



Proposed Final Statement of Intent (SOI) for IAA Activities on Climate-related Risks
Submitted to the IAA Council by the Executive Committee and its Climate Risks Task Force

1. Background

Climate-related risk has the potential to seriously affect the entire world. The degree and timing of upcoming changes in our climate involve a great deal of uncertainty, creating widespread concern about its recent and potential impacts under alternative possible scenarios. Even if the most severe climate-related risk scenarios do not materialize, many financial institutions and most individuals will nevertheless be affected. A range of effects is now being actively considered by governments, regulators, the insurance and reinsurance industries, pension plans and other entities.

Several global/high-level groups have provided important direction on potential financial sector responses to climate change, including:

- UNEP FI (United Nations Environmental Program – Finance Initiative) “[Principles for Sustainable Insurance](#)” (2012)
- UNEP FI “[Roadmap for a Sustainable Financial System](#)” (Nov 2017)
- NGFS (Network for Greening the Financial System – network of Central Banks and Supervisors) “A call for action, [Climate Change as a Source of Financial Risk](#)” (Apr 2019) and its [Technical supplement “Macroeconomic and financial stability, Implications of climate change”](#) (July 2019)
- SIF/IAIS (Sustainable Insurance Forum/International Association of Insurance Supervisors) Issues Paper on “[Climate Change Risks to the Insurance Sector](#)” (2018).
- FSB (Financial Stability Board) [Task Force on Climate-related Financial Disclosures \(TCFD\) Status Report](#) (June 2019)
- WEF (World Economic Forum) – [WEF Global Risks Report 2020](#).

The International Association of Insurance Supervisors (IAIS) has identified climate-related risk as a high priority issue. For example, the IAIS has included climate-related risk in their recently released 2020-2024 Strategic Plan. The International Social Security Association (ISSA) and Organisation for Economic Co-operation and Development (OECD) also consider climate change as a high-risk area.

Within the insurance industry, certain regulators¹, industry groups², risk management bodies³ and certain IAA Full Member Associations (FMAs)⁴ have become involved in climate change issues, largely

¹ E.g., U.K. Prudential Regulation Authority and Australian Prudential Regulation Authority, and the California Insurance Department, both as individual regulators and through their SIF participation

² E.g., Chief Risk Officers Forum

³ E.g., Global Association of Risk Professionals (GARP)

⁴ E.g., Institute and Faculty of Actuaries, Actuaries Institute (Australia), Casualty Actuarial Society, Society of Actuaries, Canadian Institute of Actuaries, and Institut des Actuaire

related to consequential risks and risk management. These efforts cover a wide range of practice areas, including all types of insurance, reinsurance and microinsurance, healthcare, pensions, investments and social insurance.

The Financial Stability Board (FSB) established the TCFD with a mandate to develop consistent climate-related financial disclosures that would be useful to investors, lenders, and insurance underwriters in understanding material risks. A dominant concern of the FSB that led to the creation of the TCFD was to prevent financial systemic shocks and painful disruptions. These might arise when risks are not properly identified, priced and managed or when the lack of long-term planning prevents an orderly transition to a low-carbon economy. The TCFD's voluntary recommendations were published in June 2017, and have gained support from leading companies and organizations around the world (833 organizations as of July 2019).

Although the IAA has already produced some useful publications⁶, the IAA has received several formal and informal requests from its key stakeholders that a systematic contribution of the global actuarial profession would be more than welcome. A strategic need has been identified to respond in a timely and proactive manner to promote the role of the actuarial approaches and contributions to addressing climate-related risks and seek opportunities to provide input to climate-related risk initiatives of key supranational partners.

2. The Need for Actuarial Involvement at the level of the IAA

It is generally recognised that climate change itself is not a new form of risk. Rather, it will amplify risks that actuaries have dealt with for a long time, as there has always been climate volatility in weather patterns and consequential damage to property, human health, and mortality. The current concern is that, since the rates of both change and volatility are and can be expected to be greater, the uncertainty concerning the future has significantly increased, partly due to possible scenarios for which previous experience is not a reliable indicator.

Addressing climate-related risks presents an opportunity for the actuarial profession to broaden the scope of its contributions to risk management, including considering the impact on the asset side of the balance sheet of insurers, pension funds, and other financial institutions. However, the most urgent need is in existing actuarial practice areas, including pensions and many types of insurance. In addition, this may open doors for the profession to contribute to the management of risks relating to the wider field of environment risks.

Much of the information about the potential impacts of climate change is currently generated by a range of experts through stochastic models, alternative scenarios and simulations addressing the uncertainties involved. As professionals who can understand the implications of the climate models and the role of insurance programs, actuaries should have a role in synthesizing and translating their results into practical information for the financial management of climate-related risks.

Other risk management bodies, such as the Global Association of Risk Professionals (GARP) or the Professional Risk Managers' International Association (PRMIA), have overall been more proactive and visible. To maintain a leading position in risk management, actuaries, as financial risk experts, need to get more involved, globally and locally. Individual actuaries and a large proportion of FMAs do not currently have the resources necessary to extract reliable data and information from the abundance of available studies, research and publications.

It is natural and expected that supranational organizations, such as the IAIS and OECD, will look (and are already looking) to the actuarial profession for significant input, both in formulating technical approaches to measure and model the costs associated with climate change and in providing assistance to both financial risk management and reporting activities within regulated entities and elsewhere. The IAIS leadership clearly has this expectation already. Supranational organizations such as ISSA and ILO, should find it useful to receive analyses from the actuarial profession of how different climate change-based government policies would affect social security, insurance and pension systems.

Several supranational organizations are currently looking for insightful information and the IAA, through its Officers and members, has already been approached for help. There is now a pressing need for the IAA to develop a plan and a strategy to respond to the needs of its supranational partners, member associations and the global actuarial profession.

As most aspects of climate risk cannot be confined to a specific region, nation, political, economic or social system, addressing it effectively should, and is, expected to be conducted by global cooperation of many stakeholders who are active internationally. Consequently, one significant level of contribution to this endeavour from the actuarial profession is at the level of the IAA.

3. Purpose of the Proposed IAA Activities

One of the most important missions of the IAA is to provide advice to and thereby make an impact on supranational stakeholders of the IAA so that the advice helps such stakeholders in their well-informed and well-founded decision making. By engaging climate risk related activities and giving advice stemming from such activities to the relevant stakeholders on a global level the IAA would serve this mission well. The IAA would thereby contribute to the valuable global efforts to further identify, measure and manage climate risks, thereby serving the public interest.

Another important objective of the IAA is to support the continual advancement of the profession in its traditional and wider fields. The Task Force has identified several opportunities in these areas, and it is expected that others will be discovered as work progresses and impacts materialize.

A key issue affecting most financial institutions is the need to identify, develop and agree with key stakeholders globally on relevant climate scenarios and then to translate such climate scenarios (specifying key factors as emissions, weather-related features such as temperature, rainfall patterns, and sea levels) into financial impacts on both their liabilities and assets. For example, some efforts to support this issue have been undertaken (such as the work being conducted by the North American and Australian actuarial associations in the development of their Actuaries Climate Indices), but far more is needed⁵. A significant contribution in this field would assist both the IAIS (through the SIF) and the TCFD by enabling companies to effectively respond to the demands of the TCFD reporting methodology.

The types of outputs we foresee should have the following direct impacts:

- Coordinate and facilitate the interchange and communication of relevant information within the profession globally, thus adding value to the separate contributions of our FMAs;

⁵ A similar climate index is being developed by the European actuarial profession

- Consolidate global actuarial contributions to support the work of supranational organizations engaged in the enhancement of risk management efforts on both a macro (global) level and on a micro level such as internal risk management, financial reporting, and prudential regulation in this area, as well as provide forum(s) for discussion;
- Stimulate research on actuarial approaches and methodologies to implement TCFD disclosures and relevant analyses;
- Help optimise adaptation and financing strategies by quantifying and facilitating the comparison of costs and benefits over long time horizons; and
- Identify and quantify mitigation strategies that can help manage risks.

We also foresee progress in attaining the following indirect objectives:

- Wider awareness of the potential impacts of climate-related risks on financial risk management, reporting and disclosure;
- Increased recognition for the potential contribution of actuaries as risk experts on the part of supranational organizations, government agencies, industry and the public; and
- Development of the actuarial profession's skill sets and capabilities to assist third parties in managing climate-related risks.

A key factor in achieving these objectives will be to enhance the coordination and effectiveness of the IAA in collaboration with other professionals and related groups, who are also addressing climate-related risks. Actuaries should strive to identify gaps in available information that should be filled by suitable experts in applicable fields.

4. Scope and Content

After discussions with the supranational organizations we partner with, the IAA should proactively respond to their most pressing needs, as well as to the needs of FMAs. We have concluded that the IAA should work to:

- i. Promote the relevant actuarial approaches in climate-related financial risk management and reporting.
- ii. Assist the relevant global stakeholders in selecting climate-dependent risk scenarios and applying them to the appropriate risk management methods such as the development of event/condition frequency and severity for actual liabilities/business portfolios in insurance, pensions and social security. Considerations include the interrelation between risks and impacts of mitigation/adaption measures.
- iii. Provide educational material on current and future impacts on categories of assets of various climate-related risk scenarios. Scenarios assessed should be consistent between liabilities and assets.
- iv. Monitor emerging information on climate changes and regularly assess how it will impact financial and insurance risks.
- v. Assist, where appropriate, in responding to modifications in regulatory/reporting/disclosure requirements and systems that arise from changes in the outlook or in the strategy to control the evolution of climate-related risks – e.g., TCFD proposals.

- vi. Monitor developments in the areas of climate changes, mitigations and transition steps undertaken, in order to identify corresponding effects on society and on industry business models, with special reference to maintaining access to equitable risk pooling.

In developing the above, the IAA should be mindful to:

- Ensure that the IAA's deliveries are relevant to both our external stakeholders and the FMAs;
- Consider what the FMAs have been and are expecting to deliver; IAA output should add value to the FMA deliveries in this area; and
- Avoid simply re-disseminating information produced by others without adding value.

5. **Activities and Timeline**⁶

Activities to be completed by the end of 2020:

- Enhance and coordinate communication with regard to relevant climate risk information (existing and new).
- Develop a paper on the role of actuaries and actuarial approaches in climate-related financial risk management and reporting, including commentary on international developments in related disclosure obligations to clients.
- Provide education and advice useful to actuaries applying global climate-related scenarios to regional and/or local circumstances for risk management and financial reporting purposes.
- Develop papers designed to stimulate development of effective and globally applicable links between climate-related risk scenarios and insurance and pension risks and costs, identifying gaps in data availability, assessment methodologies, and process capabilities at the industry sector level.

Recommended activities for 2021-2024 include:

- A paper on the application of climate-related risk scenarios to asset portfolios with an important subsidiary goal of encouraging consistency between assets and liability modeling.
- Advise supranational organizations on climate-related financial risk management and reporting and address emerging third party regulatory/reporting/disclosure requirements, if any, to provide meaningful information on climate-related risks.

⁶ To provide perspective, recent papers on the [IAA website](#), prepared by the IAA Resource and Environment Working Group include:

1. Climate Change and Mortality – November 2017
2. Decarbonization: A Briefing Paper for Actuaries – September 2018
3. Flood Risk – June 2019
4. Climate Change, Insurance and Vulnerable Populations – October 2019

Papers currently in process (as at October 2019):

5. Risk Book chapter on Climate Change (in review stage)
6. Climate Change Adaptation: A Briefing Paper for Actuaries
7. Environmental Risk Disclosures for Pension Plans: A Briefing Paper for Actuaries
8. Water Quality: A Briefing Paper for Actuaries

- A paper on the potential effects of transition and adaptation steps in this field, including the potential impact of green finance, and the consequences (including potentially disruptive changes) for the private and public insurance and pension sectors.
- Review of existing IAA publications (e.g., model standards, educational materials) relating to IFRS and IAIS topics to identify and address any climate risk related gaps, e.g., climate risk considerations when setting risk adjustment/margin assumptions and confidence levels.
- A paper on the link between climate-related risk scenarios and social security.

6. Resources Needed

The actual work is expected to be conducted through an appropriate combination of IAA groups and FMAs, working in collaboration. Joint projects with supranational organizations will be considered when appropriate.

It is anticipated that most of the work, if not all, will be done by teams of 3 to 4 people through email exchanges and conference calls.

Some coordination and secretarial support will be required from the IAA Secretariat, but this will not likely represent a significant demand on the Secretariat staff. As progress is made, the IAA could be asked to present the result of its work to supranational organizations, as such the estimated travel expenses are 12,000-15,000 CAD per year.

In summary, only a slight increase in the IAA budget to support this initiative is anticipated and benefits are expected to far exceed such additional expenses.

This is feasible by using dedicated IAA volunteer teams of 3 to 4 people per deliverable, by leveraging the work done or intended to be done by FMA teams, and by coordinating efforts.

7. Next Steps

The Executive Committee launched the Climate Risks Task Force to develop this SOI. In order to perform the activities described above, the Climate Risks Task Force should be given a new mandate to oversee the execution of the proposed activities in accordance with this SOI.