

## 2017: Sweet-and-Sour Year for the Fight on Climate Change

By Catherine Jacques-Brissette, ACIA



2017 has been an eventful year with respect to climate activity, both in terms of actions undertaken to fight climate change and the extreme-weather events observed. On one hand, governments and businesses worldwide have made ambitious commitments to reduce greenhouse gas (GHG) emissions, demonstrating a strong willingness to transition to a lower-carbon economy. Investors around the world are increasingly demanding comprehensive climate risk disclosure and better management of climate-related financial risks and opportunities. The insurance industry is leveraging its risk management capacities to address climate change impacts. On the other hand, 2017 was “[a year of record-breaking climate events](#)” reminding us that climate change impacts are likely already upon us. Climate scientists also warn that current commitments are far from sufficient to achieve the agreed-upon climate targets and that more ambitious actions are urgently needed.

### COP23: implementing the Paris Agreement

In November 2017, I attended the 23<sup>rd</sup> Conference of the Parties (COP23) of the United Nations Framework Convention on Climate Change (UNFCCC) in Bonn, representing [CAP Développement durable](#). The COP is the supreme decision-making body of the UNFCCC, bringing together business leaders, government representatives at all levels, and civil society members from nearly 200 countries. COP23 was hosted one year after the entry into force of the landmark [Paris Agreement](#); an international agreement to reduce global GHG emissions to a level likely to limit global warming below 2°C over pre-industrial levels. COP23 was all about the “Paris rule book”, a document outlining the nuts-and-bolts details on how to implement the Paris agreement and achieve the 2°C target, which should be finalized in 2018. At the time of writing, it has been ratified by [174 parties](#); including Canada, China, the United States, India, and the European Union.

### What about Trump?

Although Donald Trump announced his intention to withdraw the U.S. from the Paris Agreement, the Paris Agreement process provides that such withdrawal cannot come into effect until November 4, 2020, which happens to be the day after the next U.S. election. Remarkably enough, rather than triggering a setback trend in climate policy as some feared, Trump’s announcement actually galvanized climate action in the U.S. and around the world. An alliance called [America’s Pledge](#) has also emerged to highlight the significant efforts undertaken by states, cities, businesses, universities and citizens across the U.S. to fight climate change. This alliance, co-chaired by Michael Bloomberg and Jerry Brown, also means to ensure that America still contributes to reaching goals set out in the Paris Agreement, which are supported by more than half of the U.S. economy and population.

### Soaring momentum in the private sector

Non-state actors all around the world are stepping up efforts to fight and adapt to climate change. A bustling atmosphere pervaded the COP23 non-party stakeholder zone, in which numerous announcements of climate commitments were made, and available solutions to decarbonize the economy were highlighted. I was proud to participate as an expert panelist in a [high-level event](#) on the enabling role of ICT solutions (Information and Communications Technologies) in tackling climate change, organized by the UN-led [Momentum for Change](#) initiative. The role of the private sector in

implementing the Paris Agreement is undeniable, as corporations emit nearly 70% of the world's total GHGs. At the time of writing, more than [340 companies](#) including Walmart, Dell, Sony and Tesco, had committed to put forward science-based emissions targets consistent with the Paris Agreement's 2°C limit.

### **Shaping the sustainable insurance agenda**

Shortly after COP23, the event [Shaping the sustainable insurance agenda in North America](#) was convened in Princeton by the United Nations Environment Programme Finance Initiative's [Principles for Sustainable Insurance](#) (PSI) and Munich Re. The actuarial profession was well represented at this inaugural PSI event in the US, with members from the IAA, SOA, CAS, AAA, and myself representing the CIA. This 'by-invitation only' event featured numerous presentations and panel discussions by insurance industry leaders, which addressed multiple ways by which insurance companies are currently responding to sustainability issues, both as risk managers and institutional investors, along with obstacles to industry responses. Introductory sessions highlighted the myriad ways that climate change might affect the economy, infrastructure, public health and national security, and the various ways by which disasters can occur and cascade. Other themes covered during the event included:

- the unique capabilities of the insurance industry with respect to risk assessment, risk pooling and risk reduction;
- the need to integrate environmental, social and governance (ESG) issues into insurance underwriting;
- the importance of building resiliency in a changing climate;
- the role of the insurance industry with regard to climate change mitigation; and
- market opportunities arising from the need to protect against climate-related risks.

In the concluding session, participants were invited to suggest possible solutions that would help shape the sustainable insurance agenda. Outcomes of this event will be outlined in a paper to be named the "Princeton Declaration of Action", aiming to help accelerate action on resilience and sustainability in the context of risk management, insurance and investment.

### **Responsible investment becoming standard**

Another key theme largely covered at the COP23 and Princeton events is how ESG factors have become mainstream decision-making considerations by institutional investors. Incidentally, the number of signatories of the UN-backed [Principles for Responsible Investment](#) has increased significantly in 2017, to reach over 1,900 signatories, representing more than U.S. \$70 trillion in assets under management (AUM). That compares with the [World GDP](#) that amounted to U.S. \$75.8 trillion in 2016. Responsible investment allows to better manage risks and to fulfill investors' fiduciary duty, and can even improve long-term returns. Indeed, a significant and growing [body of research](#) demonstrates that integrating sustainability factors into investment decision-making processes is beneficial from an economic perspective. There is little room left for hiding behind a narrow interpretation of fiduciary duties to justify a "business as usual" investment strategy.

### **Better management requires enhanced disclosure**

To make responsible investment decisions possible, investors need relevant climate-related information available for them to analyse. To help fill the gap, the Financial Stability Board created the [Task Force on Climate-related Financial Disclosures \(TCFD\)](#), chaired by Michael Bloomberg. The TCFD released its final recommendations in June 2017, aiming to provide organizations with a framework for disclosing climate-related financial risks and opportunities in their mainstream financial reporting.

Increased transparency is meant to facilitate better pricing of the financial impacts of climate change, as well as to optimize investment, lending, and insurance underwriting decisions. Ultimately, effective disclosure of these risks should contribute to a well-planned rather than a precipitous shift to a lower-carbon economy, thus minimizing disruptive impacts on financial markets. Over 200 companies, representing a total market capitalization of more than \$6.3 trillion, have publicly expressed their support of the TCFD recommendations implementation. This includes more than 150 financial firms, representing AUM of more than \$81.7 trillion. Actuaries can play a meaningful role in helping companies to implement the TCFD recommendations, especially as it relates to scenario analysis, as outlined in the submissions made to the TCFD by the [IAA](#), [CIA](#) and [IFoA](#).

The implementation of TCFD recommendations will much likely be spurred by the 2018 CDP questionnaire, which fully integrates all of those recommended disclosures. The [CDP](#) (previously known as The Carbon Disclosure Project) operates the global disclosure system allowing private and public organizations to measure, manage and disclose their environmental impacts, including disclosures on carbon footprint, carbon reduction initiatives, and risks and opportunities stemming from climate-change. [In 2017](#), the CDP represented more than 800 investors managing a total of US\$100 trillion in assets, which confirms that environmental risks and opportunities are prevailing concerns for investors. ["Today](#) nearly 6,000 of the world's largest companies, representing some 60% of global market value, disclose information on climate change, water and deforestation through CDP". This network of investors and purchasers, along with policy makers around the globe, use CDP data and insights to make better-informed decisions, taking into account the risks embedded in their investment portfolios.

### **Sobering scientific evidence**

All around the world, significant progress has been made in 2017 in terms of raising awareness, making commitments, and taking action to fight climate change. Meanwhile, 2017 was also ["a year of record-breaking climate events"](#). In a nutshell:

- "2017 experienced the highest levels of carbon pollution on record"
- "the last 3 years [2015 to 2017] have been the warmest on record"
- "Hurricanes came in rapid succession, including Hurricane Harvey [...], Hurricane Irma [...] and Hurricane Maria [...]. Scientists are at work researching the role of climate change in these events, but have already found that human-induced climate change likely increased the chances of Harvey's heavy rainfall by at least 3.5 times and its intensity by almost 20 percent."
- [carbon dioxide concentrations](#), which reached 410 parts per million (ppm) in 2017, were at their highest level in at least 800,000 years and were more than 45 percent higher than pre-industrial levels.

### **Heightened sense of urgency**

Although the 2°C target has been formalized by the Paris Agreement, current commitments taken by countries (called Nationally Determined Contributions or NDCs) fall significantly short of achieving that target. According to the [UN Emissions Gap Report 2017](#), "even if the current NDCs are fully implemented, the carbon budget for limiting global warming to below 2°C will be about 80 percent depleted by 2030". Those sobering scientific warnings remind us that the window of opportunity is narrow and rapidly closing.

Recognizing the need to urgently start reducing global GHG emissions, an international initiative called [Mission 2020](#) was put together in April 2017, under the leadership of Christiana Figueres (former UN

climate chief). In December 2017, the first [One Planet Summit](#) took place, led by António Guterres (Secretary-General of the United Nations), Emmanuel Macron (President of the French Republic), and Jim Yong Kim (President of the World Bank Group). 12 commitments to fight climate change were made, and the One Planet Coalition has been created to ensure those commitments will be fulfilled. In particular, the World Bank declared it "[will no longer finance upstream oil and gas](#)" after 2019 in response to rising risks entailed by climate change. Yet, the migration to a low carbon economy is more than a shift in investments; decarbonization entails a physical component that will impact the lifestyle of individuals and social interactions. However, it is doubtful that the awareness of changes to come or a sense of urgency has penetrated deeper than a select group of activists. Individual preferences will need to be reconciled with the true common interest, despite the competition of fake news. Educating millions of stakeholders will challenge the capacity of social media and the leadership of civil society.

### **What's in it for actuaries?**

Climate change involves complex and pervasive risks that may impact all economic sectors, both in terms of assets and liabilities. As outlined in the [CIA research paper](#) on climate change and resource sustainability, traditional actuarial practice areas will not be spared, be it P&C or life insurance, investment, pension, or ERM. Climate change is expected to increase both the frequency and intensity of floods, droughts, extreme temperatures, and hurricanes, while causing sea levels to rise (among other things). These impacts will necessarily pose higher risks to insured and non-insured property, infrastructures, as well as human life and health. On the asset side, investors cannot afford to ignore responsible investment trends and opportunities, especially investments with a long investment horizon, such as pension funds and life insurance assets. Thus, actuaries have a growing interest in understanding potential long-term impacts of climate change, as these may affect the assumptions used in assessing the value of assets and liabilities.

In addition, actuarial expertise can have a complementary added value, in collaboration with other professionals, in managing risks related to climate change. The [Actuaries Climate Index](#)<sup>™</sup> (ACI) and Actuaries Climate Risk Index (ACRI) are great illustrations of how existing actuarial techniques can be expanded into the climate change field, in partnership with other stakeholders (i.e., climate scientists in this case). The ACI is an indicator publicly available [online](#) that measures the frequency of extreme weather and the extent of sea level change. Since 1990, the index has displayed an upward trend indicating an increase in the probability of extreme weather conditions. The second and upcoming index, the ACRI, will build on the ACI by correlating those measured changes in the frequency of extreme events to economic losses, mortality, and morbidity. The ACRI's correlations will shed light on past links with economic and human casualties, and help people gain insight into the risks associated with climate change. These indices, sponsored by [four North American actuarial bodies](#), are leveraging actuaries' expertise in the assessment and mitigation of the financial consequences of risk into the analysis of climate change in Canada and the United States. Actuarial organizations in Europe and Asia are also considering extending the ACI to other countries. Following the latest data update in mid-January, the ACI received [huge media coverage](#) in Canada and the U.S., showing a keen interest in this useful and objective monitoring tool.

I strongly believe that actuarial expertise in risk management, combined with stakeholder collaboration, can serve the public interest by providing tools to manage the financial contingencies associated with different climate risks, and contribute to the design of policy options for controlling them.

### **Now what?**

The numerous and widespread efforts made in 2017 to tackle climate change are clear indicators of an accelerating momentum for climate action. Still, [climate experts stress](#) that a significant gap remains between commitments made so far under the Paris Agreement, and climate action required to achieve the agreed-upon 2°C target. Even though progress is being made, we need more ambitious commitments along with specific action plans to achieve them. This heightened sense of urgency and calls for stronger efforts to fight climate change were among the [key messages](#) conveyed by delegations during COP23 wrap-up. Governments at all levels have a role to play in the transition toward a lower-carbon economy, as so does the private sector. As climate change issues are global systemic challenges spreading across all sectors of the economy, they will be addressed best through a multidisciplinary approach involving professionals from all economic sectors. I am confident that the actuarial profession, in collaboration with key stakeholders, can leverage its risk management expertise to play a meaningful role in addressing climate change challenges.

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