD in June 2017, with an aim to provide voluntary and consistent climate-related financial risk disclosure guidance for use by companies when providing information to investors, lenders and other stakeholders. The recommendations are structured around four thematic areas that represent core elements of how companies operate: governance, strategy, risk management, and metrics and targets.

Responsible Investments

QBE is a significant investor and we take our responsibility as a capital provider seriously. We aim to contribute broadly to wellbeing and sustainable development and believe that integrating principles of responsible investing into ownership and investment decision-making can have a positive impact on risk-adjusted financial returns.

QBE has a coordinated approach to responsible investments with a dedicated Responsible Investments (RI) team, which reports to the Group Chief Investment Officer and the Group Chief Financial Officer. The RI team's activities are also overseen by the Board Investment Committee and Board Risk and Capital Committee.

We are a signatory to the Principles for Responsible Investment (PRI), the world's leading proponent of responsible investment which is built around six principles for investing responsibly. We further progressed our commitment by joining the RIAA and the IGCC, and continued our support of Impact Investing Australia.

Developments over the last year in these areas are outlined below.

Credit Risk Policy

QBE Group Investments manages assets directly and through external managers. In 2017, we updated our approach to incorporating ESG considerations into our internal credit selection by introducing a new independent ESG measure to our credit analysis process. This enables us to understand and monitor a company's approach to managing ESG issues through its policies, practices and other measures. When deciding whether to appoint or allocate to an external fund manager (where applicable), QBE also considers how much they incorporate ESG factors into their investment processes and operational areas.

Climate-related risks and opportunities are a core business consideration for QBE and other businesses. As well as the physical risks associated with climate change, we are cognisant of potential transitional risks (e.g. legal, policy, investment) due to the global shift towards a lower-carbon economy, and the incorporation of risks and opportunities associated with climate change into investment decisions.

In 2018, we plan to update our Responsible Investment Guidelines to further embed this approach. This aligns with our Group Credit Risk Policy and our obligations as a signatory to the PRI. We believe considering ESG complements our existing investment due diligence and strengthens our overall decision-making.

Premiums4Good initiative

Launched at Lloyd's of London in March 2015, Premiums4Good is a unique initiative that enables targeted customers to invest a portion of their premium in securities with an additional environmental or social objective, such as green bonds and investments in infrastructure projects with environmental benefits. The initiative is free and there are no risks involved for the customer.

This initiative has stimulated the development of new investment products that offer risk-adjusted returns, as well as supporting beneficial social outcomes. As a result of the initiative, QBE has made impact investments across the globe.

Our Premiums4Good offering continued to grow in 2017, with the number of investments increasing to 26 (12 of them being environment related), representing an investment of $455 million in qualifying securities. Further information can be found in the QBE 2017 Sustainability Report.

The benefits achieved through the Premiums4Good program to the communities and environment where we operate were recognised when Premiums4Good won two awards in 2017: The British Insurance Awards- Business Sustainability/Corporate Social Responsibility Initiative of the Year and The International CSR Excellence Awards Winner 2017.

Evidence also applies to principle(s): 4.2, 4.3

Source: QBE Sustainability Report 2017

The Lloyd's market / Tokio Marine Kiln / Implications of climate change for investment performance and shareholder value

TM launched a low carbon equity fund. Tokio Marine Asset Management Co., Ltd. a subsidiary of Tokio Marine Holdings, Inc. launched the "Low-carbon Japanese Equity Fund" comprising corporations actively reducing CO_2 emissions on November 27, 2017.Tokio Marine & Nichido Fire Insurance Co., Ltd. a subsidiary of TMHD, is to invest in the Fund as an initial investor to demonstrate the group's aim to "protect the earth," which is one the core pillars of the group-wide CSR priorities. It is hopeful that the collective action of the group's asset management function induces the Japanese corporate community to reduce CO_2 emissions.

Background

Tokio Marine Group aims at contributing to the realization of the United Nations' Sustainable Development Goals (SDGs) and the goals set by the United Nations Framework Convention on Climate Change. With the enactment of the Paris Agreement in November 2016, public recognition of the urgency and significance of the need to act towards creating a low-carbon society is reaffirmed in Japan.

In addition, in the context of climate risks' impact on the stability of financial market, the final report released in June 2017 by the Task Force on Climate-related Financial Disclosures (TCFD)1 under the auspices of the Financial Stability Board (FSB)2, an initiative which was established in response to the G20's request to review how the financial sector can take account of climate-related issues, encouraged companies to promote climate-related financial disclosures. The initiative is raising public awareness in climate change and the ongoing transition towards a low-carbon society on a global scale.

Under the circumstance, through setting up the Fund which recognizes Japanese companies reporting the amount of CO_2 emissions as the investing universe, Tokio Marine Group aims at supporting Japanese companies to reduce their CO_2 emissions with the utilization of its asset management function.

Overview of the Fund

In response to the growing interest in ESG investment in Japan, the Fund is very uniquely designed to invest in Japanese companies which contribute to the reduction of CO_2 emissions and the creation of a low-carbon society. Specifically, the Fund is composed of Japanese equity portfolio with half the level of carbon intensity relative to that of TOPIX, while aligning market performance with TOPIX. The Fund investors will be able to not only achieve their expected equity market performance but also to contribute to the reduction of CO_2 emissions and the creation of a low-carbon society.

Tokio Marine Group endeavours to contribute to creating a safe, secure and sustainable low-carbon society from the asset management viewpoint.

Further information can be found here 'Tokio Marine Group launches "Low-carbon Japanese Equity Fund"'http://www.tokiomarinehd.com/en/release_topics/release/h10q7e000000j6db-att/20171215_e.pdf

Evidence also applies to principle(s): 2.1, 2.2, 4.3

Source: Tokio Marine Kiln

4.2 Incorporate the material outcomes of climate risk evaluations into investment decision making

Lloyd’s / The Corporation of Lloyd’s / Risk integration

The Corporation of Lloyd’s Treasury & Investment Management (LTIM) has been working to better integrate Environmental, Social and Governance (ESG) risk factors into the investment process for the fixed interest assets managed in-house. LTIM initiated a subscription to an external ESG database in Q1 2018 after trialling a number of providers.

Now, prior to any purchase of a corporate bond, the ESG score of the issuer and other qualitative ESG information is considered together with the CDS spread and the spread of the bond itself, and also relative to other issuers in the peer group and this informs the decision over whether to buy at the prevailing price.

Further examples have been provided to PwC for review.

Green Bonds

LTIM directly manages the Central Fund’s investment grade fixed income portfolio and took the initiative to invest in Green Bonds for the Central Fund at the end of 2015. LTIM has since added Social Bonds to the portfolio and recorded a total exposure to Green and Social Impact Bonds of approximately £90m at the end of March 2018, an increase of £5m from the 2016-17 reporting cycle.

Exclusion Policy

In Q4 2017, the Corporation of Lloyd’s announced it would be implementing a coal exclusion policy as part of its Responsible Investment Strategy for the Central Fund. This policy came into effect on 1 April 2018 and was announced publically on Lloyd’s.com and in wider messaging where appropriate.

The policy applies to assets held in segregated portfolios and commits to excluding any companies that meet at least one of the following criteria:

- Generate more than 30% of their revenue from producing coal
- Produce more than 20 million tons of coal per year
- Generate more than 30% of their electricity from burning coal
- Operate at least 10GW of coal-fired power stations

Future Planning

ESG risk integration will be further developed for the fixed interest assets managed in-house. Going forward it is intended to not only review the ESG scores and controversies of new potential holdings relative to peers and spread opportunity, but to also monitor the stability of ESG scores on existing holdings. The overall ESG score of portfolios will versus their respective benchmarks will also be monitored.

We will seek to expand our exposure to impact investments where we see suitable opportunities.

Evidence also applies to principle(s): 1.4, 4.1, 4.3, and 6.1

Source: The Corporation of Lloyd’s

The Lloyd's market / ArgoGlobal / Investment Strategy

The Argo Group risk management function is consulted if it is expected that an environmental issue may have a potential impact upon Argo’s business operations and/or insurance products. The intended purpose of such consultation is to identify and discuss potential options for the mitigation, reduction and/or avoidance of risk resulting from an environmental issue.

A strategic risk assessment is maintained which captures the principal threats and opportunities associated with sustainability issues facing Argo Group. This assessment includes a quantified evaluation of the current level of impact and likelihood for each issue as well as mitigation or realization plans and their status. The assessment is reviewed at least once per annum and principal findings shared with the ERM Steering Committee.

If a potential climate change (environmental) issue is identified by Argo Group, as an adjunct to the Argo Group risk management function, a cross-functional working group of Argo Group subject matter experts is convened by the risk management function for the purpose of discussing, assessing and determining if the potential climate change (environmental) risk could present a material threat to Argo Group and what actions may be taken by Argo Group in response to such a threat.

Argo Group’s Exposure Management Committee has also been tasked with the responsibility for the consideration of the influence of any climate change-related modeling on its property insurance portfolio.

The nature of Carbon-based extractive industries such as coal and the potential impact of their operations on climate change are recognized by Argo Group. Investment in coal extractive industries currently remains at less than 0.1% of the Argo Group portfolio, a level that is not anticipated to significantly increase in the future.

Argo Group has identified 'Stranded Assets' as a strategic risk factor with potential material impacts over the longet term horizon. Argo Group has reviewed its investment strategy as part of its sustainability plan to identify high-carbon industry holdings.

Utilizing the Lloyd's of London report entitled "Stranded Assets: the transition to a low carbon economy - Overview for the insurance industry', Argo Group has performed stress test scenarios considering the potential impact of high-carbon assets within its investment portfolio on its capital adequacy.

These stress test scenario results were combined with other scenarios within the Stress & Scenario Testing Framework (SSTF) and the outcomes have been reported to the ERM Steering Committee and Risk & Capital Committee of the Argo Group Board, as a part of the Own Risk & Solvency (ORSA) Assessment process.

Evidence also applies to principle(s): 1.3

Source: ArgoGlobal – Syndicates 1200 & 1910

The Lloyd's market / Beazley / ESG

We recognise the importance of incorporating an assessment of ESG risks into our investment decision making process and seek to invest in companies demonstrating a commitment to sustainable practices. During the last 12 months we have engaged the services of Sustainalytics, a specialist in the field of ESG research and have integrated their company-level ratings into our internal credit process applying to all of Beazley's direct investments in corporate debt securities.

Our approach defines a minimum standard for ESG performance and identifies those companies making progress towards sustainability. Companies not meeting our minimum standards will be excluded from our approved list.

Similarly, we ensure that our third party investment managers, who handle approximately 25% of our investment portfolio, pay appropriate attention to ESG considerations.

Evidence also applies to principle(s): 1.3, 1.4

Source: Beazley

The Lloyd's market / Chubb / Global Investment Strategy

In order to ensure Chubb can meet its reserving requirements, Chubb maintains a diverse investment portfolio. Although the majority of investment is held in Government treasury bonds, globally Chubb maintains a $100M investment in renewable energy as well as energy efficiency and sustainability projects worldwide. Sustainable investment is currently a significant agenda point for Chubb's investment committee.

Evidence also applies to principle(s):

Source: Chubb

4.3 Communicate our investment beliefs and strategy on climate change to clients and beneficiaries.

The Corporation of Lloyd's / Communicating the investment strategy

In 2015-2016 and 16-17 reporting, the Corporation of Lloyd's has illustrated work towards holding a responsible investments event as part of activities to communicate investment beliefs and strategy on climate change. The Corporation has been working towards building a Responsible Investments Strategy that has been reported to PwC in private reporting, which is now being communicated publically.

Strategy

In H2 2017, The Corporation of Lloyd's Treasury & Investment Management (LTIM) developed a Responsible Investment Strategy for the Lloyd's Central Fund. The policy sets out the Corporation of Lloyd's beliefs about investing responsibly, and outlines steps that the Corporation is taking to better align its investment activities with its beliefs.

> *"We have therefore decided to implement a coal exclusion policy as part of a responsible investment strategy for the central mutual fund that sits behind every insurance policy written by the Lloyd's market. That means that in the areas of our portfolio where we can directly influence investment decisions we will avoid investing in companies that are involved only in coal."*

- Inga Beale, Chief Executive Officer

This Strategy will evolve over time as work continues on the Corporation's wider Responsible Business Strategy.

Reporting

LTIM's progress against principle 4 is published on Lloyds.com as part of our commitment to ClimateWise.

Future Planning

The Responsible Investment Strategy for the Lloyd's Central Fund will be published on Lloyds.com in the second half of 2018, as part of a wider communication on Lloyd's Responsible Business Strategy, which has KPIs with the 2018-20 rolling Strategy.

Evidence also applies to principle(s): 1.1, 1.3, 2.1, 2.2, 4.1, 4.2, 5.4, and 6.1

Source: The Corporation of Lloyd's

The Lloyd's market / Hiscox / Communications strategy development

Hiscox recognises the importance of good communication with our customers and stakeholders and we use different mechanisms to achieve this communication. We have reviewed our major shareholders' and peers' attitudes to climate change, based on our history of direct communications with them or on publicly available information on their investment decisions.

In early 2017, we conducted a review of peer approaches to climate-related investment. For further details about our approach to investments, see section 4.1. We also regard the Annual Report and Accounts as a key method of communicating our approach to climate change and other risk in our investments. In 2017-18, we continued to implement a proactive approach to communicating with customers and shareholders on climate change subjects, based on our fndings.

See section 3.1 in the Hiscox independent ClimateWise report for more details in this area, including pension funds, future planning, and the role of the insurance industry.

Evidence also applies to principle(s): 4.1, 4.2

Source: Hiscox

The Lloyd's market / QBE European Operations / Communication of investment strategy

As part of our commitment to PRI, QBE Group Investments engage with PRI developments in responsible investment, TCFD and climate risk reporting and approaches to integrate this into our decision making, risk management and investment processes.

As noted within this submission, climate change is an area of increasing focus for the QBE Board, who recognise it as a topic affecting the core business of QBE and insurance companies world-wide. As appropriate, climate related matters are included in QBE Group Investments reporting and communication with internal stakeholders, Board Investment Committee, Divisional Boards, and as appropriate with external stakeholders.

As noted elsewhere, climate change was discussed at the May 2018 Annual General Meeting of the QBE Insurance Group Limited. This included an overview of how QBE manages climate-related risks and opportunities and our commitment to reporting in alignment with the TCFD recommendations commencing in our 2018 Annual Report.

QBE have committed to reporting in line with the TCFD recommendations commencing in the 2018 Annual Report. The cross-functional QBE Climate Change Working Group, including QBE Group Investments has been working with an external expert to further analyse the companies' exposure to climate risk and build a roadmap for implementing the TCFD recommendations over the next three years.

Evidence also applies to principle(s): 1.1, 1.3, 1.4 and 3.1

Source: QBE Sustainability Report 2017, 2018 Annual General Meeting – CEO's address

The Lloyd's market / Tokio Marine Kiln / Reporting

Tokio Marine Kiln and the Tokio Marine Group continue to report CSR related activities in the respective annual reports.

Aiming to Be a "Good Company" Trusted by All People and Society

Tokio Marine Group has provided "safety and security" to society and contributed to its development by making the most of its abundant knowledge and experience accumulated over the years in the insurance industry. In the future as well, TM will work to solve various social issues and continuously raise the Group's corporate value while contributing to a safe, secure and sustainable future. By doing so, TM aims to become a "Good Company" that is trusted by all people and society.

Focusing on Three Core CSR Themes and Promoting Initiatives in Collaboration with Stakeholders

Tokio Marine Group has set "Providing Safety and Security," "Protecting the Earth" and "Supporting People" as its three core CSR themes and is promoting CSR in collaboration with a variety of stakeholders.

Executing our Corporate Philosophy Based on the Tokio Marine Group CSR Charter

For Tokio Marine Group, CSR represents the implementation of the Corporate Philosophy. In keeping with the Tokio Marine Group CSR Charter, which serves as behavioural guidelines for implementing CSR, all TM's self-motivated employees will continually act with integrity and compassion using their unique ideas to provide stakeholders with even better value.

Respect for International Codes of Conduct and Human Rights

Tokio Marine Group supports and respects the Universal Declaration of Human Rights, OECD Guidelines for Multinational Enterprises, ILO Core Labour Standards, UN Guiding Principles on Business and Human Rights, as well as ISO 26000. The ideas and contents of the ten principles concerning human rights, labour, the environment and anti-corruption advocated by the United Nations Global Compact (UNGC) coincide with Tokio Marine Group's own approach to CSR as well as its CSR Charter. Therefore, Tokio Marine Holdings has been participating in the UNGC since 2005.

Beyond being a 'Good Company' in the way TMK provides insurance, we support a range of good causes and focus on building strong partnerships with organisations that make a real and substantial difference to people all over the world. In 2017, TMK continued our partnership with London's Air Ambulance. While funding is important, we also seek to engage our employees in the initiatives we support. In 2018, a team of six runners from TMK participated in the Sierra Leone Marathon in aid of Street Child and raised £22,000. The charity, which TMK has supported since 2011, seeks to help vulnerable young people into homes and education in one of the poorest countries in the world. TMK also continues to work with and support Water Aid as its main charity partner.

Further information can be found in the Tokio Marine Sustainability Report 2017 – Protecting the Earth.

Evidence also applies to principle(s): 1.4, 2.1, 2.2, 3.3, 3.4, 4.1, 4.2, 5.2, 5.3, 5.4, 6.1, 6.2

Source: Tokio Marine Kiln

5 Reduce the environmental impact of our business

5.1 Engage with our supply chain to work collaboratively to improve the sustainability of their products and services.

The Corporation of Lloyd's / Working across our supply chain

In the Corporation 2015-16 reporting, activities relating to considering our supply chain, including training for relevant staff, developing sustainable procurement guidance and incorporating questions in our tender process on environmental, social and ethical impacts for potential suppliers.

Year on year the Corporation of Lloyd's seeks to build on its commitments to fully embed sustainable procurement practices with key internal stakeholders and across its supply chain.In 2016-17 reporting, the Corporation of Lloyd's provided material on the establishment of a Procurement Centre of Expertise (COE) in January 2017.

1. Over 2017-18 the focus of activity has been to fully entrench itself within the Corporation while continuing to build on commitments to embed sustainable procurement practices both internally and across the supply chain. There are KPIs within the 2018-20 Strategy documents that underpin and support this work.

   The COE's mission is:

   "to deliver an effective and sustainable approach to all third party sourcing and supplier management, with a clear purpose to support Lloyd's Protect, Promote and Provide principles while achieving maximum value, minimising risk and driving efficiencies to invest in the future."

   There are a number of projects and activities underway to support the team in delivering this mission and to help drive efficiencies and process-improvements, including;

2. Continued development of 'Lloyd's Procurement Strategy**'** to include objectives such as:
   - To better manage supply chain risks and key supplier relationships
   - To develop sustainable Procurement capabilities and embedding best practices across the organisation

3. Continued development of 'Lloyd's Procurement Policy' which sets out policies and procedures concerning all third-party supplier expenditure, with a clear vision:
   - To demonstrate continuous improvement and the achievement of value for money through the effective procurement of goods and services to ensure the Corporation of Lloyd's needs and those of the local community are met.
   - To have a clear framework of accountability and responsibility that adopts legally compliant, best practice procurement procedures and techniques.
   - To build a diverse and competitive market that can supply the Corporation of Lloyd's and its service user's requirements and provide value for money.
   - To encourage communication and interaction with local and national suppliers to understand their views and what enables and encourages diverse parts of the market to bid for work with the Corporation of Lloyds.
   - To develop a relationship between the Corporation of Lloyd's and the business community and the broader voluntary and community sector that creates mutually advantageous, flexible and long term relations

based on continuous improvement of quality of performance and financial savings.

- To ensure that our purchasing and contracting activities are ethically, environmentally and socially responsible; applying 'Lloyd's' principles around sustainable procurement, Corporate Social Responsibility, Living Wage, Anti-bribery & Corruption, Diversity & Inclusion, Modern Slavery and other applicable ethical sourcing and environmental considerations.

4. Supplier rationalisation in an effort to optimise the Corporation of Lloyd's supplier base, bringing both financial and business improvement benefits to Lloyd's and its' suppliers, as well as enhancing the supplier/customer relationship; the supply base has been consolidated from approx 1,400 to 740 suppliers during this reporting year.

5. Development and roll-out of a 'Supplier Code of Conduct' which sets out the standards of business conduct which all suppliers are required to comply with. Our goal is to work collaboratively with our supply chain partners towards a responsible business approach; in cases where a supplier is unable to fully adhere to the Code, they are asked to notify the Corporation as soon as possible whereby both parties will work together to develop an improvement plan.

The Code includes:

Environment

Recognising that sustainable businesses should acknowledge the planet's finite resources, the Corporation of Lloyd's expects its suppliers to support sound environmental management principles and reduce their impact on the environment within which they operate:

- Suppliers must have a written environmental/sustainability policy or equivalent, appropriate to the size and nature of the supplier's operations that, where applicable, addresses preventing, mitigating and controlling serious environmental and health impacts from operations including raw material usage, greenhouse gas emissions, water, waste, air quality and biodiversity
- Suppliers must have effective internal environmental management programmes with adequately trained staff responsible for managing the organisation's environmental performance. Suppliers must abide by all legislation and regulations related to the protection of the environment and the handling of dangerous and hazardous materials
- Suppliers must endeavour to use products which can be re-used, recycled, used in an energy efficient manner and which cause minimal environmental damage at all stages of the supply chain

Economic

Economic sustainability focuses on bringing economic benefit to the workers, businesses and communities in which a company operates. From an ethical perspective, commercial transactions should be economically beneficial to all parties involved and relationships should be based on the principle of fair and honest dealings, and sustainable development:

- Suppliers must embed basic business principles in a Code of Business Standards or equivalent, including adherence to local laws and regulations
- Suppliers must ensure that policies are in place to stop fraud, money laundering, bribery and corruption, i.e. anti-bribery & anti-financial crime polices
- All suppliers must comply with national and international sanctions policy and legislation
- Suppliers must have reasonable and lawful payment policies with their own suppliers and subcontractors

Labour

The Corporation of Lloyd's is committed to the protection of human rights and is guided by fundamental principles such as the United Nations Universal Declaration of Human Rights, the International Labour Organisation (ILO) Core labour standards and the Modern Slavery Act 2015; the Corporation seeks to ensure there are:

- No human rights abuses throughout our supply chains by encouraging behaviours and practices that are consistent with these principles, including:
- A commitment to anti-slavery and compliance with the requirements of the Modern Slavery Act 2015, or equivalent
- Provision of a safe working environment, abiding by local Health and Safety laws
- Compliance with all applicable local wage and working hour laws
- A mechanism to enable individuals to raise concerns relating to wrongdoing or malpractice at work i.e. a Whistleblowing or Speaking Up policy

Diversity & Inclusion

The Corporation of Lloyd's supports the belief that a diverse workforce and inclusive organisation is intrinsically linked to improved business outcomes.

As an employer it recognises the importance that equality legislation has to play in promoting equality and eliminating unlawful discrimination; in striving for excellence it seeks to create an inclusive environment globally for all regardless of their gender, marital/civil partnership status, race, religion or ethnicity, disability, age, sexual orientation, gender reassignment or nationality.

The Corporation's suppliers will support and reinforce its commitment to providing an inclusive environment for its workforce. Suppliers are expected to provide the same equal opportunities to their workforce and we require commitment to the following:

- Compliance with all applicable local equality laws
- Avoidance of discrimination: promoting a workplace free from harassment, victimisation or any other form of abuse
- Demonstrate a commitment to inclusion: drafting an equal opportunities policy that covers gender, marital/civil partnership status, race, religion or ethnicity, disability, age, sexual orientation, gender reassignment and nationality.
- Provide staff training covering equality, diversity and inclusion principles

Information Security & Data Protection

The Corporation of Lloyd's recognises that Information Security is a business matter, not just an IT matter, and that it must reflect changes from a number of sources, notably organisational design, technology adoption, culture and regulatory and legal change.

Corporation suppliers must demonstrate compatibility with 'Lloyd's Information' security policies and standards. The details of this section are less relevant to reporting, but are available to the reviewers on request.

Account Governance and Compliance

The Corporation encourages active engagement, strong account governance and open communication with its supplier throughout the term of the engagement; suppliers are expected to:

- Actively support eProcurement, e-Invoicing, including as a minimum to accept PDF Purchase Orders and provide PDF Invoices via email. This allows a reduction in paper, drives security, accuracy and efficiency, and requires consideration about information and data security to be included to provide a full view of our supplier expectations.
- Take responsibility for ensuring that they keep the Corporation up to date with any changes to details including; VAT registered number, bank account details and address.
- Notify the Corporation of any changes to authorisations, company ownership, investigations and material risks and any other development that may impact their ability, capacity and authorisation to deliver.
- Sign and comply with the Corporation of Lloyd's Non-Disclosure Agreement (NDA).

6. Review and relaunch of the Corporation of Lloyd's supplier sourcing process: the Procurement team operates a continuous improvement and review programme including a review of all support documentation and polices. The 'Lloyd's Tender' documentation has been updated to reflect best practice; suppliers are asked to respond to a series of questions and to provide supplementary evidence on key sustainability issues, including Environmental Protection, Diversity and Inclusion, and as outlined above in the Code of Conduct material.

   During post-tender supplier evaluation, the Corporation continues to consider and score suppliers on responses to sustainability questions; the weighting used when scoring sustainability factors at this stage depends on the products/services being procured; as an average the weighting is 0-10-15%.

   In instances where sustainability factors have more of an impact on the products and services being procured, it may be necessary for the Corporation to follow up with a supplier site visit or request further clarification at presentation stage.

7. Implementation of an electronic contract management system to be used to store all supplier contracts. The aim is that this system will prompt a review of the Corporation's document retention practices and encourage e-signing and the disposal of legacy hard copy contracts which are currently archived and stored in a vault; a progress update and further details will be provided next year.

   Centralised ownership of the Corporation of Lloyd's Travel policy and Stationery provider: The Corporation of Lloyd's policy on class of travel for employees was revised in January 2017; employees are continually encouraged to make use of video and tele-conferencing facilities wherever possible, where travel is absolutely essential employees are no longer permitted to travel business class.

   This change has resulted in a significant reduction year-on-year in the number of flights taken and a reduction in the Corporation's carbon footprint.

8. The Corporation of Lloyd's seeks to involve its in-house suppliers in the development of annual environment action plans where appropriate. The full plans have been shared with the reviewers and contain 23 headline initiatives with associated environmental impact targets across energy management, ITG, employee engagement, travel and suppliers.

   The following examples have contributed to the Corporation achieving a Platinum Award in the City of London 'Clean City Awards' for the second year running. Greg Boon, Lloyd's Cleaning Manager and Funmi Boyce, Service Delivery Coordinator were asked to collect the award on behalf of the Corporation, which recognised the activities undertaken to reduce waste.

   – Working in collaboration with our in-house suppliers: Last year the Corporation of Lloyd's reported collaboration with catering and cleaning providers (Elior UK Plc and Principle Cleaning Services Ltd), regarding recycling the paper cups used in the Corporation UK buildings and coffee cups bought in from external sources.

     By the end of 2017 765,000 cups had been recycled, and the Corporation has continued the initiative and tracking despite the formal challenge finishing in December 2017. This has been supplemented by further work to shift towards reusing rather than recycling.

     The Corporation currently offers a 25p discount on both drinks and meals for visitors to the Coffee Shop and Foodhall for anyone using reusable cups or containers. The benefit of re-using reduces our waste and energy spent sorting and recycling and therefore is the best long term solution. This has been promoted through signage and internal blogs and Yammer posts for internal staff.

     Also in this area, over the last year Lloyd's catering team in London has been working hard to reduce our foodprint through a number of initiatives:

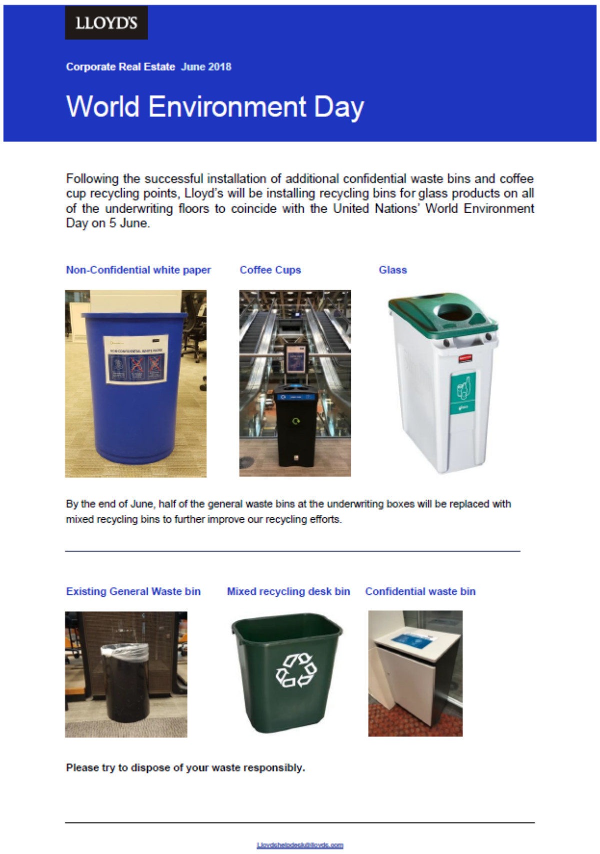
     – Replacing plastic cutlery in the restaurant with PLA (corn starch) and replaced fruit salad pots, yogurt pots, salad boxes, smoothie cups with PLA alternatives
     – The PG Tips teabags we used to use contain micro-plastics, so we replaced them with Clipper teabags which do not.
     – Only selling bottled water in glass, instead of plastic. Soft drinks are similarly sold in either glass bottles or aluminium cans.
     – Replaced plastic straws with paper straws in the restaurants and in One Under Lime, a food and drink venue beneath the London HQ.

     During World Environment Day the Corporation supported a week of activities across 4-8 June 2017, where the Coffee House and Food Hall in London and Chatham went meat free and menus focused on fish, seafood, vegetarian and vegan dishes.

     The Catering team tracks its food carbon footprint and noted that 400 kilograms of meat was normally consumed in the Lloyd's restaurant on a weekly basis – the equivalent in carbon emissions of driving a car 32,000km – and set targets within the Environmental Working Group annual plan to take action.

   – Working to engage the market: Following the successful installation of additional confidential waste bins and coffee cup recycling points, the Corporation installed recycling bins for glass products on all of the underwriting floors to coincide with the United Nations' World Environment Day on 5 June. By the end of June, half of the general waste bins at the underwriting boxes were replaced with mixed recycling bins to further improve recycling efforts from the Lime Street building.

This was communicated to all who operate from the underwriting floors by the Underwriting Room Manager in the Corporation's Corporate Real Estate team, and the market Corporation Social Responsibility group:


LLOYD'S

Corporate Real Estate June 2018

World Environment Day

Following the successful installation of additional confidential waste bins and coffee cup recycling points, Lloyd's will be installing recycling bins for glass products on all of the underwriting floors to coincide with the United Nations' World Environment Day on 5 June.

Non-Confidential white paper | Coffee Cups | Glass

By the end of June, half of the general waste bins at the underwriting boxes will be replaced with mixed recycling bins to further improve our recycling efforts.

Existing General Waste bin | Mixed recycling desk bin | Confidential waste bin

Please try to dispose of your waste responsibly.

Lloydshelpdesk@lloyds.com

– Energy Reduction Targets: Each year the Corporation of Lloyd's sets an energy reduction target i.e. to reduce electricity usage or carbon emissions; these activities are completed with support from the Corporate Real Estate team and NG Bailey facilities Services the facilities management partners.

  A range of examples are noted below, and a full action plan for 2017 and 2018 has been distributed to the external reviewers that also includes sections on ITG, employee engagement, travel, suppliers, management and reporting:

Energy reduction examples
Set an energy reduction target:
Revision of Energy Efficient Small Plant (LED opportunities / AHU pumps, motors and drives)
Energy Savings Opportunity Scheme (ESOS) Regulations Reporting, and TM44 Survey (Separate spreadsheet)
Undertake a CO2 assessment when opening new offices. A CO2 assessment is completed when opening new offices (in 2017 we have completed assessments for offices in Beijing, Shanghai, Rotterdam)
Meat free Fridays and increase in vegan and vegetarian options
To reduce the number of deliveries to the London building and encourage environmentally friendly vehicles.

– Stationery stock continues to be reviewed and consolidated. Stationery has been evaluated and chosen on the environmental sustainability where possible. The Corporation's core list has been consolidated and reduced by 50%.

  The Corporation are no longer printing "Lloyd's" printed stationery (i.e. headed paper, continuation paper, compliments slips, etc.), instead these have been replaced with document templates available online which can be used if necessary, and printed as-required on-demand.

  As a result, print volumes have also been reduced by 14%, with a reduction of circa 26% in colour printing; this has been achieved through changing the default print set-up to black and white and through regular monitoring.

Forward planning

The Corporation of Lloyd's reviews the coming year's options to expand reporting across all offices, and therefore further improve the accuracy of the Corporation's carbon footprint. This plan comes in part from the Environmental Working Group, which meets every four months to develop and monitor progress against an environmental action plan for the Corporation.

Meetings in 2018 are scheduled at the beginning of the year, and the group has met in February and July, with the final meeting scheduled for October. Activity, minutes, and all documentation is shared within the group in a SharePoint area available to the group. The full list of activities has been provided to the reviewers and details will be shared in the next reporting year when they become public.

Evidence also applies to principle(s): 3.2, 3.4, 5.2, 5.3, 5.4, and 6.1

Source: The Corporation of Lloyd's

The Lloyd's market / ArgoGlobal / Assisting Markets with Low Insurance Penetration

ArgoGlobal continues to support an initiative sponsored by the Rockefeller Foundation – World Bank Disaster Risk Finance and Insurance Program (DRFIP) partnership. The purpose of this initiative is to explore innovative financial solutions against climate change and disaster risks in Asia. Specifically, under consideration is the ability to offer parametric flood coverage to counties in Asia where this type of risk has increased due to climate change.

Evidence also applies to principle(s): 1.1, 1.4

Source: ArgoGlobal – Syndicates 1200 & 1910

The Lloyd's market / Beazley / Procurement

As part of our procurement policy, we leverage our buying power and work with suppliers to make a positive environmental impact; for example reviewing packaging from lunch providers to ensure minimum packaging used; if feasible sharing suppliers with other tenants to decrease deliveries.

We have developed and implemented formal procedures to ensure that environmental impacts are considered and managed during the procurement process.

Evidence also applies to principle(s):

Source: Beazley

The Lloyd's market / Chubb / Chubb UK Offices Recycling Programmes

Chubb has recently reviewed its cleaning contract across 8 of the UK sites. A major factor within the tender process was the importance placed around waste management and how it could be further improved and streamlined. Chubb wanted to increase both; performance and awareness among staff.

The chosen provider demonstrated an appetite to reenergise the management of the waste within contract and were selected on this basis rather than cost. The new company are in the process of launching a new awareness campaign within Leadenhall Street to help increase staffs awareness on food waste. Food and recycling bins have been placed strategically on each floor and within each kitchen or tea point to encourage staff to segregate waste at source which is by far the most effective method for improving recycling.

No material is sent to landfill to become permanent waste; any material that cannot be recycled is converted to energy in order to reduce our dependence on fossil fuel based energy, either through anaerobic digestion or by incineration.

Waste data is reported on monthly basis, from a paltry start of only 38% of waste recycled in the first month of operations, Chubb now maintains an average recycling rate of 63%. In addition, Chubb has set up a sustainability working group whose primary goal is to raise awareness regarding pollution and waste generation. By educating our employees, it is anticipated that these recycling rates will increase drastically; as well as reduce downstream contamination of recyclable material as a result of improper segregation.

That total CO_2 savings as a result amounts to 75,010 kg and the equivalent of 360 trees for the year (June 2017 – May 2018).

From early 2018, Chubb has refurbished its London headquarters. This refurbishment was in no small part in order to allow the building to accommodate the relocation of employees from nearby offices into one building. As a result of the centralisation, Chubb now has more influence on the recycling habits of those employees and is able to receive more accurate statistics on the waste generated by its operations.

Chubb Improves Environmental Ranking on Newsweek Green 2017 List

Chubb has been named one of the top green companies in the world by *Newsweek* magazine in its annual ranking of the world's largest companies on corporate sustainability and environmental impact.

Based on Chubb data measuring environmental performance in areas including waste reuse and recycling, water usage and greenhouse gas emissions, the company ranked 307 among Newsweek's top green companies in the world[2].

The Newsweek Green Rankings are one of the world's most recognised assessments of corporate environmental performance. The U.S. 500 study ranks the 500 largest publicly traded companies in the United States by market capitalisation, while the Global 500 study looks at the 500 largest publicly traded companies globally by market capitalisation. Companies are compared against their industry group peers and the rankings are reviewed by a panel of leading sustainability practitioners.

Paper Free initiatives

Since the end of 2017, unless prohibited by local regulations, Chubb will only provide digital policy documents, and no longer issues paper copies of policy documentation to its Property and Casualty customers. This will save upwards of 390,000 sheets of people.

In addition, Chubb no longer prints material to be used at any of its major events, instead the attendees are invited to install the app, Crowd Compass, where all material related to the event or exhibition will be available and guests can interact in live polling or Q&As without the need for additional third party solutions. Content on Crowd Compass is managed through the online platform "CVent".

Managed Print Solutions

In January 2018, Chubb upgraded its managed service with Canon printing. The new service allows Chubb to view real time information on all devices across the entire Chubb network and view break downs by printer manufacturer, model, and location. The data will be visisble through a dedicated Canon Customer Service Manager, as well as similar platforms (uniFLOW, Mapsiot, IW Management Console and eMaintenance). As discussed in previous reports, the uniFLOW secure release reduces wasted paper by requiring confirmation of print at the printer. This allows individuals to review their print request and cancel if appropriate. Requests that go unconfirmed after a significant period will be automatically deleted from the queue.

Chubb will have improved visibility of nearly all possible statistics, including:

- Device utilisation and print capacity
- Total prints across the entire network
- Types of print complete, e.g. Duplex/simplex, colour/mono
- Copy Print and scan ratios

Chubb will use this information in order to improve the sustainability of its operations according to the following objectives:

- Increasing duplex ratio
- Reduce total print volume
- Reduce energy consumption via print rationalisation and more efficient devices
- Reduce wasted prints with Uniflow Secure Release

Chubb are still reviewing the data reported through the Canon Customer Service Manager to establish a baseline rate of consumption.Once a baseline has been established, Chubb will work with Canon to develop initiatives to reduce the print consumption of its employees.

Improved Energy Monitoring

As the technology has improved, Chubb has begun installation of advanced energy monitoring interfaces in all of its directly managed UK sites. Although Chubb is already monitoring and recording its total energy use in all sites, this information can only be used so far. The new interfaces will allow Chubb to determine the consumption of each component, which can be used to determine the worst offenders so appropriate measures can be made to reduce Chubb's consumption. The project is currently in its infancy, but once sufficient data has been collected a baseline can be established so that meaningful changes can be made in a cost effective manner. Depending on the success in UK sites, the contract will be expanded to all European sites.

Similarly, in partnership with Amex, Chubb is collecting and collating data relating to all business travel. The collected data will be used to determine trends in the company's business travel, which will feed back into the enhancement of Chubb's travel policy with the intention of reducing the number of flights taken by Chubb staff.

Activity Based Working

As part of the London office colocation and refurbishment projects Chubb is flagshipping 'Activity Based Working' in its London Headquarters. Activity Based Working means that Chubb has provided a variety of working environments within the office besides the traditional desk to more comfortably accommodate employees who are not necessarily going to be based at the office for the duration of the working day or week. Employees who travel to a client's office frequently may not wish to be shackled to a desk, but also this frees up desk spaces for employees who otherwise may not have a space.

In addition, Chubb hired office space consultants to monitor the usage of desk space in its offices. The result was that there was never a period of time in which fewer than 20% of employees were absent from the office. With this information, Chubb has reduced the total number of desks per person by 20% allowing a higher total headcount for the building. This also means that for the same amount of office space, the total number of employees has increased thereby increasing the efficiency of existing infrastructure in the form of lighting, heating and air conditioning.

Where possible, all equipment from the office has been sold to be repurposed, or otherwise recycled.

Evidence also applies to principle(s): 1.1, 1.4

Source: Chubb

The Lloyd's market / QBE European Operations / Supply chain engagement

QBE's global Procurement function is committed to conducting our operations in a responsible and sustainable manner, in accordance with the guidelines of ISO 20400, the new global standard for sustainable procurement. We plan to fully comply with this standard by 1 January 2020.

One of the five core principles according to which QBE conduct procurement activities include taking into account current and potential supplier's ESG practices in decision-making. Reviewing supplier ESG practices is a standard part of the supplier selection process. For example, our new agreements with our panel of accredited smash repairers in Australia help to ensure their environmental impact is minimised, including water pollution, odours and air pollution and the handling, storing and disposing of dangerous goods and chemicals.

Our Supplier Sustainability Principles set our minimum expectations of suppliers doing business with QBE in relation to human rights, workplace diversity, environmental considerations and community engagement.

Evidence also applies to principle(s): 5.2

Source: QBE Sustainability Report 2017, Procurement Sustainability Principles

The Lloyd's market / Tokio Marine Kiln / Sustainable procurement

We have engaged an external consultant (AECOM) to support and document our Environmental Reporting on an on-going basis. The support and reporting includes monitoring of key environmental impact areas associated with our principle office at 20 Fenchurch Street and our two UK IT Data Centres. We have summarised the waste results in section 5.2.

TMK also works with an external environmental consultant to calculate our corporate carbon footprint. We have also commissioned Energy Savings Opportunities Scheme (ESOS) audits of our offices at 20 Fenchurch Street and also our IT infrastructure at the Sungard data centre (Guildford). We are reviewing the opportunities identified and considering the recommendations made.

Evidence also applies to principle(s): 5.2, 5.3, 5.4

Source: Tokio Marine Kiln: TMK facilities management, AECOM reports are available upon request.

5.2 Measure and seek to reduce the environmental impact of the internal operations and physical assets under our control.

The Corporation of Lloyd's / Emissions tracking

In the Corporation 2016-17 reporting, information on emission tracking was covered in reporting illustrating results since tracking first started in 2008. The Corporation has provided this information every year, and the findings are shared in Lloyd's Annual report.

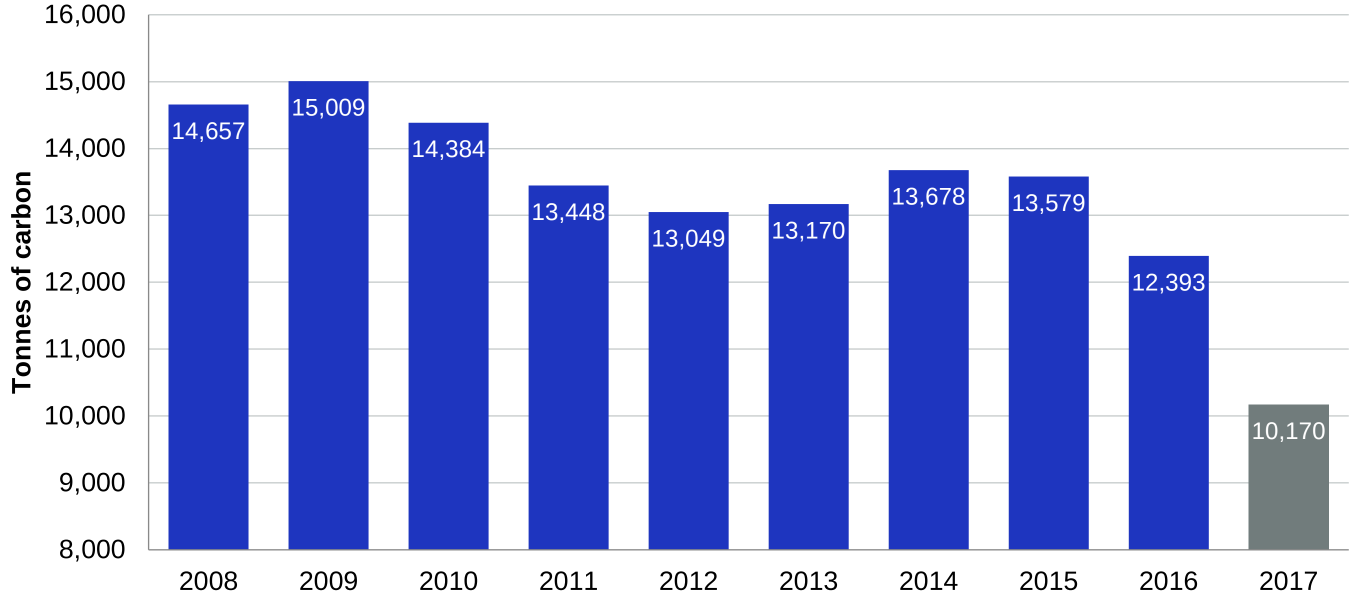
The environmental performance covers all Corporation of Lloyd's entities that meet the criteria of being subject to control or significant influence, and includes 100% coverage of contracted staff worldwide. Reporting covers all offices owned or leased by Lloyd's.

The Corporation of Lloyd's works in partnership with Carbon Smart – environmental consultants contracted by the Corporation – to calculate the GHG emissions Corporation global operations. These figures are disclosed publically each year in Lloyd's annual report and are made available on a dedicated page on Lloyds.com. They are also shared on the Corporation intranet – MyLloyd's – as part of staff engagement on environmental initiatives throughout the year such as World Environment day that features a week long activity plan.

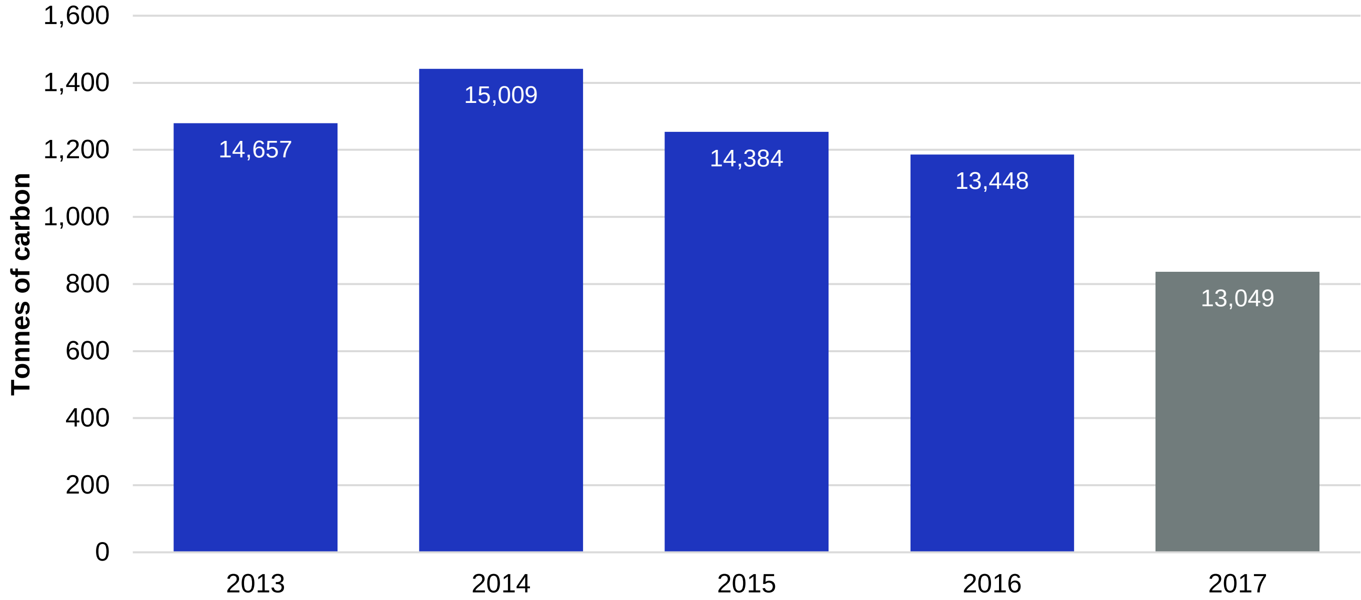
2017 marks the fifth year in which the Corporation has reporting the Green House Gas (GHG) emissions inventory of the international offices in addition to that of the UK, and sees those offices continuing to engage with their resource consumption. Examples of initiatives are covered in principle 5.1 and 5.4.

The Corporation of Lloyd's total reported emissions have decreased by 19% since 2016, and 24% compared to the 2013 baseline. This has been driven by reductions in the emissions from global electricity consumption, which accounts for 65% of global emissions, and air travel, which accounted for 10% emissions in 2016, but just 4% in 2017.

Nine year UK carbon footprint trend



Five year international carbon footprint trend



Due to their small size, not all of the Corporation of Lloyd's international offices have the capability to report on GHG emissions related activities. As a result, the Corporation currently collects data from fifteen key international offices, representing 75% of the total employees based outside of the UK, up from 69% in 2016.

Emissions for the remaining international employees, and their respective offices, were estimated using an average of tonnes of CO^2e per employee outside of the UK. The Corporation will review in the coming year's options available to expand reporting across all offices, and therefore further improve the accuracy of the Corporation's carbon footprint.

A full report with further information has been provided to the reviewers to demonstrate the full range of statistics and targets tracked on an annual basis.

The calculations were performed using the principles set out in the World Resources Institute GHG Protocol and follows the Department for Rural Affairs (Defra) guidelines on how to report. This process is covered in principle 5.3.

Results

The Corporation of Lloyd's total reported GHG emissions from business activities in 2016 was 13,578 tonnes of CO^2e, a decrease of 8% against 2015 figures. This has been driven by the range of projects outline in this report and in particular by reductions in the emissions from global electricity consumption and air travel, which accounted for 65% and 10% of global emissions respectively.

The Corporation of Lloyd's total reported GHG emissions from business activities have decreased by 19% since 2016. This has been driven by reductions in the emissions from global electricity consumption, which accounts for 65% of global emissions, and air travel, which accounted for 10% emissions in 2016, but just 4% in 2017.

Carbon offsetting

The Corporation of Lloyd's offsets air travel emissions through buying carbon credits for carbon offset projects through Natural Capital Partners.

In 2016 carbon credits were purchased for the Sabah Rainforest Rehabilitation Project in Malaysia and an "improved cookstoves" project in India.

In 2017 the Corporation purchased carbon credits for the improved cook stoves project in India. India uses the greatest amount of fuel wood globally with 88% of rural households using sold fuel for cooking. This means that over 900 million people are exposed to indoor pollution on a daily basis.

The project in India has distributed 490,000 stoves since 2008. The stoves are designed to make them 60% more fuel efficient and significantly more durable than traditional stoves. The stove's widespread distribution ensures that the health and financial benefits from the reduced pollution, fuel costs and collecting time can be scaled up across India.

Forward planning

The Corporation of Lloyd's reviews the coming year's options to expand reporting across all offices, and therefore further improve the accuracy of the Corporation's carbon footprint. This plan comes in part from the Environmental Working Group, which meets every four months to develop and monitor progress against an environmental action plan for the Corporation.

Meetings in 2018 are scheduled at the beginning of the year, and the group has met in February and July, with the final meeting scheduled for October. Activity, minutes, and all documentation is shared within the group in a SharePoint area available to the group.

This group is composed of representatives from the following Corporation teams: Operations, Property Services, IT, Catering, Innovation, Supplier Management, and Responsible Business, and is sponsored by Shirine Khoury-Haq, Chief Operations Officer.

The primary objective for the group is to measure and seek to reduce the environmental impact of the internal operations and physical assets under the Corporation of Lloyd's control. The Environmental Action Plan focuses on energy consumption, waste, transport and procurement, and covers all Lloyd's offices.

Evidence also applies to principle(s): 5.2, 5.3, 5.4, and 6.1

Source: The Corporation of Lloyd's

The Lloyd's market / ArgoGlobal / Responsible Corporate Citizen

In support of its commitment to influence the potential negative impact of climate change, Argo Group has now included climate change as a part of its review and development of its internal sustainability plan that was established during 2015and has been maintained into 2018.

Since 2014 Argo Group has continued to make a significant investment in the use of Video Conference (VC) technology with the primary purpose being that of holding business meetings that do not require business travel. The on-going analysis of VC usage is positive, with an increase in VC usage during the period of 2014-18, and a resultant reduction in the amount of employee air travel.

Argo Group continues to underscore its role as a responsible corporate citizen by being sensitive to the implications of climate change and is making an effort to minimize the environmental impact of its office services, facilities and technology operations. A recycling program has been established in many of our U.S. based office locations and to the greatest extent possible, Argo Group US business entities operate in a "paperless" environment. As the Argo Group US office leases expire, in accordance with the applicable provisions of our sustainability plan, attempts are being made to target "green buildings" for Argo Group US office space leasing purposes and to also include energy efficient requirements in lease negotiations and agreements. The preference for "green buildings" has also been included as a specific due diligence checklist item for office selection purposes.

During 2017 Argo Group relocated its New York office, and environmental sustainability was an important consideration in the real estate selection process and was reflected in the new office, which is in a Benchmarked facility that is located at 413 W. 14th Street in New York City.

During 2018, a planned London office relocation will be implemented. Green targets have also been incorporated into this relocation with a target to achieve a BREEAM certificate. BREEAM is the world's leading sustainability assessment method for master planning projects, infrastructure and buildings. It recognises and reflects the value in higher performing assets across the built environment lifecycle, from new construction to in-use and refurbishment.

We have continued to embed the climate change initiative started in 2016 to promote recycling of printer toner cartridges throughout the Argo Group's US offices.

Corporate sensitivity to climate change implications also extends to some of the Argo Group US significant third party vendors, who are committed to reducing the environmental impact of their business operations..

Evidence also applies to principle(s): 1.1, 1.4

Source: ArgoGlobal – Syndicates 1200 & 1910

The Lloyd's market / Beazley / Seeking to take action

To ensure we support and protect the environment as effectively as possible, we focus on three key areas:

1. Our offices: ensuring the environmental impact from our offices is minimal and finding ways to enhance our buildings so they have a more positive impact;

2. Our procurement: see principle 5.1

3. Our people & communications: engaging our people to help achieve our goals, encourage them to consider their

environmental approach outside of work and keep them informed of what we are doing.

We refreshed our Environmental Policy in November 2017, renewing our commitment to managing our environmental impacts, including:

- Monitoring environmental performance – Since 2008 we have monitored a range of environmental key performance indicators including energy consumption and greenhouse gas emissions, and are using this information to identify and realise opportunities to improve our performance;
- Sustainable procurement – see 5.1
- Waste management – We actively facilitate recycling of our office waste at all Beazley office locations and review regularly our waste management practices and identify opportunities to improve. Our focus is on reduction and on implementing methods to support this

We are tenants in all our buildings globally and, working closely with our landlords, we lead and support on environmental initiatives in our offices:

- In January 2018 we moved to a new office in Birmingham and have created a green environment which features recyclable furniture and energy-saving initiatives.
- Last year, the New York office adopted more stringent recycling procedures, following the enactment of a local law in August 2017, which enforces more rigorous procedures within the building and enables Beazley as a tenant to recycle more effectively.
- In our London office we have also implemented 'follow me' printing technology and installed hand dryers in our bathrooms to reduce our paper usage.
- In our Birmingham, Munich, Paris and Atlanta offices, and all new offices moving forward, we have eliminated underdesk rubbish bins in favor of centralised rubbish and recycling bins, to encourage recycling as well as reduce plastic liner waste.
- Our San Fracisco office has embraced environmentalism and recently hosted a Recology representative who spoke about the importance of recycling and composting. Recology is a 'zero waste' company whose mission is to see a world without waste. Recycling and composting creates jobs in the community and helps farmers in rural locations, where a lot of our US produce is harvested. While our San Fran office is already involved in the building's recycle and composting programme, Recology was brought in to help educate them on the topic.
- Our San Fran office has also maintained their Green Office award for another year and their building is planning a new waste management system, with the goal of being a zero waste building by 2020

Evidence also applies to principle(s):

Source: Beazley

The Lloyd's market / Chubb / Chubb 2016 UK Energy/Emissions Management

One of the primary objectives of Chubb's Corporate Environmental Programme is to measure, record and reduce the GHG emissions from our own operations. As an insurance company, Chubb has a modest environmental footprint. However, we aim to reduce our mark on the environment even further. This includes efforts to reduce the direct and indirect GHG emissions generated from heating, cooling and lighting our offices and from company owned or leased vehicles, as well as the reduction, reuse or recycling of resources.

Between 2006 and 2012, a period that preceded ACE Limited's January 2016 acquisition of The Chubb Corporation and adoption of the Chubb name, GHG emissions at ACE were reduced nearly 30% per employee, far exceeding the original goal of an 8% reduction per employee. In addition, in 2014, ACE set a new companywide goal to reduce GHG emissions 10% per employee by 2020 from a 2012 base year. The new Chubb is committed to reducing its overall environmental impact and plans to announce an updated GHG reduction goal for the combined company. From 2015 to 2017, Chubb reduced its global absolute emissions by 11%.

Chubb continues to reduce its global environmental impact by encouraging internal operations to manage energy usage through a Corporate Energy Policy that encompasses UK facilities.

In support of the new global reduction goal, Chubb created a targeted plan to address energy consumption at the European level through the Chubb European Group Energy Policy. The Chubb European Group Energy Policy aims to increase transparency, accountability, and organisational awareness about energy reduction and reducing GHG emissions.

Targeted emissions reductions and a clear outline of the company's commitments will encourage innovation and make energy management a priority for the organisation at the European level. The contents of the policy include: a corporate policy statement, short-term objectives including a reduction target, a statement of commitment regarding management issues, procurement issues, financial issues and technical issues, and a log to track performance year on year. As an appendix to this document, Chubb has also designed a checklist for evaluating all new real estate leases, as well as a section that summarises proposed energy efficiency projects.

In coordination with the energy policy, Chubb has invested in energy surveys for one of Chubb's largest buildings located in the UK.

The main long-term goal of the policy is to increase efficiency of Chubb's facilities and therefore reduce GHG emissions. Another long-term goal is to create a framework of objectives that can be used as a model for other regions of Chubb's business.

Lastly, Chubb is interested in formalising tracking and reporting on progress of achieving these energy reduction goals as well as tracking how implemented energy efficiency projects have achieved their calculated energy savings and return on investment. This translates into regular status updates the include stakeholders at the company.

Another initiative in 2017 was the purchase of renewable energy for 100% of Chubb's offices in the U.K. In total, from January 2017 to December 2017, 10,126 MWH of renewable energy was purchased, equating to the avoidance of 3,561 tons of CO2e.

2016 vs 2017 Location-based Emissions Report[a]

Breakdowns	2016	2017
UK Facility Emissions	5,211 tCO2e	4,664 tCO2e
Number of UK Employees	1976 FTE	1983 FTE
Emissions per Employee	**2.64 tCO2e/FTE**	**2.35 tCO2e/FTE**

The UK reduced absolute location-based emissions by 10% from 2016 to 2017.

2016 vs 2017 Market-based Emissions Report[c]

Breakdowns	2016	2017
UK Facility Emissions	3,157 tCO2e	1,103 tCO2e
Number of UK Employees	1976 FTE	1983 FTE
Emissions per Employee	1.60 tCO2e/FTE	**0.56 tCO2e/FTE**

[c] 2016 and 2017 emissions have been verified by a third party, a verification document can be provided

The UK reduced absolute market-based emissions by 65%.

Evidence also applies to principle(s):

Source: Chubb

The Lloyd's market / MS Amlin / Measuring and taking action

We have consolidated our supply chain where possible to reduce deliveries to our UK offices.

In 2015 MS Amlin appointed Cushman & Wakefield, a leading global private commercial property services company, to provide facilities management services to our head office in The Leadenhall Building and our hub office in Chelmsford. This decision consolidated our facilities management requirements, whilst also increasing our efficiency in assessing and reporting on the environmental impact of our operations.

Cushman & Wakefield measured MS Amlin's carbon footprint in 2017 through the Carbon Disclosure Project (CDP). MS Amlin has completed the CDP submission and is awaiting the results. Going forward we will aim to continue collating the information required for CDP reporting on an annual basis. Both of our offices in Chelmsford and London continue to carry a high rating under the Building Research Establishment's Environmental Assessment Method (BREEAM), which is the world's foremost environmental assessment method and rating system for buildings, setting the standard for best practice in sustainable building design, construction and operation.

At our head office in The Leadenhall Building, MS Amlin's London Facilities team improved upon 2016's Gold award and achieved a Platinum Award in the 2017 Clean City Awards. This is a scheme organised by the City of London Corporation to promote good waste management practices, encourage waste minimisation and promote recycling and reuse initiatives. There are three levels of award - Merit, Gold and Platinum.

Additionally in The Leadenhall Building we have invested in 'Demand Logic' monitoring software for our building management system. The first 6 months of usage have allowed us to significantly improve the functionality of our air conditioning system whilst reducing it's energy consumption. We hope that the impact on 2018's CDP response will be a further reduction in our carbon footprint.

At our office in Chelmsford, our Facilities team gained Gold accreditation from Essex County Council for it's MS Amlin travel plan, an improvment upon their previous Silver rating. Highlights include single car use reduction of 9%, and an increase in park and ride usage of 4% and rail travel increase of 4%.

Forward planning

We will continue to monitor our environmental impact; working with our delivery partners to reduce waste streams, improve recycling rates and lower our overall carbon footprint. Whilst the impact of Brexit is still unknown we will continue to comply with Article 8 of the European Commissions Energy Efficiency Directive.

Looking forward we will continue to review across all of our property our use of lighting, air and water flow rates, as well as electrical consumption, to ensure our environmental infrastructure is running and being maintained to the most efficient standards for our occupiers whilst minimising our carbon footprint.

Evidence also applies to principle(s):

Source: MS Amlin

The Lloyd’s market / Navigators Underwriting Agency Limited / Reducing our footprint

Navigators in London continue to derive the benefit of a move to new premises in December 2015. Features associated with this new building on a brownfield site have been reported in previous submissions (*see below*), and Navigators in London has an expectation of sustainable reduction in our carbon foot-print as a result of this move:

The move took place in December 2015, and the building is of recent construction and is located on a former brownfield site, where reuse of piles gave a 1,000te of carbon savings.

Other construction features include:

- *Façade fittings to enhance solar gain control.*
- *Optimized building fabric thermal insulation values to reduce heating loads in winter.*
- *Grey and rain water harvesting for toilet flushing.*
- *Green roofs for attenuation and thermal buffer.*
- *Measured improvement over building regulations Part L2A 2006 requirements.*
- *BREEAM 2008 ‘excellent’ rating.*

Evidence also applies to principle(s): 4.1, 5.4, 6.1

Source: Navigators Underwriting Agency Limited (Navigators)/NavTech

The Lloyd's market / QBE European Operations / Measure and seek to reduce

QBE European Operations, Corporate Real Estate (QBE EO CRES) has primary responsibility for the management and maintenance of QBE’s European office infrastructure – physical assets and internal operations. QBE EO CRES has, since 2007 developed and implemented procedures and infrastructure for monitoring and reporting of Environmental Key Performance Indicators (EKPIs) for QBE’s European offices.

QBE EO monitors a range of EKPIs including resource consumption (energy, water, office paper, business travel etc.) and greenhouse gas emissions in order to identify opportunities to improve performance, support decision making and also to provide the data for internal and public disclosure of QBE EO’s corporate ‘carbon footprint’.

CRES EO, produces quarterly Environmental KPI reports and Environmental Inventories that collate EKPI data for QBE’s European offices to improve environmental management through an on-going ‘rolling programme’.

The reports identify data gaps, limitations and actions required to facilitate development and maintenance of a robust reporting system.

The Inventories include calculation of greenhouse gas emissions associated with QBE EO’s offices in accordance with the World Business Council for Sustainable Development / World Resources Institute Greenhouse Gas Protocol; and provide an ‘audit trail’ for environmental reporting to QBE Group Environmental, Social and Governance.

QBE Group introduced a worldwide Environmental and Social Governance (ESG) System at the end of 2016, which provides a framework to improve global data quality. QBE EO aligned its pre-existing data management system with the requirements of the ESG system during 2017, with 2016 and 2017 environmental activity data audited and verified by Deloitte.

Specific QBE EO initiatives to reduce adverse environmental impacts include:

- QBE is progressing to ensure resource efficiency initiatives are rolled out across our Global operations. For instance we have converted major offices in North America, Australia and Europe to energy-efficient LED lighting and occupancy sensors, in order to reduce energy consumption.

In addition, we are encouraging staff to minimise waste by re-using and recycling. Across our global operations, we measure, track and report on environmental metrics including greenhouse gas emissions by scope and intensity, energy, water and office paper consumption, waste generation, and business travel.

- Consolidation of QBE's office space at the Chelmsford office. The Chelmsford office previously consisted of two separate buildings, which were combined to form one QBE office. However, reduced space requirements have allowed the offices to be reinstated to their original configuration, which the intention that one building is occupied by QBE and the other sub-let.

  QBE consolidated its staff to one building during 2016, allowing the other building to be refurbished. QBE then moved into the refurbished building during Q1 2017, allowing the other to be decommissioned for future sub-let. This project continued through 2017 and the empty office is now ready to be let out. The overall impact of this initiative is improved office facilities for our Chelmsford staff, reduced costs for QBE and improved resource efficiency for the site with associated reduced adverse environmental impact.

Evidence also applies to principle(s): 5.1

Source: QBE

The Lloyd's market / Tokio Marine Kiln / Reduce environmental impact of the internal operations and physical assets under our control

We have engaged AECOM to support and document our environmental reporting on an ongoing basis. In 2017, waste arising out of TMK's head office in London consisted of:

Waste stream	TMKG 20 Fenchurch Street waste arisings / Kg	Waste reused or recycled / Kg
Mixed dry recyclables (general office waste)	23,454	23,454
Food waste (general office waste)	6,805.5	6,805.5
Residual waste (general office waste)	7,151	0
Toner cartridges	0	0
Glass waste	624.5	624.5
Confidential waste	16,236	16,236
Time served archived material	425	425
Waste Electrical and Electronic Equipment	1,661*	1,202*
Batteries	45	45
Total / Kg	**56,402**	**48,792**

** Reported WEEE is for TMKG in the UK as whole and includes waste from other TMKG UK locations e.g. the SunGard data centre.*

Overall, the table shows that we have reused/recycled 86% of our waste in 2017. The waste statistics available from AECOM include:

- General office waste is segregated in to recycling bins. Dry recyclable waste in 2017 was 23,454kg.
- 2017 food waste was 6805.5 kg
- 0kg of printer cartridges were recycled during 2017
- Glass waste in 2017 was 624.5kg
- Residual waste was 7,151 kg
- Total confidential waste recycling which are securely destroy was 16,236 kg
- Redundant IT equipment was 1,661kg of which 72% was recycled
- 45kg of batteries were recycled in 2017

- No large items of furniture have been removed however any previously redundant furniture is donated to a charity “We Clear Junk”
- Of the total 13,123.7kg of paper used, 100% had Forestry Stewardship Council (FSC) certification

The building management group, which TMK has a representative on, continues to look at ways to improve the environmental efficiencies of the wider building.

- All drinking water used by TMK is produced (from mains supply) on-site. As such, we do not purchase bottled water, which reduces glass or plastic bottle waste and also adverse impacts associated with delivery.
- Office lighting is movement sensitive, and switches off when no one is in an area.
- TMK employs power saving devices on computers (monitors go off after 20 minutes if unused, and our virtual desktop Wyse terminals consume less than 10% of the power of a standard PC, as well as generating significantly less heat).
- Use of virtual desktops also reduces the amount of hardware required and the amount of space and power required for servers.
- TMK is supporting the change of electricity supply contract to use electricity derived from certified renewable sources.

Within our day-to-day operation, TMK has set all of the group printers to default to duplex copying and we encourage colleagues not to print unless they really need to do so. We have also introduced secure printing, meaning that no print jobs are released unless the user swipes their security pass. This has reduced regular paper consumption considerably. Since 2012, we introduced electronically and secure distribution of Board papers.

Since 2013, we issued payslips on line, and experimented with reducing the number of legal disclaimers which appear when we print emails, and setting the default print range of emails to just one page. TMK has also replaced paper Christmas cards with e-cards since the last few years. We recognised that these initiatives are ongoing and we continue to review periodically at ways to reduce our paper consumption. We monitor and report our paper consumption / usage.

Evidence also applies to principle(s): 3.3, 4.3, 5.1, 5.3, 5.4

Source: Tokio Marine Kiln: TMK facilities management and BREEAM certificate and ESOS, AECOM audit reports are available upon request.

5.3 Disclose our direct emissions of greenhouse gases using a globally recognised standard.

The Corporation of Lloyd's / Greenhouse gas emissions

The Corporation works with Carbon Smart – environmental consultants contracted to support the Corporation in this area – to calculate the GHG emissions from global operations following internationally recognised standards. 2016 marked the fourth year in which the Corporation has reported the GHG emissions inventory of our international offices in addition to that of the UK, and sees those initiatives continuing to engage with their resource consumption. The Corporation's total reported GHG emissions from business activities in 2016 were 13,578 tonnes of CO2e, down from 14,831 tonnes of CO2e in 2015.

2017 marks the fifth year in which the Corporation of Lloyd's is reporting the GHG emissions inventory of international offices in addition to that of the UK, and sees those hubs continuing to engage with their resource consumption. There are direct KPIs in the 2018-20 Strategy that cover these efforts, and sub-initiatives with tracking in the Environmental Working Group.

These figures are reported publically in the Corporation of Lloyd's annual report, and made available online in the environmental section of the public website.

Methodology

The GHG accounting and reporting follows principles of relevance, completeness, consistency, accuracy and transparency. Carbon Smart applies these principles when collecting, reviewing and performing the GHG emission calculations as part of: defining organisational and operational boundaries, verifying the integrity of data, checking the data audit trail and finally performing the calculations.

The Corporation of Lloyd's continues to use the operational control approach for defining the scope of its GHG emissions inventory and calculate total direct Scope 1, 2 and major Scope 3 emissions. Reported environmental data covers 100% of contracted staff worldwide; the review includes all the Corporation's entities that meet the criteria of being subject to control or significant influence of the Corporation.

As 2017 is only the fifth year the Corporation is reporting on emissions from its international offices, data on some emissions sources remains challenging to obtain, and therefore was excluded from the Corporation's overall GHG emissions summary for 2017: refrigerants, company owned/leased vehicles and national rail from non-UK offices.

Consistency

In order to ensure comparability, Carbon Smart has continued to use the same calculation methodologies used in previous years. The Corporation has dual reported for scope 2 emissions in 2017, in line with changes with the WRI Greenhouse Gas Protocol, for the third time. The location based scope 2 total has been used to report the Corporation's total GHG emissions to ensure a consistent approach with previous years.

As in 2016, the data for 2017 was collected, verified and calculated in accordance with the requirements of the following standards:

- World Resources Institute (WRI) Greenhouse Gas (GHG) Protocol (revised version)
- Defra's Environmental Reporting Guidelines: Including mandatory greenhouse gas emissions reporting guidance, October 2013
- The emissions have been calculated using the Defra 2017 conversion factors. This work is partially based on the country-specific CO2 emission factors developed by the International Energy Agency, © OECD/IEA 2017 but the resulting work has been prepared by Carbon Smart and Lloyd's and does not necessarily reflect the views of the International Energy Agency.

For more insight into the quality and reliability of the Corporation of Lloyd's GHG emissions inventory please visit the opinion statement issued by Carbon Smart. Further details on the methodologies used as also included in principle 5.2.

Results

The Corporation of Lloyd's total reported GHG emissions from business activities in 2017 were 11,007 tonnes of CO_2e consisting of:

GHG emission tracking

	Scope 1 (tonnes CO^2e)	Scope2 (tonnes CO^2e)	Scope3 (tonnes CO^2e)	Out of scopes (tonnes CO^2e)	Lloyd's total 2017 GHG emissions (tonnes CO^2e)	Lloyd's total 2016 GHG emissions (tonnes CO^2e)
UK	1,756	6,498	2,916	<1	10,170	12,392
International offices	17	703	118	-	837	1,186
					11,007	13,578

As in 2016, the Corporation of Lloyd's continue to dual report scope 2 emissions emanating from electricity consumption. Location-based scope 2 emissions are calculated using a conversion factor based on the average grid mix in each location (issued by Defra in the UK[d]).

Market-based scope 2 emissions are calculated using a conversion factor specific to the electricity purchased by the Corporation. Scope 2 location-based and market-based emissions are shown in the table below:

Scope 2 location based emissions[e]

	Scope 2 – location-based (tonnes CO^2e)	Instrument type	Scope 2 – market-based (tonnes CO^2e)	Instrument type
UK	6,498	National grid average emission factor (issued by Defra)	0	Supplier emission factor (100% renewable energy used)
International offices	703	Various national grid average emission factors (issued by Defra & International Energy Agency)	731	Various national grid average emission factors (issued by Defra & International Energy Agency)
Total	7,201		731	

The Corporation's total location-based scope 2 emissions are 7,201 tCO2e whilst market-based scope 2 emissions are 731 tCO2e.

91% of electricity consumed globally, all of which is used in the UK, is sourced renewably as a result of KPIs from 2016 where the supplier contract is still in effect, and therefore has an associated conversion factor of zero. To avoid confusion and ensure a consistent approach with previous years, the Corporation has chosen to report location-based emissions, which is the methodology used to calculate historical scope 2 emissions since 2007.

A further breakdown of the Corporation's emission performance is detailed below:

– Scope 1 emissions rose by 11% on 2016 and 8% on the 2013 baseline. This increase was driven by increase in fuel oil used in the UK to facilitate building shut downs. The benefit of these shutdowns is visible in a reduction in electricity consumption (scope 2 emissions) therefore whilst scope 1 emissions have increased; this is largely offset by a decrease in scope 2 emissions.

[d] The emissions have been calculated using the Defra 2017 conversion factors. This work is partially based on the country-specific CO2 emission factors developed by the International Energy Agency, © OECD/IEA 2017 but the resulting work has been prepared by Carbon Smart and Lloyd's and does not necessarily reflect the views of the International Energy Agency.

[e] All totals have been rounded to the nearest whole number

- Scope 2 emissions, comprised of global electricity emissions, fell by 18% on 2016 and 29% on the baseline year of 2013. As 91% of global electricity is consumed in the UK, this global reduction was primarily driven by a 5% reduction in actual electricity consumed across the UK and a drop of 15% in the carbon intensity of grid electricity in the UK.
- Scope 3 emissions fell by 36% on 2016 and by 24% on the 2013 baseline. This was driven by a 67% reduction in flight emissions from 2016 to 2017. The average journey length in 2017 was also 29% lower than in 2016 resulting in lower emissions per journey.

For more insight into the quality and reliability of our GHG emissions inventory please access the opinion statement issued by Carbon Smart.

Evidence also applies to principle(s): 5.2, 6.1, and 6.2

Source: The Corporation of Lloyd's

The Lloyd's market / ArgoGlobal / Operational Boundary

All figures in the table below relate to Exchequer Court, 33 St Mary's Axe, London EC3A 8AA.

ArgoGlobal rents a number of desks in the Room at Lloyd's - these have not been included in the table below because they fall completely within the operational control of Lloyd's and have been included within the Corporation of Lloyd's GHG inventory.

	2017 (t CO_2e)	**Comment**
Emissions from refrigeration and air conditioning equipment	0	
ArgoGlobal has no other direct emissions.	-	ArgoGlobal does not own or lease any vehicles
Scope 2 Indirect Emissions - purchased electricity/steam/heat		
Electricity	270.7	
Steam/heat	0	
TOTAL	270.7	
Scope 3 Indirect Emissions - purchased electricity (leased premises)		
Not applicable - all emissions from leased premises are included in Scope 2 above	-	
Scope 3 Indirect Emissions - other sources		
ArgoGlobal has chosen not to report on these emissions at this point in time.	-	

Evidence also applies to principle(s): 1.1, 1.4

Source: ArgoGlobal – Syndicates 1200 & 1910

The Lloyd's market / Beazley / GHG emissions

Our UK and European emissions are monitored and reported by AECOM Infrastructure and Environment. Beazley Group UK and European GHG emissions for 2017 are reported as 6,103.16 tonnes CO2 equivalent (tCO2e). 2017 Scope 1 and 2 emissions (723.10 tCO2e) are 22.9% lower than those reported for 2016 (938.31 tCO2e), with total reported emissions up by 18% (929.85 tCO2e).

This increase in total reported emissions is primarily due to increased business travel by air (Scope 3).

Reported annual UK and European Office GHG emissions for 2013 to 2017 are summarised below:

	UK and European Office GHG Emissions / tCO_2e					
	Activity / Source of Emissions	2013	2014	2015	2016	2017
Scope 1 Emissions	Boilers	0.00	0.00	0.00	0.00	0.00
	Back-up Generators	0.00	0.00	0.00	0.10	0.10
	Refrigerants	172.50	145.43	125.61	4.93	0.00
	Company Vehicles	47.86	31.48	46.07	46.46	39.37
Scope 2 Emissions	Imported Electricity	1,133.68	1,203.78	1,152.57	886.83	683.63
Scope 3 Emissions	T&D Electricity	96.74	104.56	95.34	79.13	50.97
	Business Travel by Air	4,686.93	4,352.71	4,649.48	3,801.99	4,981.60
	Business Travel by Rail	4.21	5.38	7.29	5.30	14.20
	Business Travel by Taxi	107.28	21.93	26.72	27.77	27.74
	Commuting	319.84	311.51	296.64	314.18	297.52
	Private Car use for business	14.79	3.51	15.73	6.64	8.03
	Reported GHG Emissions	**6,583.83**	**6,180.30**	**6,415.47**	**5,173.31**	**6,103.16**

Please note:

1. *GHG emissions are calculated and, where possible, reported using the current UK Government (BEIS) GHG Conversion Factors for Company Reporting (2017 data set). The exception to this is the emission factor used for calculation of emissions associated with electricity consumption in Ireland, where emissions are calculated using an SEAI emission factor which is believed to include transmission and distribution loses – which are Scope 3 emissions.*
2. *Beazley's 2017 GHG emissions are, where possible, calculated using emission factors for 'all gases' i.e. carbon dioxide, methane and nitrous oxide. The exceptions to this are emissions associated with:*
   a. *refrigerants, which are reported as carbon dioxide equivalent (CO2e) emissions; and,*
   b. *electricity use in Ireland for which an SEAI emission factor of CO2/kWh is used*

Activity data and associated GHG emissions arising from Beazley Group's activities principal UK office, Plantation Place South and the Dublin office2 (with 20 FTE and 1 temp) for 2017 calendar year are reported. These account for more than 92% of Beazley's UK/European permanent and contracted staff. The scope of reporting includes the use of company vehicles and centrally managed business travel by air, rail and private car for the UK. Emissions from the smaller regional UK and European offices, which are leased under shared tenancy, are excluded from the scope of reporting.

At the time of submission, our 2017 report on US GHG emissions was yet to be finalised. Our 2016 GHG emissions for our three principal North American offices were reported as 1,653.95 tCO2 e. This was 1% lower than 2015 reported emissions and is due to small reductions in Scope 2 and 3 emissions offsetting a small increase in emissions from business travel by air.

Evidence also applies to principle(s):

Source: Beazley

The Lloyd's market / Chubb / Chubb Limited Annual Report, Environmental Statement

As an insurance company, Chubb's environmental footprint is relatively modest, but through our Corporate Greenhouse Gas Inventory Program and Corporate Environmental Strategy, we work to reduce it even further. Some of the primary objectives of our environmental strategy are to measure, record and reduce Chubb's corporate GHG emissions.

In 2007, Chubb joined the voluntary U.S. Environmental Protection Agency (EPA)-sponsored Climate Leaders program, through which the company was able to develop long-term, comprehensive climate change strategies, inventory its emissions and set a six-year GHG reduction goal of 8% per employee. While the EPA program was discontinued in September 2011, Chubb's Corporate GHG Inventory Program remains active using its methodology, which is based on the World Resources Institute and the World Business Council for Sustainable Development (WRI/WBCSD) GHG Protocol for data collection and analysis. In 2012, Chubb successfully met its first generation GHG reduction goal with a 27% reduction in emissions per employee since 2006. In order to continue Chubb's global commitment to reducing its environmental footprint, a new GHG reduction target was announced in September of 2014. The reduction goal promised to reduce emissions 10% per employee by 2020 from a 2012 base year. In January 2016 ACE Limited acquired The Chubb Corporation and adopted the Chubb name. A new GHG reduction goal is currently being evaluated based on the emissions from the combined companies.

Chubb 2017 GHG Inventory Data

	2017
Global Absolute Emissions (CO_2-eq.)	80,132

The data above represent 27,211 metric tons of CO_2-eq. of Scope 1 emissions from fossil fuel combustion, 56,061 metric tons of CO_2-eq. of location-based Scope 2 emissions and 52,921 metric tons of CO_2-eq. of market-based Scope 2 emissions from purchased electricity. Chubb's GHG emissions data are reviewed by a third-party on an annual basis. The company's most recent 2017 GHG inventory was reviewed by Bureau Veritas and the verification statement can be found on the following page.

In addition to tracking GHG emissions versus its goals, Chubb reports its GHG emissions data to the Carbon Disclosure Project (CDP), an organization that scores carbon emissions information from thousands of corporations on behalf of the global investment community. In 2017, Chubb's response to the questionnaire resulted in a score of A-.

Chubb's Global GHG Management Plan concentrates primarily on reducing energy consumption at the facility level – specifically, in owned buildings and larger, long-term leased spaces. Projects have been implemented at a number of major offices including: Philadelphia, Pa.; Wilmington, Del.; Hamilton, Bermuda; Sydney, Australia; the Chubb Conference Center, Lafayette Hill, Pa.; London, U.K.; and Monterrey, Mexico.

The projects include installation of new HVAC equipment, lighting upgrades and installation of a central building automation system (BAS) in order to improve operations within the building and reduce energy consumption. Energy efficiency projects implemented by the corporate environmental program in 2017 represent an estimated savings of approximately 150 metric tons of CO_2e per year.

In Chubb's office building in Philadelphia, the company has reduced energy consumption by over 20% since 2006 through the installation of new boilers and LED lighting, the use of variable speed drive HVAC equipment and installation of an exhaust energy recovery ventilator. Through these steps, the company earned LEED Silver certification in 2009 and was awarded LEED Gold certification in 2014. It was also awarded Energy Star Certification by the U.S. EPA in 2016.

In July 2011, the company's Bermuda office building was awarded LEED Gold certification – the first building in Bermuda to be awarded the designation – due in large part to a re-lamping of office lights, applying a floating temperature set point and installing motion sensors and timers on office equipment.

These actions reduced electrical needs by approximately 500,000 kWh (358 metric tons CO_2e) per year. In 2014, the company engaged with the U.S. Green Building Council (USGBC) and the Bermuda facility became one of the first buildings using LEED Dynamic Plaque, a tool that continuously monitors and encourages improvement of overall building performance.

Information about Chubb's full range of environmental efforts, including insurance solutions to help customers manage their environmental and climate change risks, corporate initiatives to control our own ecological impact and philanthropic actions in support of environmental causes, can be found in the company's annual Environmental Report, which is available at www.chubb.com.

Evidence also applies to principle(s): 5.1, 5.2, 6.2

Source: Chubb

The Lloyd's market / MS Amlin / Disclosure standards

Please refer to Principle 5.2 relating to the Carbon Disclosure Project submission.

The MS&AD Group has been included in the CDP* ‘Climate Change A List’, being recognised as one of the leading companies in the world for its efforts in responding to climate change. (see link).

The ‘Climate Change A List’ is the highest level evaluation from CDP, and in 2017 year includes 13 companies from Japan and 112 companies from around the world. In 2017, CDP has set the bar even higher than in previous years also, raising the A-score threshold and making the ratings more competitive and more coveted than ever before.

Evidence also applies to principle(s):

Source: MS Amlin

The Lloyd's market / QBE European Operations / Emissions

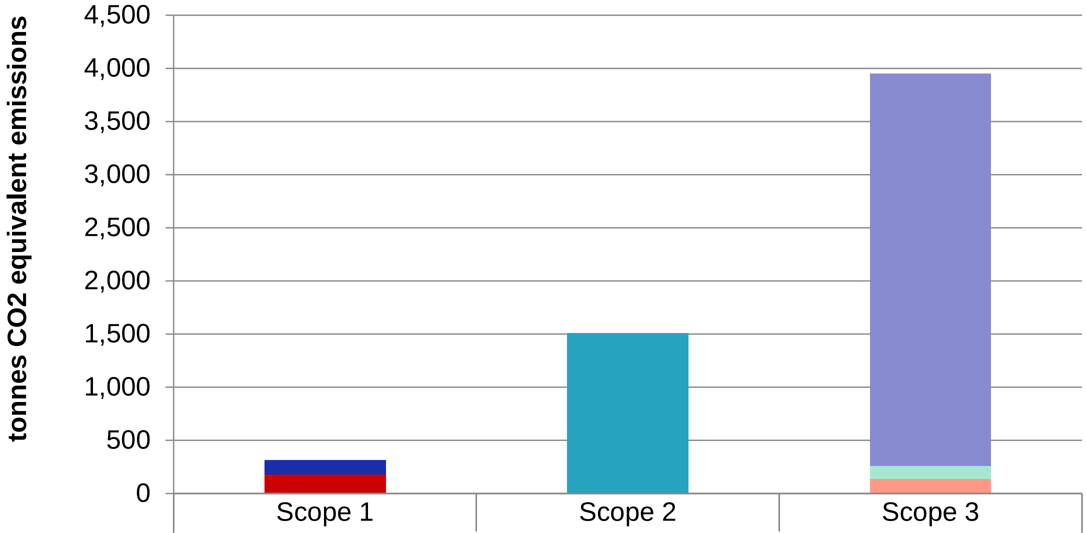
QBE EO Corporate Real Estate (QBE EO CRES) has primary responsibility has primary responsibility for identifying, monitoring, reducing and reporting environmental impacts from QBE European Operation’s physical assets and internal activities.

CRES EO has, since 2007 developed and implemented reporting procedures and infrastructure for monitoring and reporting of Environmental Key Performance Indicator (EKPI) data for QBE’s European offices. CRES EO collates and reviews data provided by the company’s European offices on a quarterly basis. Quarterly reports summarise a range of EKPI, including greenhouse gas emissions, providing the data for internal and public disclosure of QBE EO’s corporate ‘carbon footprint’.

QBE European Operations report 2016 greenhouse gas emissions of 5,776 tonnes carbon dioxide equivalent (tCO_2e), a decrease of 25% from 2016 (7,772 tCO_2e). The fall in reported emissions is due to reduced Scope 1 and 2 emissions. The most significant reductions are associated with electricity consumption achieved through reduced property portfolio (m^2), reduced consumption (kWh/m^2) and reduced grid carbon intensity ($kgCO_2e/kWh$).

Reported greenhouse gas emissions (CO_2e) for 2017 are shown by GHG Protocol scope and source in the graph overleaf.

QBE European Operations Greenhouse Gas Emissions, January - December 2017



Emissions by GHG Protocol Scope	Associated Emission (tonnes CO2e)		
	Scope 1	Scope 2	Scope 3
Boilers	134.41		
Car use	178.69		
Air conditioning and fire suppression equipment	1.77		
Back-up generators	0.27		
Imported electricity		1,510.52	
imported heat and steam		0.00	
Air travel			3,687.38
Emissions arising from rail travel			128.33
Emissions arising from T&D of Electricity			135.03

The QBE EO scope of reporting covers direct environmental impacts associated with 31 QBE offices located in 13 countries, with approaching 2,250 employees.

Reporting is based on operational control. QBE's European offices are generally leased with shared tenancy; building services such as boilers, back-up generators and centralised cooling systems are generally managed and controlled by the landlord or landlord's agent under a service contract.

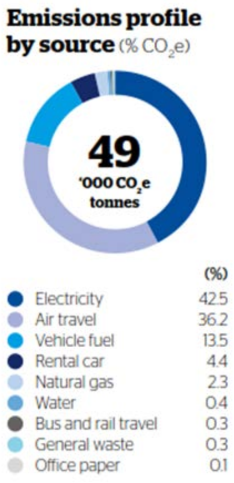
QBE EO calculate greenhouse gas emissions associated with our offices in accordance with the World Business Council for Sustainable Development / World Resources Institute Greenhouse Gas Protocol and applicable UK Government guidance for company reporting. GHG emissions associated with the activities of QBE EO are, where possible, calculated using the 2017 UK Government conversion factors for 'all gases' i.e. carbon dioxide, methane and nitrous oxide reported as carbon dioxide equivalent emissions (tonnes CO_2e). The exceptions to this are emissions associated with electricity supply to non-UK offices, which are calculated using International Energy Agency emission factors (CO_2 Emissions from Fuel Combustion, 2017) which are limited to carbon dioxide (tCO_2) and refrigerants which are reported as tCO_2e.

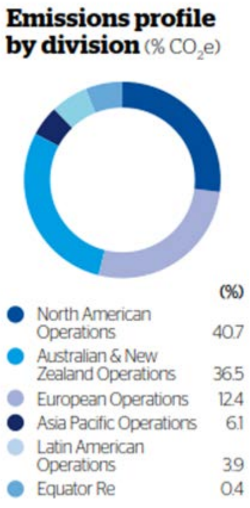
QBE Group Reporting

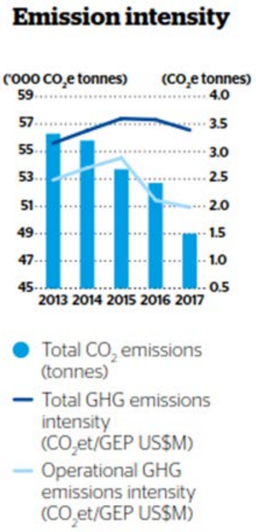
QBE Group is a participant in the annual Carbon Disclosure Project. QBE Insurance Group Limited reported global greenhouse gas emissions of 49,034 tonnes carbon dioxide equivalent (tCO_2e) for 2017, down from 52,762 tCO_2e reported in 2016.

QBE's 2017 Sustainabilty Report is available on the internet at https://www.group.qbe.com/corporate-governance/sustainability-report, provides the following summaries of annual Group greenhouse gas emissions and other measures of environmental footprint.

QBE Group 2017 GHG Emissions / tCO_2e:







Our reporting on environmental data follows the guidelines outlined in:

- the Global Reporting Initiative (GRI) Standards' requirements for Emissions Disclosures 305-1, 305-2 and 305-3;
- the Greenhouse Gas Protocol's Corporate Accounting and Reporting and Corporate Value Chain (Scope 3) Accounting and Reporting Standards;
- QBE's ESG Reporting – Greenhouse Gas Reporting Framework which governs our data collection process.

The Group's GHG emissions reporting is driven by our global insurance operations across the world. We calculate emissions using the energy content and emission factors considered most relevant to each region, based on information sourced from:

- Australian Government Department of Environment and Energy's *National Greenhouse Account Factors*, 2017;
- UK Government's Department of Environmental Food and Rural Affairs (DEFRA) and Department of Energy & Climate Change's (DECC) *Greenhouse Gas Reporting: Conversion Factors*, 2017;
- US Environmental Protection Agency's (EPA) *Greenhouse Gas Inventory Guidance: Direct Emissions from Stationary Combustion Sources*, 2016;
- US EPA's *eGRID database*, 2017;
- International Energy Agency's *CO_2 Emissions from Fuel Combustion*, 2017.

Evidence also applies to principle(s): 5.2

Source: QBE

5.4 Engage our employees on our commitment to address climate change, helping them to play their role in meeting this commitment in the workplace and encouraging them to make climate-informed choices outside work.

The Corporation of Lloyd's / Engaging our employees

In 2015-16 and 16-17 reporting, information has been shared around the programme of work centred on engaging and enabling Corporation of Lloyd's around the topic of climate change.

The Corporation of Lloyd's Responsible Business team lead engagement in this area, and are supported by various teams across the Corporation including but not limited to catering, facilities, brand teams, and the international offices.

The engagement process starts before an employee joins Lloyd's. There are also policies around conduct and ethics, which contributes to 94% of employees feeling that the Corporation of Lloyd's was a responsible organisation in relation to the way we conduct business in the 2017 employee survey:

- Lloyd's Code of Conduct sets out our expectations of our employees and is included as part of the induction process for new joiners
- Lloyd's has a Speaking Up policy to which provides a mechanism to enable employees to voice any concerns they may have in a responsible and effective manner. It also periodically carries out a Speaking Up policy survey to assess awareness and views towards speaking up on issues of concern such as suspected crime, discrimination or ethical issues
- Authors of all Lloyd's board papers are required to outline any material social, ethical and environmental implications of their proposals to the board
- Lloyd's is a member of the Institute of Business Ethics
- Lloyd's is an accredited Living Wage Employer. Our pay levels for direct employees and on-site contractors meet or exceed the living wage requirements set out by the Living Wage Foundation

In addition to these examples, Corporation staff are engaged through a number of avenues in addition to those listed throughout this report.

These include:

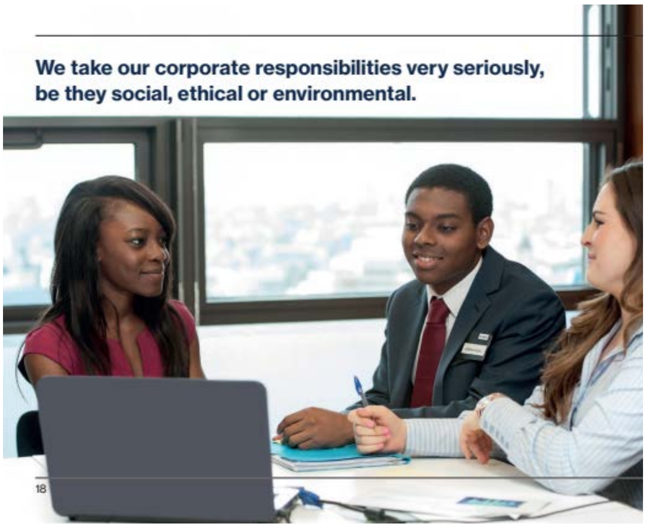
1. The induction process: New employees are introduced to the strategic priorities from the very beginning as part of their e-learning induction process, which sets out the roadmap the Corporation of Lloyd's strategy.

   Within the Corporation Social Responsibility section of the new e-learning module the content describes the Corporation's history with ClimateWise, and provides links to the pages on Lloyd's.com for staff to find out more. This will be updated with details of Lloyd's Responsible Business policy when available.

2. Lloyd's Community Programme: To enable Corporation of Lloyd's employees (including contractors) are entitled to three days voluntary leave over a calendar year to take part in volunteer activities.

   This includes assisting community organisations with the up-keep and maintenance of these public spaces with opportunities ranging from giving a hall a deep clean or fresh coat of paint to creating a new community space.

3. Lloyd's Graduate scheme: The Corporation's responsible business approach is also referenced in the 2018 Lloyd's Graduate scheme brochure to demonstrate the Corporation aims and strategy in the Corporate Social Responsibility area:



4. Employees are also engaged on an ongoing basis through MyLloyd's, which is the Corporation-wide intranet that consists of resources and updates for all employees. This helps employees keep up to date with the Corporation's views of what is happen, in London and across the world.

   Messaging included topics set out in the 2017 Environmental Working Group action plan on:

   – Increasing the amount of recyclable waste: advice shared through blog posts
   – Reducing the amount of waste being generated: signage, internal posts, a stand in the Operations Directorate town hall
   – "War on plastics" To reduce the amount of plastic materials used by Lloyd's: posts shared on internal and external social media platforms, video messages from CEO
   – Communicating and celebrate our success both internally & externally: posts shared on internal and external social media platforms.

   Over the last reporting year this was used to communicate activities including but not limited to the below:

5. World Environment Day (5 June 2017): a communications plan involving all 23 Lloyd's international offices was developed, which included centralised messaging and activities around the main area of focus for the year – efforts to go plastic free, which were championed and endorsed by Inga Beale, Chief Executive Officer after a visit to the Mumbai office. This included Beale recording a video with details of her pledge available on the Corporation intranet.

Details were shared across social media accounts and message boards for staff to learn more and record their own pledges:

Lloyd's @LloydsofLondon · Jun 5
Did you know, half of the world's plastic is disposable and only used once, with 79% of that ending up in landfill and the natural environment? Join Lloyd's offices across the world and challenge yourself to go plastic free for a day #BeatPlasticPollution

3 9

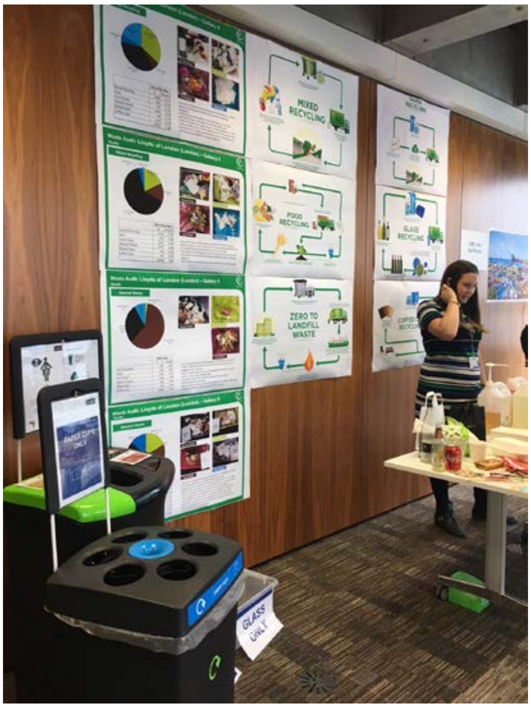
Lloyd's Retweeted
Paper Round @PaperRound · Jun 5
We loved seeing all the great plastic free pledges at today's recycling event @LloydsofLondon @PrincipleClean for #WorldEnvironmentDay

2 3

Lloyd's Retweeted
Frank :oD ias @letmebefrnk · Jun 5
I'm in! I pledge to be more conscious and reduce my use of single use plastic to #BeatPlasticPollution for the @UNEnvironment's #WorldEnvironmentDay Myself and other colleagues have been making pledges today @LloydsofLondon

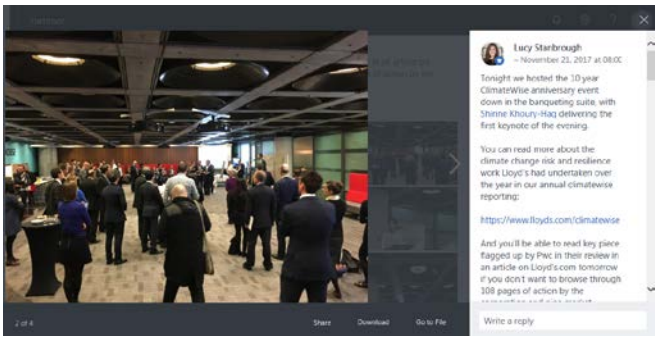
1 3

6. Town halls: Corporation Directorates hold town hall sessions on a quarterly basis. At the June 2018 Operations town hall there was a dedicated stand on the Corporation's environmental audits, which showcased the statistics tracked by Paper Round, alongside the plans for the year. Staff were on hand to answer questions and engage attendees:



7. There are a number of features available such as the ability to comment on blog pieces or LiveWire that allow employees to submit questions or make views known. This has also been supplemented by Yammer, which has been relaunched across the Corporation as an initiative led by an employee workout group to enable better communication.

   A group has been set up by for Lloyd's to share responsible business initiatives; including Environment and Sustainability, Lloyd's Charities Trust, Lloyd's Community Programme, Lloyd's Patriotic Fund, Lloyd's Tercentenary Research Foundation, Responsible Business Strategy and more. Tracking within the system allows insights to be tracked on engagement and impact, such as the ClimateWise 10 year anniversary event:



Forward planning

The Corporation aims to continue to grow the number of global sustainability champions and the Corporate Social Responsibility team are actively engaged with Corporation colleagues around the world to help them implement sustainability initiatives in their offices.

Employee engagement also forms part of the Environmental Working Group action plan, and a copy of the 2017 and 2018 reports have been provided to the external reviewers to demonstrate the range of initiatives, and the year on year planning that takes place.

Evidence also applies to principle(s): 1.1, 1.3, 1.4, 3.1, 5.1, 5.2, 5.3, and 6.1

Source: The Corporation of Lloyd's

The Lloyd's market / ArgoGlobal / Sustainability Plan

In support of its commitment to influence the potential negative impact of climate change, Argo Group has now included climate change as a part of its review and development of its internal sustainability plan that was established during 2015 and has been maintained into 2018.

The Argo Group sustainability plan contemplates that regular internal communication will occur regarding the issue of climate change for the purpose of raising employee awareness of this issue and the actions that they can take in response to it. The amount of Argo Group internal communication on climate change and sustainability issues has been increased throughout 2017-2018, with training and communication meetings occurring in certain Argo Group business offices and the posting of climate change-related newsletters and information on Argo Group's internal internet, which is accessed by its 1,400 employees.

Evidence also applies to principle(s): 1.1, 1.4

Source: ArgoGlobal – Syndicates 1200 & 1910

The Lloyd's market / Chubb / Re-Launch of Chubb Enviornmental Working Group

In early 2018, the Chubb Environmental Working Group was re-established after a period of some inactivity. This working group will be focused on improving the sustainability of European offices, with the primary goal being to inform and educate employees regarding the impact their activities have. In order to accomplish this, the group will be hosting events in Chubb offices, including guest speakers and activity stands provided by our award winning waste management company, Paper Round. In doing so, not only will the recycling rate in Chubb offices improve, but employees will be able to make more concious decisions outside of the office

The group will also be working very closely with facilities in order to ensure that during any refurbishments or relocations, sustainable options can be incorporated into the plans ; for example, as part of the refurbishment of the London headquarters the group ensured disposable cups would no longer be used, vastly reducing the consumption of otherwise unrecyclable materials.

Evidence also applies to principle(s): 5.1, 5.2, 5.3

Source: Chubb

Lloyd's / The Market / MS Amlin / Engaging employees

As referenced in Principle 2.1 MS Amlin's CR policy is available on the company intranet sytem and is applicable to all employees globally. This policy defines our approach to corporate responsibility, enabling MS Amlin to take decisions and actions that create responsible outcomes, while also achieving our organisational goals.

We actively encourage paper reduction and recycling in our offices and operate a clear desk policy. Employees are encouraged to reduce business travel where possible.

Our employees are also actively engaged with our sponsorship of MS Amlin Andretti. We regularly communicate updates from the team, including providing insight into the impact that our sponsorship has and how it actively promotes the sustainability of consumer transport and the future of motorsport. Our underwriting modelling team are also involved with the MS Amlin Andretti team directly, providing data analysis and sophisticated software tool development to help the team manage the energy usage of the cars, and help them to go faster around the track.

Evidence also applies to principle(s):

Source: MS Amlin

The Lloyd's market / QBE European Operations / Employee engagement

QBE engage with our employees through a number of different channels such as:

- Attending events and seminars on climate-related risks and opportunities, as well as implementing the TCFD recommendations
- Internal engagement through our intranet and Yammer
- Inviting the A4S Executive Chairman to present to the QBE European Operations Finance team and teams across our Group and Australian Operations
- The annual Sustainability Report
- QBE EO Quarterly Environmental Reports, listing a range of environmetnal metrics, including GHG emisisons are posted on our intranet for our employees, the reports are also submitted to QBE Group, Environmental and Social Governance, where the environmetnal KPI data is aggregated and consolidated with comparable data from other regions for reporting via the Company's online Annual Report.

Evidence also applies to principle(s): 5.2

Source: QBE, See QBE's 2017 Sustainabilty Report*. The report provides the summaries of annual Group greenhouse gas emissions and other measures of corporate 'environmental footprint'.*

The Lloyd's market / Tokio Marine Kiln / Employees engagement

Tokio Marine Kiln aspires to be a global "Good Company", consistent with the Group business strategy. We have embedded the key pillars of the Good Company culture within the annual performance reviews of our employees. This encourages and rewards the employees in their positive engagement on these values. The recognition is also supported by the Tokio Marine Group where each subsidiary will nominate an employee to receive the Good Company Award in Tokyo each year.

In addition, the Tokio Marine Group including TMK, has implemented a wide range of charitable activities where the company and our employees can get involved at several different levels: company donations, personal donations and also volunteering. For example, since 1999, Tokio Marine Group employees have mangroves in 9 countries in Southeast Asia in partnership with tree-planting NGOs. The CO2 absorption and fixation efforts through mangrove planting amounted to 100,000 tonnes and the entire Tokio Marine Group became carbon neutral.

Another example is Tokio Marine Kiln's employees' involvement in the Street Child, Sierra Leone marathon. Every year, the employees volunteer to run in raising funding for orphans in the country to rebuild their lives after the civil war. In 2018, total funding raised £22,000 for this charity.

In 2017, TMK began a new global charity partnership with Water Aid which continues into this year. This includes a significant donation to their charitable endeavours around the world. In 2017 TMK paid for an employee to visit numerous pieces of work that Water Aid have carried out in Madagascar and had the opportunity to assist in their efforts to alleviate poverty and provide clean sanitation to those in developing countries.

The CSR activities of the Tokio Marine Group companies are communicated globally to all of our 33,000 employees through the Tokio Marine Group journals, which are circulated monthly on the intranet. In addition, the Tokio Marine Group produces a CSR report on an annual basis, and is available publicly.

Further information can be found in the Tokio Marine Sustainability Report 2017 – Protecting the Earth.

Evidence also applies to principle(s): 3.3, 4.3

Source: Tokio Marine Kiln: List of charity donations, Tokio Marine journals available upon request.

6 Report and be accountable

6.1 Ensure that the organisation is working to incorporate the Principles into business strategy and planning by encouraging the inclusion of the social and economic impacts of climate risk as part of the Board agenda

Board level commitment

Climate change is recognised as an issue at Board level at the Corporation and each market participant has a ClimateWise sponsor at Board level:

Company	**Designated Board Member**	**Title**
The Corporation of Lloyd's	John Parry	Chief Financial Officer
Argo	Philip Grant	Independent Non-Executive Director
Beazley	Anthony Hobkinson	Group Head of Claims
Chubb	Andrew Kendrick	SVP, Chubb and President, Europe
Hiscox	Michael Schenstrom	Director of Group and Finance Operations
MS Amlin	James Few	Managing Director, Reinsurance
Navigators	Carl Bach III	Chief Executive Officer, NUAL, Navigators, Syndicate 1221 at Lloyds
QBE	Joe Gordon	Chief Operations Officer
Renaissance Re	Ian Branagan	SVP Group Chief Risk Officer
Tokio Marine Kiln	Charles Franks	Chief Executive Officer

Evidence also applies to principle(s): All.

Source: Lloyd’s ClimateWise members

The Corporation of Lloyd's / Responsible business

In 2015-2016 and 16-17 reporting, the Corporation of Lloyd's outlined how the social, ethical and environmental issues are encompassed within the Corporation strategy. As a major player in the global economy, it is important that the Corporation of Lloyd's acts responsibly.

Inga Beale, Chief Executive Officer, takes overall responsibility for the environment and energy usage including the formulation, development and implementation of the Environmental and Energy policy within the Corporation and requires the co-operation and support of all managers, employees, tenants, contractors and visitors in its implementation.

Emphasis is placed on effective management ensuring a systematic approach to the identification of environmental aspects and impacts and energy usage and the allocation of financial and physical resources to control them. Further information about the Environmental and Energy Policy can be found here.

Responsibility in the Executive team

In addition, the Chief Financial Officer[f], Chief Operating Officer[g], and Performance Management Director[h], have responsibilities under their 'management functions' to:

> *"promote the Corporate and Social Responsibility (CSR) agenda and specifically to progress Lloyd's CSR objective of using its position and voice to inform and encourage appropriate action on global social and environmental issues of relevance to insurance, such as climate change, whilst ensuring its internal practices support its external messages."*

These terms of reference implement the governance arrangements by which the Lloyd's Council operates. They also set out the terms of the delegation of authority to the Franchise Board and other committees, panels, boards and persons and permit for sub-delegation including to the Lloyd's executive.

Wider integration

The Lloyd's market aims to ensure its customers are fairly treated at all times and should aspire to the highest standards in business conduct generally. The Corporation of Lloyd's aims to use its experience and expertise to help communities around the world build resilience against disasters, including the effects of climate change and extreme weather events. All of these activities help to complement the 'Lloyd's brand' and attract new and diverse talent.

The Corporation of Lloyd's continues to be an active member of the ClimateWise initiative, reports against the variety of activities that occur across the business, and continues to attend managing committee meetings held during the reporting year.

This is reflected in the Corporation of Lloyd's business practices as well as work with community and charity partners:

> *"We continue to promote our approach to responsible business through our membership of ClimateWise, ensuring our people and customers are treated fairly, and supporting the communities we work in around the world"*

- John Parry, Chief Financial Officer

Strategy and Vision

Lloyd's strategy is to maintain and enhance the benefits of placing business and operating at Lloyd's, thereby ensuring Lloyd's policyholders are provided with valued products and services. Lloyd's Strategy 2018 – 2020 outlines the Corporation's actions in pursuit of this goal.

Lloyd's Strategy 2018-2020
Each year we assess whether current and future risks are adequately addressed, and mitigating actions in place. This assessment is made in close collaboration with the market and we publish the results in a series of rolling three year strategies.

Our strategy is broken down into six strategic priorities. Each year we adjust the activities we undertake to deliver our priorities in response to the evolving environment.

In supporting the Lloyd's market, the Corporation's activities are aligned to its three main responsibilities and delivered through the six strategic priorities:

- Protecting the interests of the market, mainly delivered through Market Oversight and Capital
- Promoting Lloyd's to its customers and other stakeholders, mainly delivered through Customers & Distribution and Brand

– Providing valued support services to Lloyd's members and market participants, mainly delivered through Operations & Services and Talent

For 2018 the focus is to respond to the challenges currently facing the market. There are four key areas of focus:

– Making market oversight more risk based
– Making our new EU subsidiary in Brussels operational by the end of 2018
– Finishing delivery of phase one of the London Market Target Operating Model and encouraging adoption of services by the market that yield business process efficiencies
– Launching pilot initiatives to make it cheaper and easier for customers to reach Lloyd's, including developing ways to encourage innovation

The Corporation of Lloyd's is committed to effecting positive change by being seen as a leader in its responsible business approach and is currently working towards creating the Corporation's first ever responsible business strategy and report on progress against a series of responsible business targets. The Corporation will also work with the Lloyd's Market Association to create a responsible business framework for the market.

The Corporation of Lloyd's recognises the need to focus on continual improvement of its environmental and energy management performance. The Corporation aims to encourage a positive culture which promotes sustainable business practices. To ensure this is achieved care for the environment and improved energy performance is actively promoted throughout the organisation through the provision of information, training, instruction and supervision.

Accountability

Each priority has a delivery plan comprising milestones and annual Key Performance Indicators (KPIs) and activities. These form a hierarchy of metrics ranging from the vision to annual KPIs for each strategic priority. The most material milestones and annual KPIs are listed for each strategic priority in the Corporation Annual report, with specific aims and objectives outlined publically in a dedicated strategy document (*Lloyd's Strategy 2018-2020*).

Internally there are further levels of detail for Corporation employees on the intranet that is promoted, tracked, and shared throughout the year. The Corporation of Lloyd's strategy and associated performance metrics framework are reviewed annually to ensure they remain appropriate, and to publically demonstrate progress to our stakeholders.

The remuneration of Corporation Directors is influenced by progress against these milestones and performance indicators. Corporation employees are also assessed against personal objectives designed to meet the performance indicators relevant to their role.

Evidence also applies to principle(s): All.

Source: The Corporation of Lloyd's

The Lloyd's market / Beazley / Anthony Hobkinson, Beazley Group Head of Claims

At Beazley, our vision is to use our expertise, influence and passion as a force for good in our local communities and the wider world.

Our ResponsIble Business efforts go beyond conventional corporate social responsibility to focus on the impact that we have on the world through our business, insurance. We strongly believe that insurance in itself is a force for good – facilitating economic activity and development, helping to protect people, property and businesses from the worst effects of adverse events, and enabling them to recover more swiftly when risks materialise.

However, beyond this, we think there is a huge amount of scope for the insurance industry to bring its expertise in risk management to bear in improving outcomes for our insureds and the societies and environment in which they operate. Our insurance products can work harder to achieve this.

We are pursuing this approach throughout the company in 2018, with a Sustainability initiative designed to further mobilise our employees and our expertise to address some of the challenges the world faces, taking its lead from the UN's Sustainable Development goals, with climate change and its associated impacts being high on the agenda.

> *"Beazley greatly values the work of ClimateWise and our participation in the initiative, which has been an important driver of our own internal sustainability and responsible business efforts. There is real momentum in the insurance industry behind the recognition that we have a key role to play in helping to address the global challenges of climate change. Beazley is committed to making further progress, by providing insurance solutions to our clients as they work to reduce carbon emissions, helping to close the coverage gap in vulnerable areas, building resilience and mitigating the physical impacts of more extreme and unpredictable weather conditions, and, ultimately, by being there to help when disaster strikes."*

- Anthony Hobkinson, Beazley Group Head of Claims

Evidence also applies to principle(s): All.

Source: Beazley

The Lloyd's market / Chubb / Climate Change as Part of the Board Agenda

Following the devestation caused by Hurricane Harvey, it is more apparent than ever that climate change will affect us in ways that have not been foreseen. In response, Chubb has invited the head of its CAT modelling department to attend at the risk committee for the first time. CAT modelling will be presenting on the risks posed to the business as a direct or indirect result of Climate Change. In doing so, the profile of climate change associated risks will be raised, and the board will be better able to make decisions for long term strategies.

Evidence also applies to principle(s): 6.2

Source: Chubb

The Lloyd's market / MS Amlin / Supporting and aligning

As part of the MS&AD Group, MS Amlin is committed to supporting and aligning to our parent organisation's CSR and environmental policies and standards.The MS&AD Group has made the environment a key part of its corporate strategy and has identified a set of key issues. These issues are: mitigation of and adaptation to climate change, sustainable use of resources, reduction of environmental burden and preservation of biodiversity.

With this strategic guidance, MS&AD continues to deliver against its mission; to contribute to the development of a vibrant society and help secure a sound future for the earth, by bringing security and safety through the global insurance and financial services business."

As a responsible member of the insurance sector MS Amlin recognise that ensuring sustainability and continuity for our clients is central to our business. We believe that acting responsibly enables us to work in the best interests of all our stakeholders, and contribute to a sustainable business and the delivery of long-term value to the societies and economies of which we are part.

Evidence also applies to principle(s): ALL

Source: MS Amlin, See CSR report

The Lloyd's market / QBE European Operations / Incorporation of Principles into business strategy

As a global insurer and reinsurer, at QBE we are focused on the sustainability of our business. As part of this, especially in an environment of rapid and ongoing change, we place importance on understanding current and emerging environmental trends impacting our stakeholders in order to be able to take a holistic, long-term view in areas such as our risk management and decision-making processes and customer services and products.

The QBE Board are supported by the following four key groups in the management and governance of the climate change activities (which may form part of managing wider ESG and sustainability activities):

- Board Risk and Capital Committee (BRCC) : oversees and guides QBE's sustainability approach, initiatives and reporting requirements and receives regular updates on performance and activity (including on climate change).
- Group Environment, Social and Governance (ESG) Committee : Executive committee reporting to the BRCC and responsible for the delivery and effectiveness of sustainability strategy, initiatives and reporting requirements. The ESG Committee is chaired by the Group Head of Communications and Marketing, a member of the Group Head Office executive team. It is made up of senior representatives from Group departments involved in the day-to-day management of sustainability issues, including Risk, Finance, Investments, Investor Relations, People, Communications, Legal, Company Secretariat and Compliance.
- Group Sustainability function : formed in 2017 under a dedicated Group Head of Sustainability, to support the work of the ESG Committee by providing greater coordination of external stakeholder engagement, sustainability strategy development, performance management and reporting.
- Climate Change Working Group : chaired by the Group Chief Risk Officer (CRO) and Group Financial Controller, with a focus on identifying and managing the physical and transitional risks related to climate change and the global shift towards a low-carbon economy. The Working Group includes senior representatives from across QBE's business (from the Group and the Divisions), including Underwriting, Investments, Finance, Risk and Operations. The Climate Change Working Group have been working with an external expert to further analyse our exposure to climate risk and build a roadmap for implementing the TCFD recommendations over the next three years. This will include a more detailed review of strategy, products, exposure and risk management in light of climate change.

We are also in the process of establishing an ESG Risk function in Group Risk, who will manage the identification and integration of ESG risks including climate-related risks.

The BRCC receive regular updates on ESG issues, including climate change. The Group Board receives specific updates, where required. Climate change is an area of increasing focus for the QBE Board, who recognise it as a topic affecting the core business of QBE and insurance companies globally. Discussions have been held at the Group Board on climate change to raise awareness of the associated risks and opportunities. In addition, climate change was discussed at the May 2018 Annual General Meeting of the QBE Insurance Group Limited. This included an overview of how QBE manages climate-related risks and opportunities and our commitment to reporting in alignment with the TCFD recommendations commencing in our 2018 Annual Report.

Evidence also applies to principle(s): 2.2, 2.3

Source: QBE Sustainability Report 2017, QBE Insurance Group – Notice of Annual General Meeting (2018), 2018 Annual General Meeting – CEO's address

The Lloyd's market / Tokio Marine Kiln / Incorporation of Principles into business strategy

Tokio Marine Kiln and the Tokio Marine Group view climate change as one of the top risks facing our industry. The commitment from our Board and senior management is embedded within our culture and corporate values: "To be a Good Company". This is evidenced and formalised in our CSR Charter, CSR reporting and our participation in international organisations which work against climate change.

Evidence also applies to principle(s): 4.1, 4.3, 6.2

Source: TMK proprietary information

6.2 Publish a statement as part of our annual reporting detailing the actions that have been taken on these principles.

The Corporation of Lloyd's / Publish a statement detailing actions

In previous reporting the Corporation of Lloyd's has outlined activities taken against the ClimateWise principles and published them online and where relevant in the annual report for the relevant calendar year.

This document constitutes 'Lloyd's' response to the ClimateWise principle for the period covering 1 July 2017 – 30 June 2018. The Corporation of Lloyd's collates and submits this document on behalf of the Corporation of Lloyd's and the Lloyd's market members outlined in the front matter of the document, to provide an overview of activities undertaken by 'Lloyd's'.

As with previous years – although this has not previously been reported publically – there have been no requests to exclude 'Lloyd's' from responding to any sub-principles, and this response will be publically available on Lloyds.com/ClimateWise with previous year's responses when the independent report is released in Q3/4.

Similar information is also available in the annual report, across Lloyd's.com and social media accounts, and internally to Corporation employees for transparency. This report goes into substantially more detail that can realistically be expected from the other sources.

In 2015, 2016 and 2017 the Corporation of Lloyd's publically released the score received from the independent reviewers as part of the commitment to communicating climate change action. This has since been repeated by other ClimateWise members, and the Corporation of Lloyd's aims to continue this in 2018 to encourage transparency and a responsible business approach.

Evidence also applies to principle(s): All.

Source: The Corporation of Lloyd's

The Lloyd's market / Beazley / Publish a statement

Our Responsible Business work is detailed in our annual report[6], which gives a thorough overview of our Community, Charity, Environment and Marketplace activities,and includes our emissions reporting.

Evidence also applies to principle(s): All.

Source: Beazley

The Lloyd's market / MS Amlin / Reporting

MS Amlin's CR activities form part of the annual CSR reporting for the MS&AD Group. A summary report is made available each year on the MS&AD website.

Evidence also applies to principle(s): ALL

Source:MS Amlin, See CSR report

The Lloyd's market / Navigators Underwriting Agency Limited / Publish an annual statement

Navigators is pleased to provide its 2018 ClimateWise report, which details our updated position, as part of the wider Lloyd's community, with regards the six core principles (and their sub-principles) of ClimateWise:

1. Lead in risk analysis
2. Inform public policy making
3. Support climate awareness amongst customers
4. Incorporate climate change into investment strategies
5. Reduce environmental impact of our business
6. Report and be accountable

As part of the Lloyd's community the report is in the form of activities primarily relating to the period July 2017 to June 2018, demonstrating how we continue to innovate and contribute to a low carbon resilient economy, noting that where applicable, continuing initiatives and activities have been retained from prior annual submissions.

ClimateWise focus for Navigators in more recent submissions has been on sustaining existing initiatives and activities, rather than actively pursuing new areas, in the main a reflection of the relatively benign state of the Energy Insurance market.

However in the 2018 reporting period, a stability, supported by a gradual upward trend has returned to the commodity oil and gas prices, which for our clients in the Oil and Gas Sector has resulted in cautious optimism, and a noticed increase in offshore and onshore exploration activity, with a natural cascade into downstream projects, with potential opportunity for the Energy Insurance sector.

Whilst for Navigators this has resulted in most cases as 'more of the same', it has raised an awareness of the need to continue to explore opportunities in non-conventional Energy or Energy aligned sectors, which is reflected in the 2018 submission.

This reporting period has also given emphasis to the tremendous capability of nature to disrupt lives and create human and economic loss in the form of three major North Atlantic Basin hurricanes, Harvey, Irma & Maria, in a 4 week period over August – September 2017. The Natural Oceanic & Atmospheric Administration (NOAA) further reported that 2017 was the 3rd warmest year on record for the USA. It was also widely reported that 2017 was the warmest non El Niño year ever recorded.

As with our more recent submissions, we report primarily against our main activity relating to Principle 3, which has seen in this reporting period significant development. We have also for this reporting period been able to show further progress in our submission against Principle 1, and maintained activity in regard to Principle 5.

Navigators continue to monitor with interest developments associated with climate risk and climate-related financial disclosure as being considered by the G20 Financial Stability Board.

Evidence also applies to principle(s): 6.1

Source: Navigators Underwriting Agency Limited (Navigators)/NavTech

The Lloyd's market / QBE European Operations / Annual statement

QBE recognises that economic, environmental and social issues are critical to the sustainability of all businesses over the longer term, and that the insurance industry has an important role in ensuring these issues are appropriately prioritised across society.

As part of our commitment to PSI and PRI, we produce annual reports to demonstrate how these principles are integrated into our decision making, risk management and investment processes.

Furthermore, QBE is a signatory to the Carbon Disclosure Project (CDP), a not-for-profit organisation which runs a global disclosure system that enables companies, investors and other bodies to measure and manage their environmental impacts. Each year the CPD Secretariat issues a questionnaire to the world's largest companies by market capitalisation, to identify the views of company management on climate-related risks and opportunities, governance, strategy and metrics. QBE Group have been reporting, on a voluntarily basis, as part of the CPD since 2010 with our recent submission available on the QBE Group website.

More recently, QBE have committed to reporting in line with the TCFD recommendations commencing in the 2018 Annual Report (released in Feburary 2019). The cross-functional QBE Climate Change Working Group has been working with an external expert to further analyse the companies' exposure to climate risk and build a roadmap for implementing the TCFD recommendations over the next three years.

The Lloyd's submission represents the annual statement of ClimateWise activities. Further information about how QBE approached sustainability issues more broadly can be found within the 2017 Sustainability Report. In addition, details of how QBE manages risk are set out in the Group Chief Risk Officer's Report.

Evidence also applies to principle(s): 2.2, 2.3

Source: QBE Sustainability Report 2017, QBE Insurance Group – Notice of Annual General Meeting (2018), 2018 Annual General Meeting – CEO's address

The Lloyd's market / RenaissanceRe Syndicate Management Ltd / Renaissance Re Holdings Ltd. reference to climate change in 2017 Annual Report

Within the RenaissanceRe Holdings Ltd. 2017 Annual Report (page 42) is a section on environmental and climate change matters. This exhibits specific commitment to ClimateWise principle 6.2 as the statement is included in an annual report that is publicly available and distributed to all shareholders communicating recognition of these issues.

"Environmental and climate change matters

Our principal economic exposures arise from our coverages for natural disasters and catastrophes. We believe, and believe the consensus view of current scientific studies substantiates, that changes in climate conditions, primarily global temperatures and expected sea levels, are likely to increase the severity, and possibly the frequency, of weather related natural disasters and catastrophes relative to the historical experience over the past 100 years. We believe that this expected increase in severe weather, coupled with currently projected demographic trends in catastrophe-exposed regions, contributes to factors that will increase the average economic value of expected losses, increase the number of people exposed per year to natural disasters and in general exacerbate disaster risk, including risks to infrastructure, global supply chains and agricultural production. Accordingly, we expect an increase in claims, especially from properties located in coastal areas. We have taken measures to mitigate losses related to climate change through our underwriting *process and by continuously monitoring and adjusting our risk management models.*

In addition to the impacts that environmental incidents have on our business, there has been a proliferation of governmental and regulatory scrutiny related to climate change and greenhouse gases, which will also affect our business. Although most regulations related to climate change and greenhouse gases do not directly apply to our business, these regulations could indirectly impact our business".

Evidence also applies to principle(s): 3.1, 4.3, 6.1.

Source: RenaissanceRe Syndicate Management Limited.

The Lloyd's market / Tokio Marine Kiln / Our commitment to Climate Change

Looking back on the past year in the insurance sector, the hurricanes Harvey, Irma and Maria (HIM) sent us all a powerful reminder that nature continues to be unpredictable and indiscriminate.

But there are patterns to be seen and climate change - its origins and its course - continues to make itself a central topic in people's conversations within all levels of human society and across all countries. Yet it also continues to divide opinion in some quarters, notably the USA where the Trump administration remains steadfast in its denial that the problem is real and (wholly or in part) man made. The science says otherwise of course and has been saying so consistently now for many years.

So at a time when there are powerful voices trying to dismiss the issue, it becomes even more important for the rest of us, in our different capacities, to redouble our efforts and commitment to responding to climate change in a positive way.

As I said last year, ClimateWise is designed to show that we care, to show that we are acting upon that care and that we're on the side of bettering the planet through actions and words.

At TMK we continue to raise awareness amongst our staff of the importance of protecting the environment in both our personal and professional lives. We also continue our efforts to reduce our own environmental impact by cutting CO2 emissions, physical waste, water usage and power consumption.

Beyond that we have a voice with our customers and suppliers and we work with them and encourage them to follow the same approach. We ask them to take responsibility for their environmental impact and act to minimise it in the interests of everyone. The good news is that they generally agree and, if they are not already doing so, are willing to add their voice to ours.

Whilst nature will always exert its power in sometimes dramatic ways, we believe in using our powers - of persuasion and advocacy - so that we can change opinions and so that the efforts of ClimateWise can have a real and positive effect on the lives of the people on this planet.

Charles Franks
Chief Executive Officer, Tokio Marine Kiln

Evidence also applies to principle(s):4.3, 5.4, 6.1

Source: Tokio Marine Kiln

Sources

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