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# **Latest Trends and Developments Related to Climate Change: What does it mean for the insurance industry?**

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Program**

Statutory General Assembly  
15 June 2017, San Francisco  
(Hotel Ritz Carlton)

## Climate risk encompasses broad range of risks

### Physical risks

**Climate- and weather-related events impacts on property, infrastructure, supply chains and trade (e.g., floods, storms)**

- Increased severity and frequency of extremes or long-term shifts in climate patterns

### Liability risks

**Those suffered loss or damage from climate change seeking compensation from those they hold responsible**

- Potential to hit carbon extractors and emitters – and, if they have liability cover, their insurers – the hardest”

### Transition risks

**Financial risks from transitioning towards a lower-carbon economy**

- Policy, technology and physical risks could prompt asset-value reassessment (stranded assets)

### Reputation risks

**When brand names are associated with climate-related damages or perceived mismanagement of the above risks**

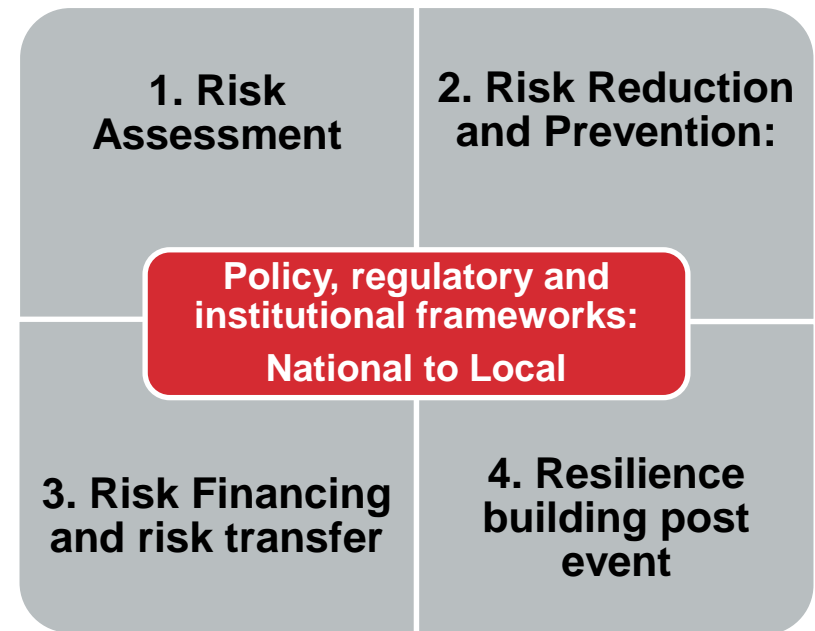
# Three UN Frameworks has profoundly impacted governments' approaches to disaster risk management, climate change, and sustainable development ...

### Key developments based on UN frameworks since 2015

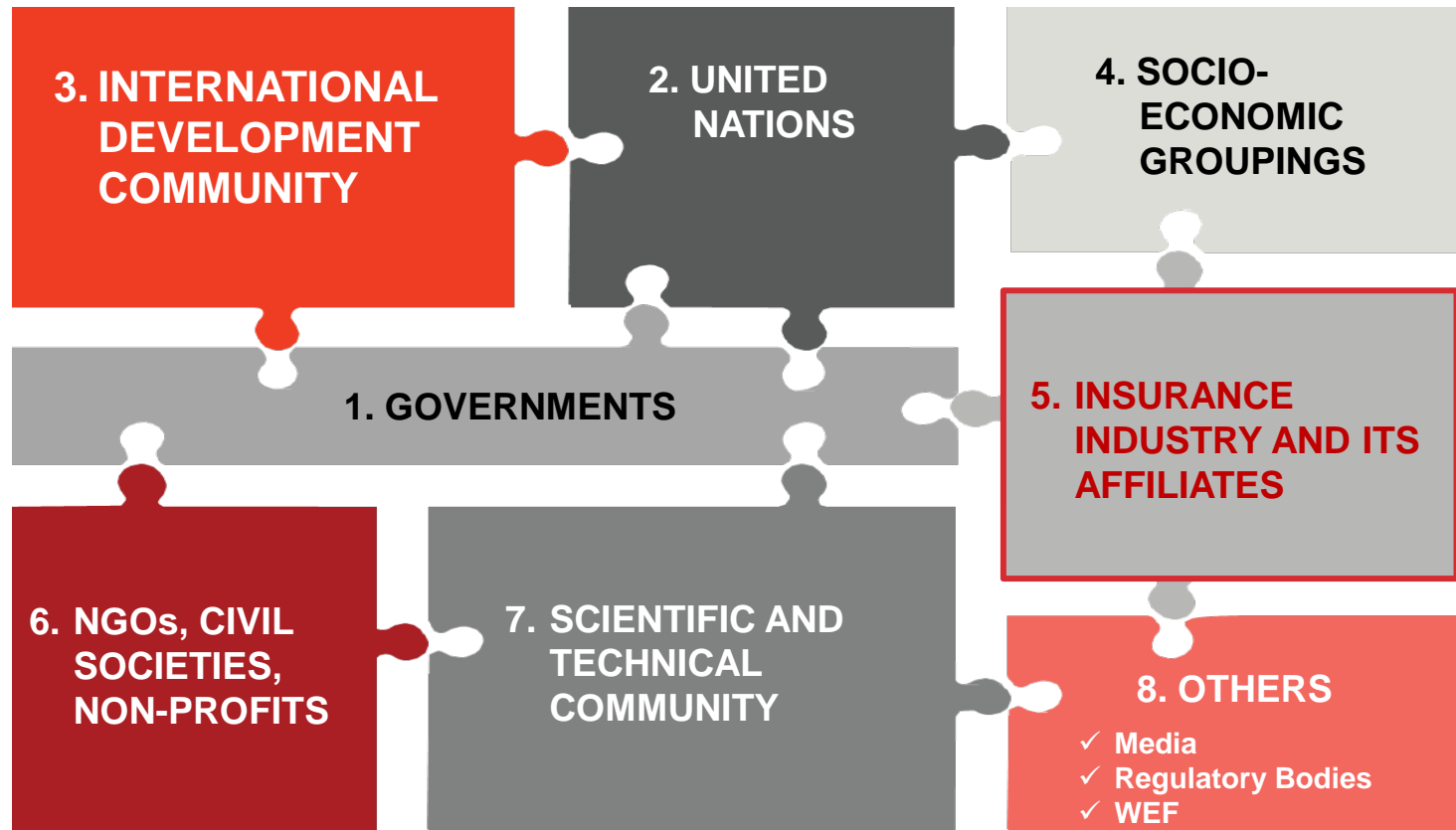
#### 2015 – a pivotal year:

- ✓ 190 governments adopted: (1) Sendai Framework for Disaster Risk Reduction (2015-2030), (2) COP21 Climate Change Paris Agreements; (3) 2030 Agenda for Sustainable Development.
- ✓ Common thread: Convergence from a highly fragmented line-ministry silos towards a comprehensive approach to disaster and climate risk management (resilience and adaptation)
- ✓ Integration into national development planning/budgeting and involvement of ministers of finance are “slowly” coming into focus.
- ✓ Role of insurance is being recognized.

### Comprehensive approach with four key components



## A “highly” complex and diverse global stakeholder landscape supports governments with implementation



**On average, insurance protection gap has been estimated to be around 75 per cent for natural hazards globally**

**(~50% for high- and ~90% for middle- and low income countries)**

### Seven overall challenges

1. Access to risk information and risk pricing difficulties
2. Public policy and regulatory issues
3. Stakeholder-relevant products and services
4. Lack of awareness about insurance
5. Limited take up
6. Domestic insurance market
7. Scale and sustainability

### More specific issues to solve

#### 2. High-income countries Also experience

- Fluctuating capacity and Market appetite
- Risk-pricing difficulties
- Public policy & political motivation

#### 1. Overall

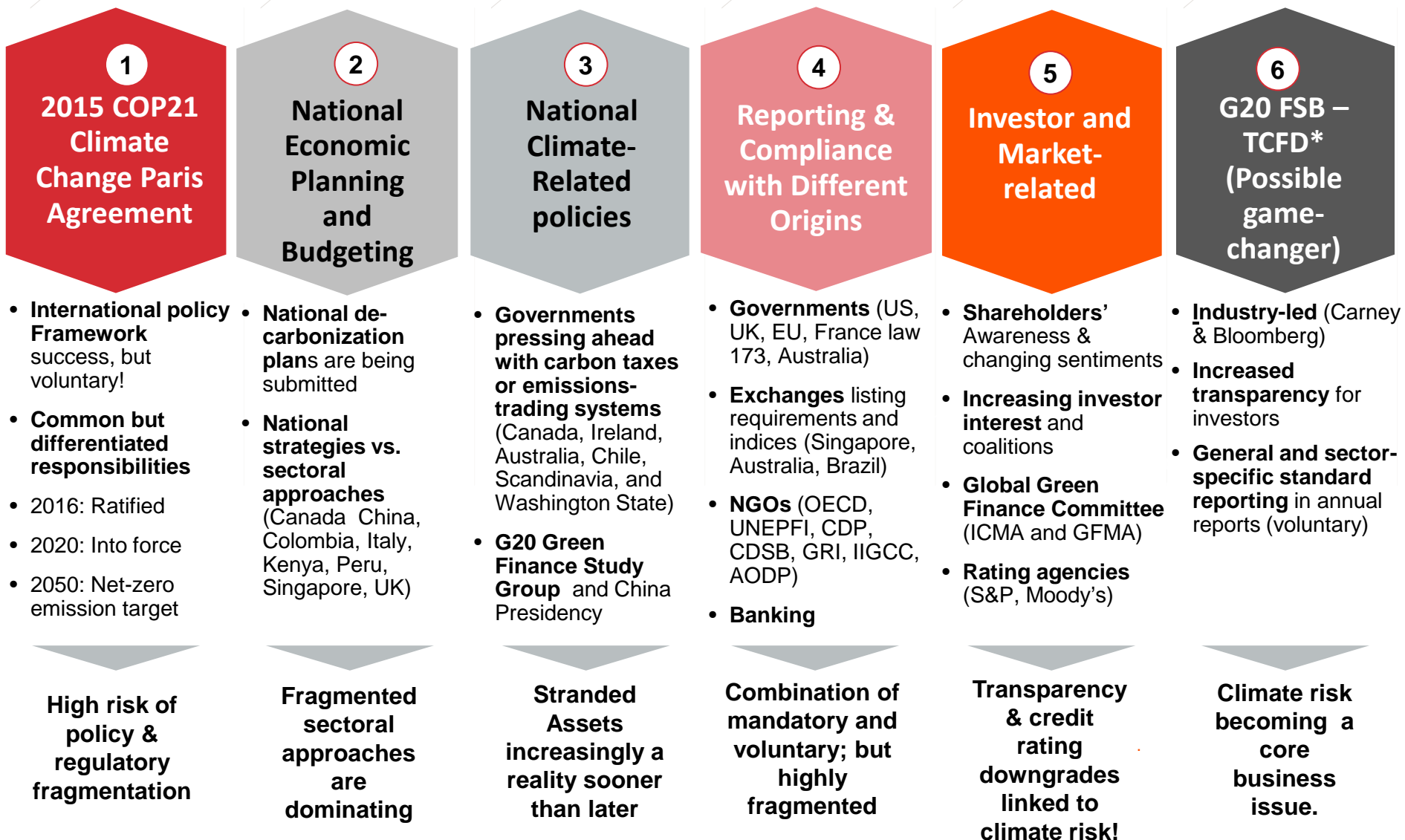
- Difficulties in risk assessment due to lack of data
- Asymmetrical information & adverse selection
- Limited take up
- Moral hazard unless insurance is incentivizing risk-reducing behavior



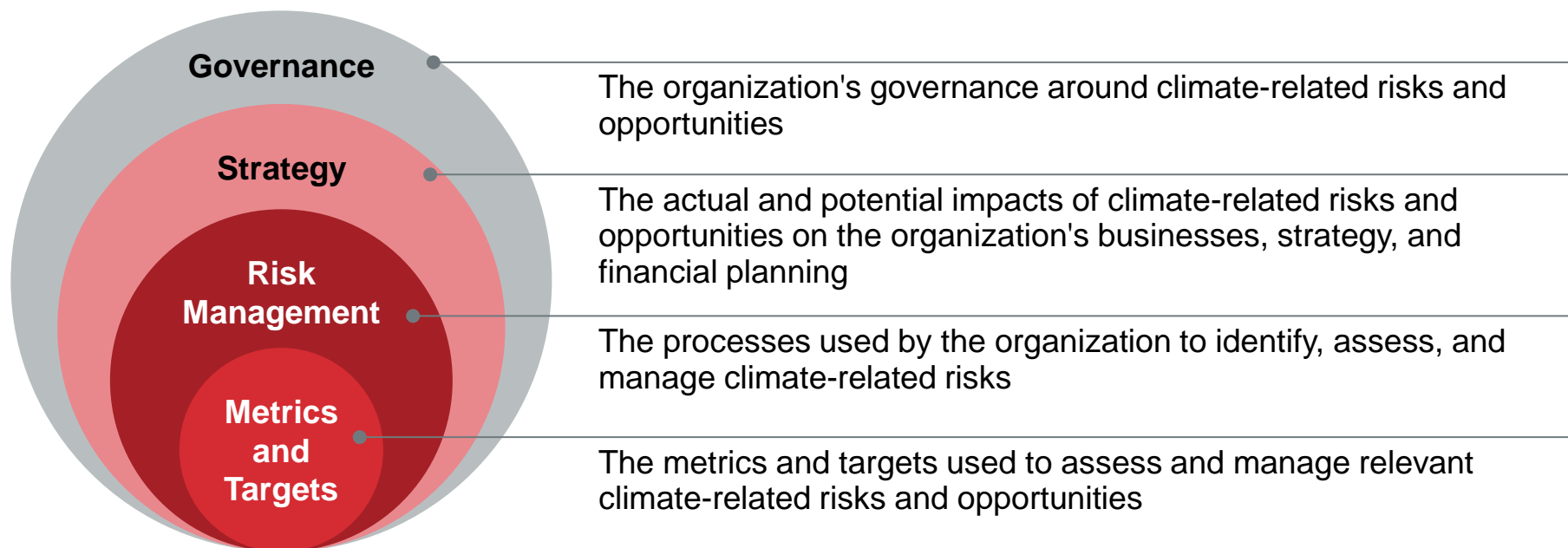
#### 3. Mid- and low-income countries also have additional issues

- Lack of
  - Data
  - Risk modelling tools
  - Technical expertise
- Developed domestic finance sector
- Regulatory constraints
- Need for global (re)insurance capacity and expertise
- High distribution and claims settlement costs
- Scale and sustainability

# The dialogue in climate change is increasingly focused on risks, solutions and economic opportunities



## G20 FSB-TCFD is changing the paradigm; elevating climate risk from a social and corporate responsibility to a core business issue!



- ▶ Could potentially replace the highly fragmented reporting requirements with a **more consistent framework** for publically-traded companies.
- ▶ **Data sharing**, need for **standard approaches to 2-degree scenario testing**, **expertise** and **integration** may pose challenges!

## Eight Take Away Messages

1. Four different types of climate-related risks could lead to financial and economic impacts: Physical, Liability, Transition and Reputational risks
2. Economic impacts of weather-related extremes are on the rise (physical Risks), exacerbated by climate change and development patterns
3. Since 1960s three UN international policy negotiations in disaster risk management; climate change and sustainable development profoundly impacted the way governments manage these issues
4. 2015: a pivotal year – Convergence towards a comprehensive approach to extreme event risk Management is being considered by governments: Risk-based and including: (i) preventive measures (ii) emergency preparedness and early warning; (iii) risk financing and risk transfer; (iv) further resilience through improved reconstruction
5. Integration into national development planning/budgeting and involvement of ministers of finance are “slowly” coming into focus. Role of insurance is being recognized.
6. The climate change discussion has shifted from “whether anthropogenic climate change is real or not and corporate social responsibility” to “determining sound pathways and economic opportunities towards a low carbon economy and institutionalizing climate risks into core business”!
7. Insurance industry could play an important role both as risk underwriters and as institutional investors, **but** a number of questions remain
8. The Geneva Association through its strategic/policy research and influencing activities is working with the global insurance industry and the global stakeholder landscape to address these issues





For more information please contact:

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## Backup Slides

# The Geneva Association issued its Climate Statement, signed by 68 member CEOs – Unprecedented industry-level convergence

## Some Highlights

**Investment in research and Knowledge Sharing** in Risk Modelling, Risk Pricing, Prevention, etc.



**Product innovation, market development, claims settlement** to build resilience and to encourage transitioning to low carbon economy.



**Adaptation and mitigation strategies** and their cost/benefits and **building partnerships with the public sector.**



**Insurance products, investment strategies** to support low-carbon energy encourages mitigation and adaptation efforts, such as **investing in low-carbon energy projects.**



1. Néstor Abatidaga, CEO, Sancor Seguros
2. Fadi AbuNahl, CEO, TrustRe
3. Carlo Acutis, Vice President, Vittoria Assicurazioni S.p.A.
4. Dominic Addesso, President and CEO, Everest Re Group, Ltd.
5. Khalifa Al-Subaey, Group President and CEO, QIC Group
6. Oliver Bäte, Chairman of the Management Board, Allianz SE
7. Inga Beale, CEO, Lloyd's
8. Albert Benchimol, President and CEO, Axis Capital Holdings Ltd.
9. Andreas Brandstetter, CEO, UNIQA Insurance Group AG
10. Charles Brindamour, CEO, Intact Financial Corporation
11. Carlo Cimbri, CEO, Compagnia Assicurazioni UNIPOL S.p.A.
12. Dean Connor, President and CEO, Sun Life Financial Inc.
13. Henri de Castries, Chairman and CEO, AXA Group
14. Patrick de Larragoiti Lucas, President, Sul América Seguros
15. Josef de Mey, Chairman of the Board, Ageas
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18. Sten Dunér, President and CEO, Länsförsäkringar AB
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20. Jari Eklund, Group Director, LocalTapiola Group
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22. Stuart Fletcher, Chief Executive, BUPA
23. Lard Frieze, CEO, NN Group
24. Patrick Frost, Group CEO, Swiss Life
25. Mario Greco, Group CEO, Assicurazioni Generali S.p.A.
26. Evan Greenberg, Chairman and CEO, ACE Group
27. Donald Guloien, President and CEO, Manulife Financial
28. Peter D. Hancock, President and CEO, AIG Inc.
29. Lianhong Huo, China Pacific Insurance (Group) Co., Ltd.
30. Constantine Iordanou, Chairman and CEO, Arch Capital Group Ltd.
31. Ajit Jain, President, Berkshire Hathaway Group
32. Denis Kessler, Chairman and CEO, SCOR SE
33. Chang-Soo Kim, President and CEO, Samsung Life Insurance Company Ltd.
34. Andrzej Kleszyk, President and CEO, PZU
35. Frédéric Lavenir, Director General, CNP Assurances
36. Michel Liès, Group CEO, Swiss Reinsurance Company Ltd
37. David. H. Long, Chairman & CEO, Liberty Mutual Group
38. Jorge Magalhaes Correia, CEO Fidelidade Group
39. Bronek Masojada, Chief Executive, Hiscox plc
40. Spiros Mavrogalos, CEO, Ethniki Insurance Company
41. Mike McGavick, CEO, XL Group, XL Catlin
42. Tomás Muniesa, CEO, Vida Caixa S.A.
43. Akio Negishi, President, Meiji Yasuda Life Insurance Company
44. Tomoatsu Noguchi, President and Chief Executive, The Toa Reinsurance Company Limited
45. Torsten Oletzky, Chairman of the Board of Management, ERGO Versicherungsgruppe AG
46. Gonzalo Alberto Perez Rojas, President, Suramericana de Seguros S.A.
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49. Kengo Sakurada, President and CEO, Sompo Japan Insurance Inc.
50. Martin Senn, CEO, Zurich Insurance Group
51. Chang-Jae Shin, Chairman and CEO, Kyobo Life Insurance Company Ltd.
52. Patrick Snowball, Group CEO, Suncorp
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57. Esteban Tejera Montalvo, First Executive Vice-Chairman, MAPFRE
58. Yoshinobu Tsutsui, President, Nippon Life Insurance Company
59. Willem van Duin, Chairman of the Executive Board, Achmea B.V.
60. Nikolaus von Bomhard, Chairman of the Board Management, Munich Reinsurance Company
61. Ulrich Wallin, Chairman of the Executive Board, Hannover Re
62. Christopher J. B. Williams, Chief Executive Officer, HCC Insurance Holdings, Inc
63. Mike Wilkins, Managing Director and CEO, Insurance Australia Group Ltd.
64. Mark Wilson, CEO, Aviva plc
65. Greig Woodring, President and CEO, Reinsurance Group of America Inc.
66. Alexander Wynaendts, CEO and Chairman of the Executive Board, AEGON N.V.
67. Wu Yan, Chairman, The People's Insurance Company (Group) of China Ltd.
68. Eugenio Yurrita Goiburu, CEO, BBVA Seguros SA

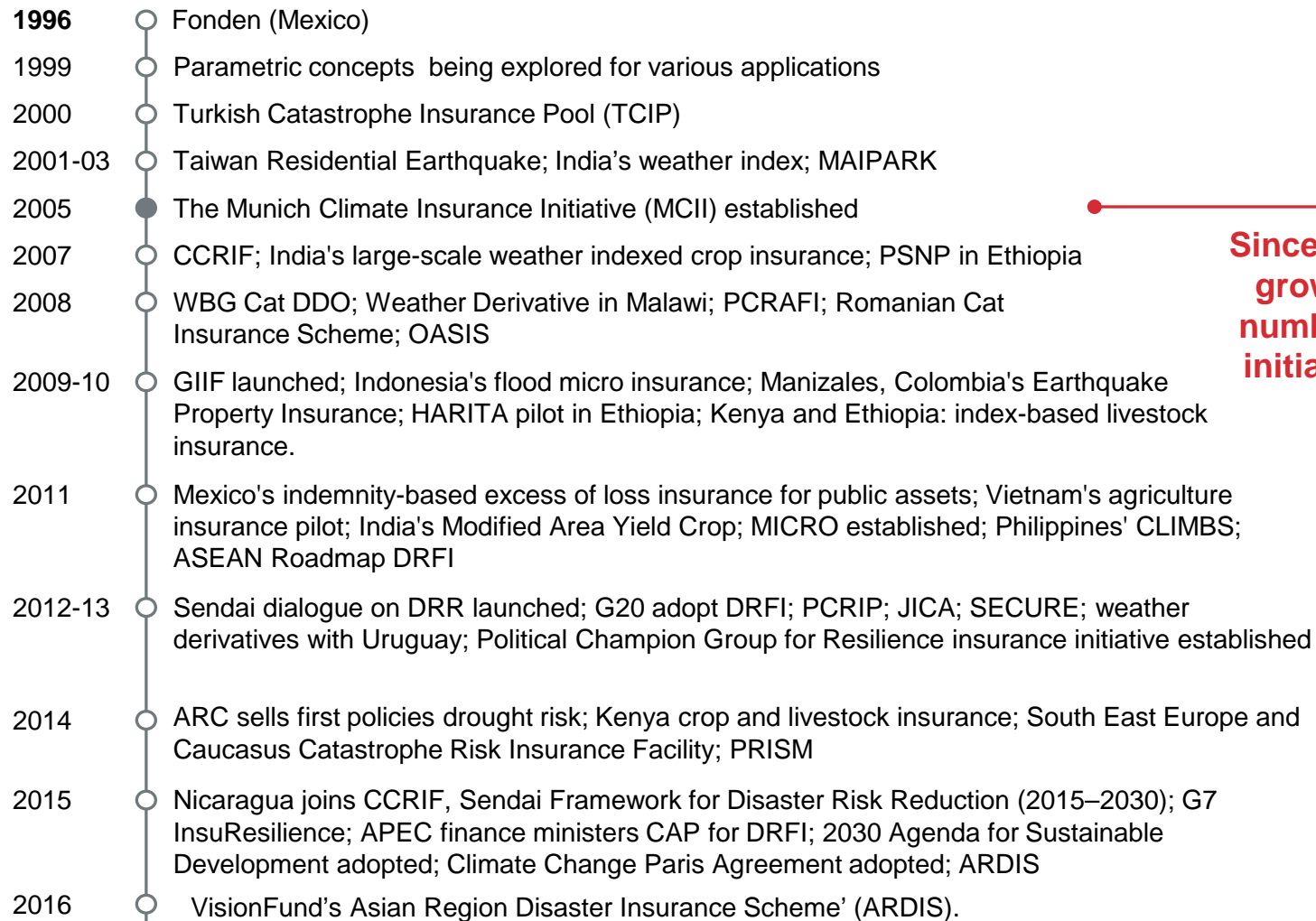
# There is a rising trend in weather-related economic losses and uninsured losses

*Natural disaster losses worldwide (1980-2015)*

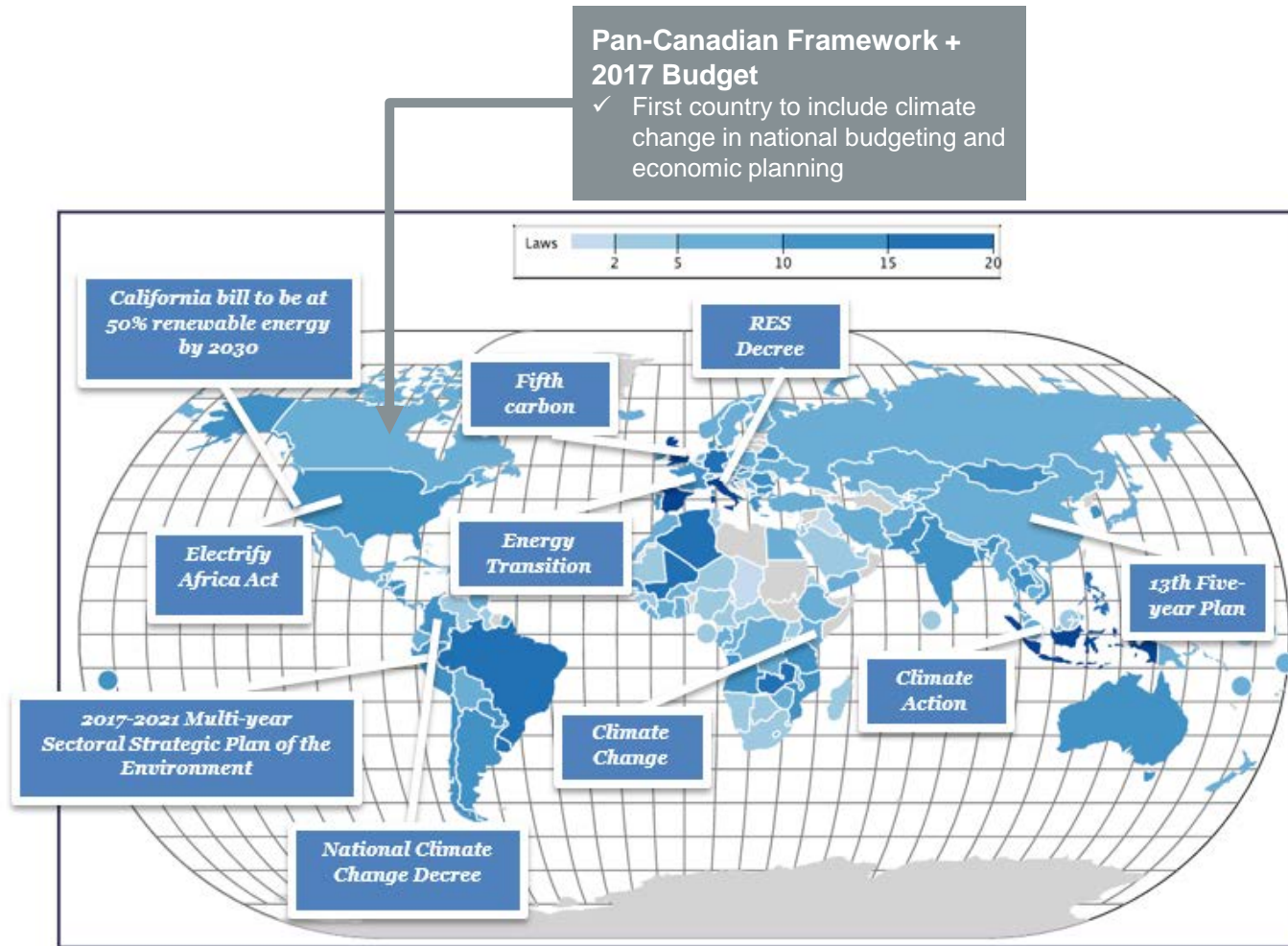


- Economic risks are further exacerbated by climate change and development patterns.
- On average, insurance protection gap has been estimated to be around 70 per cent for weather-related hazards (~50% for developed and ~90% for developing nations)

# Since 2015, growing number of risk transfer initiatives, but scale and sustainability remain key issues!

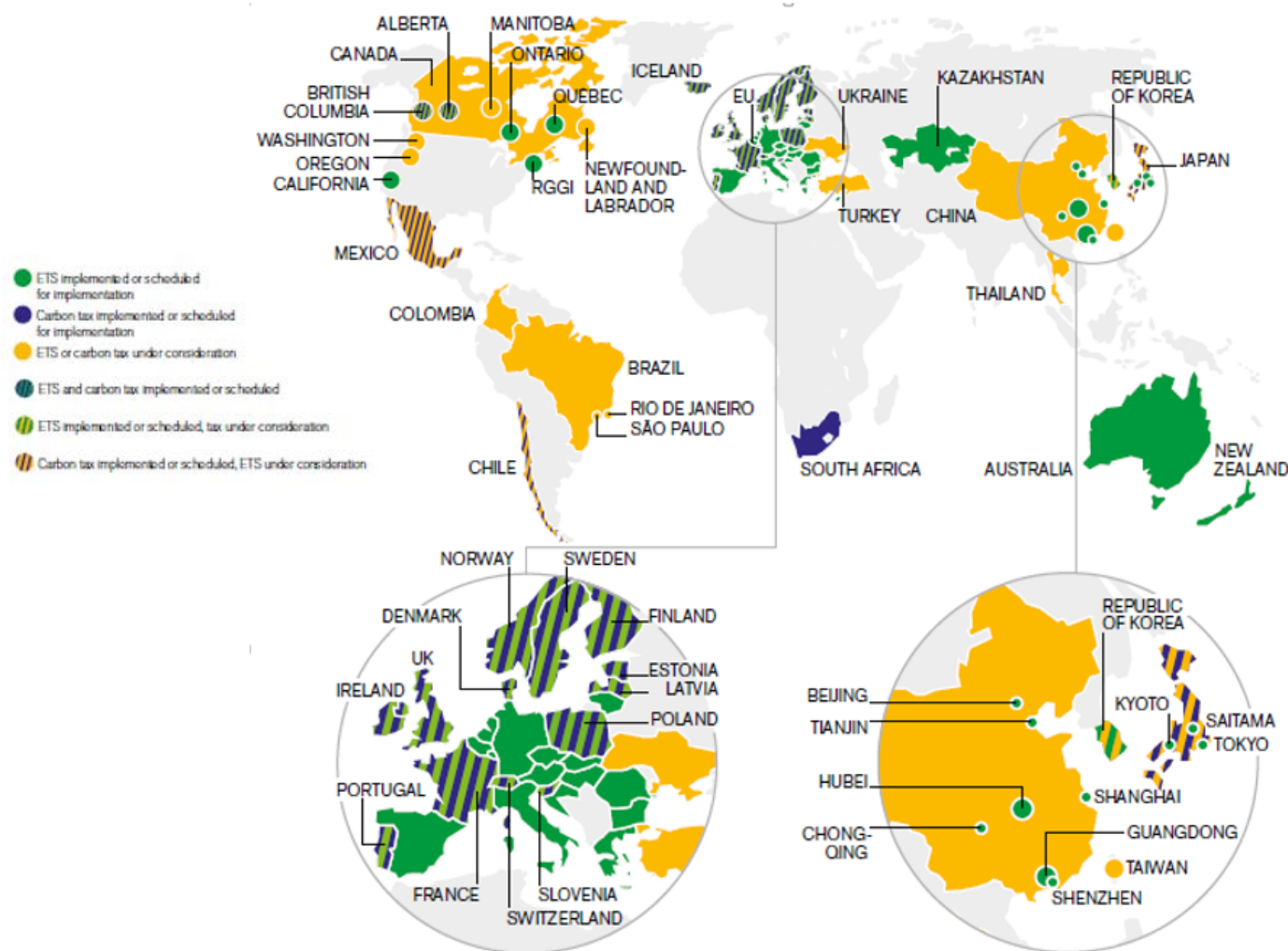


# Highlights of climate change national planning, legislative and executive acts since 2015





## Summary of existing, emerging and potential regional, national and subnational carbon pricing initiatives (ETS and tax) as of the end of 2016





## Objectives

- 
- Deliver insights for further harnessing market-based insurance to reduce the protection gap and support risk reduction and resilience agenda in developed and developing countries
  - Explore role of insurance industry in transitioning to low carbon economy
  - Facilitate and provide a platform for high-level industry-relevant dialogue with key stakeholders e.g., Ministries of finance, international development community, UN, Socio-economic groupings, etc.

(Co-)Chairs: D. Kessler, S. Sumi

### EE+CR Working Group

(15 members)

**Expert Task Teams have been established to support project implementation.**

### High-level dialogues:

- GA/OECD (Paris, Dec 2015)
- HLM-UN SG: UN HQ, NYC (March 2016)
- UN Climate Action Summit (May 2016)
- UN Heads of Government COP21 signatory meeting (April 2016)
- World Bank UR 2016 – Critical Infrastructure (Venice, May 2016)
- EC DG Clima (Oct. 2016)
- UN Global Platform on DRR (Cancun, May 2017)

## Four priority themes under two pillars (2016-2018 Work Plan)

### Pillar 1:

#### Resilience to Extreme Events and Climate Risk

##### 1. How Can Risk Modelling shape the Future of Extreme Event and Climate Risk Management? Innovation in Risk Transfer and Beyond (Forthcoming Sept 2017)

- **2017 EE+CR Forum:** (GA-SCOR Foundation Conference) “How will Risk Modelling Shape the Future of Risk Transfer?” (March 8-9 2017, Paris)

<https://www.genevaassociation.org/events/2017/2017-extreme-event-and-climate-seminar>

##### 2. Pathways to more effective PPPs for expansion of sustainable risk transfer (May 2017 – June 2018)

- Case study of Australia, UK, Germany, Canada, and Japan flood risk management with focus on the interplay of preventive and risk transfer measures

##### 3. Role of insurance industry in investing in and resilience of critical infrastructure (To be launched in 2018)

- **2018 EE+CR Forum: “Pathways to Climate Resilient 21st Century Critical Infrastructure”** (GA with Intact Financial) (7-8 March 2018, Canada)

### Pillar 2:

#### Transitioning to Low Carbon Economy

##### 4. Survey of Investments and Liability Approaches of the GA Members in Relation to Climate Change – Perspectives from the insurance industry (Forthcoming Nov. 2017)

- Based on interviews with CIOs, CROs and Chief Underwriter of the global insurance industry



## Pillar 1: Resilience to Extreme Events and Climate Risk

**1) An Integrated Approach to Managing Extreme Events and Climate Risks (Sept 2016)** - Towards a Concerted Public-Private Approach With recommendations to harness potential contributions of the insurance industry

**Authors:** M. Golnaraghi, S. Surminski, and K. U. Schanz

Link for the report: [https://www.genevaassociation.org/media/952146/20160908\\_ecoben20\\_final.pdf](https://www.genevaassociation.org/media/952146/20160908_ecoben20_final.pdf)

**2) The “Global” Stakeholder Landscape in Extreme Events and Climate Risk Management (Jan 2017) - PPPs**

**Authors:** M. Golnaraghi and P. Khalil

Link for the report: <https://www.genevaassociation.org/media/956576/stakeholder-landscape-in-eeecr.pdf>

**3) Guidelines for Risk Assessment to Support Sovereign Risk Financing and Risk Transfer (GA/IDF joint publication) (A module of UNISDR National Guidelines) (June 2017)**

**Authors:** M. Golnaraghi, I. Branagan, S. Fraser, J. Gascoigne, A. M. Gordon

**Note:** This document has been developed in response to a request from United Nations Office for Disaster Risk Reduction (UNISDR) as part of "Words into Action Guideline on National Disaster Risk Assessment: Governance System, Methodologies, and Use of Result".

**4) How Can Risk Modelling Shape the Future of Extreme Events and Climate Risk Management? Innovation in Risk Transfer and Beyond (Forthcoming Sept 2017)**

Engaging 22 leading experts in risk modelling as co-authors (from industry, risk modeling, science and technology and governments and addressed two key issues:

- (i) How can innovation in CAT risk modelling be transferred to the public
- (ii) Opportunities for innovating risk modelling using latest scientific and technological developments

**2017 EE+CR Forum** (Geneva Association-SCOR Foundation Conference): “How will Risk Modelling Shape the Future of Risk Transfer?” Hosted by SCOR (March 8-9 2017, Paris)

<https://www.genevaassociation.org/events/2017/2017-extreme-event-and-climate-seminar>

### **5) Case Study: Comparative Analysis of Assessment of Flood Risk Management Programs: Australia, UK, Germany, Canada, and Japan (Launched in May 2017 – Forthcoming June 2018)**

Based on extensive literature review, stakeholder analysis and interviews

### **6) Role of insurance industry in building climate resilience of critical infrastructure (To be launched in 2018)**

Note: Research framework will be developed and presented to the GA Board in November 2017.

**2018 EE+CR Forum:** (Hosted by Intact Financials Corporation) “Pathways to Climate Resilient 21st Century Critical Infrastructure - A High-Level Multi-Stakeholder Dialogue with focus on the Role of (Re)Insurance Industry and PPPs” (March 7-8, 2018, Canada)

## **Pillar 2: Transitioning to Low Carbon Economy**

### **1) COP 21 Paris Agreement: What Does it Mean for the (Re)insurance Sector? (Jan 2016)**

Authors: Maryam Golnaraghi with contributions from: David Bresch, Peter Höppe, Karsten Löffler, Masaaki Nagamura, Ernst Rauch

Link for the report: [https://www.genevaassociation.org/media/942906/whatdoescop21meanforinsurance\\_complete\\_digital.pdf](https://www.genevaassociation.org/media/942906/whatdoescop21meanforinsurance_complete_digital.pdf)

### **2) Survey of Investment and Liability Approaches of the GA Members in relation to Transitioning to Climate Changes – Managing Climate Risks and Transitioning to Low Carbon Economy? (Forthcoming November 2017)**

Industry perspectives from asset and liability sides of insurance business – (Based on interviews with CIOs, CROs and Chief Underwriter of the global insurance industry)