

Risk Management in the Global to Local and Now to Decadal Agendas

AMS - 15th Symposium on Societal Applications: Policy, Research and Practice: Session 3B: The Future of Financial Weather and Climate Risk Management, January, 13, 2020

Gordon McBean, PhD, FAMS, FAGU, FRSC
 Professor Emeritus, Western University, London, Canada
 Institute for Catastrophic Loss Reduction

1

"The risks associated with climate-related disasters do not represent a scenario of some distant future. They are already a reality for millions of people around the globe – and they are not going away."
 UN USG, Political and Peacebuilding Affairs

Global Risks Report 2019

A global risk is an uncertain event or condition that, if it occurs, can cause significant negative impact for several countries or industries within the next 10 years.

Need for integrated risk management across issues and globally

2

Linking social, economic, technology, science and environmental issues and the future with the present -- FINANCIAL WEATHER-CLIMATE RISK

SEEING THE FUTURE
 - Now to Season to Decades
 - Impacting Events, Exposure, Vulnerability, Risks – Impacts

3

Financial Weather-Climate Risk Management

SEEING THE FUTURE - Now to Season to Decades
 - Impacting Events, Exposure, Vulnerability, Risks – Impacts

Transdisciplinary focus on issues and information outputs.

4

Global Agenda 2030

Growing Risk in a Shrinking World

"If I had to select one sentence to describe the state of the world, I would say we are in a world in which global challenges are more and more integrated, and the responses are more and more fragmented, and if this is not reversed, it's a recipe for disaster."
 A. Guterres, UN Secretary-General, January 2019

CoP21 Paris 2015

Need an integrated approach across issues and disciplines – and levels of governance and private sectors – to address these issues together.

5

Global Agenda - 2030

Climate Convention CoP21 Paris, 2015

Article 2 - 1. This Agreement aims to strengthen global efforts to address the threat posed by climate change and to pursue... **Limiting the increase in average temperature to well below 2°C above pre-industrial levels and pursuing... and impacts of climate change.**

Adaptation - making adjustments in our decisions, activities and thinking because of **OBSERVED OR EXPECTED CHANGES** in climate, in order to moderate harm or take advantage of new opportunities.

Article 7 - 1. Parties hereby establish the **global goal on adaptation of enhancing adaptive capacity, strengthening resilience and reducing vulnerability** to climate change, ...to **sustainable development** and ensuring an adequate adaptation ...7 d) **Assisting developing countries**

(b) ...formulate and implement national adaptation plans;

6

Global Agenda - 2030 Sustainable Development Goals – 17 Goals -169 Targets

Interconnections

International and National Policy

7

Global Agenda - 2030 Sendai Framework for Disaster Risk Reduction 2015-2030

The post-2015 development agenda, financing for development, climate change and disaster risk reduction ...

Ensuring credible links, ... between these processes will contribute to building resilience and achieving the global goal of eradicating poverty." ...action within and across sectors by States at local, national, regional and global levels

Four priority areas for Disaster Risk Reduction

1. Understanding disaster risk;
2. Strengthening disaster risk governance to manage disaster risk;
3. Investing in disaster risk reduction for resilience;
4. Enhancing disaster preparedness for effective response, and to "Build Back Better" in recovery, rehabilitation and reconstruction.

Lead - S&T Major Grp

IRDR

8

Integrated Research on Disaster Risk

An integrated approach – disciplinary, hazards ... - Objectives:

1. Characterisation of hazard, vulnerability and risk.
 - 1.1 identifying hazards and vulnerabilities leading to risks; **Forensic Investigations - FORIN - DATA**
 - 1.2 forecasting hazards and assessing risks; and
 - 1.3 dynamic modelling of risk.
2. Effective decision-making in complex and changing contexts, interpretation to Action - RIA
 - 2.1 identifying relevant decision-making systems and their interactions;
 - 2.2 understanding decision-making in the context of environmental hazards;
 - 2.3 improving the quality of decision-making practice
3. Reducing risk and curbing losses through knowledge-based actions.
 - 3.1 Vulnerability assessments
 - 3.2 Effective approaches to risk reduction

International Centres of Excellence (16)

- Disaster Resilient Homes, Buildings and Public Infrastructure
- Vulnerability and Resilience Metrics University of South Carolina
- Risk Education and Learning Periperi U, Stellenbosch U, South Africa

9

futurearth Future Earth

RISK-KAN EMERGENT RISKS AND EXTREME EVENTS

To build global knowledge leadership on emergent risks and extreme events.

Extreme climate and weather events, associated disasters, and emergent risks are becoming increasingly critical in the context of global environmental change. They are a potential major threat to reaching the Sustainable Development Goals (SDGs) and one of the most pressing challenges for future human well-being.

Multi-hazard Risk and Resilience Inter-Disciplinary Institute

10

Climate Disclosure, Liability and Finance

Following the 2008 financial crisis, **Financial Stability Board** recognized the **growing risk of climate-related issues to the global financial system**. Carney and Bloomberg, industry-led **Task Force on Climate-Related Financial Disclosures** framework for identifying, evaluating, and disclosing climate-related risks. Final recommendations in 2017.

ICLR report - CLIMATE RISK DISCLOSURE, LIABILITY AND FINANCE.

1. Disclosure - Businesses and governments are increasingly expected to disclose the climate risks they face and their plans to manage their exposure. Voters, consumers, investors and other stakeholders expect to be informed.
2. Liability - Loss and damage from severe weather events is rising. When may we expect that the courts would find anyone liable for losses and damage?
3. Finance - Canadians - significant losses from recent floods, fires/other extreme weather events. How will Canadians finance the cost of recovery and reconstruction from future events, investments in resilience, and transition to low carbon economy?

11

Meeting the Climate Challenges

May 24-28, 2020 Ottawa 54th STSBO

ACTION

Unite Behind the SCIENCE SAVE THE EARTH

Comprehensive Actions Needed

12