

# The Geneva Association – Webinar

***Leveraging Insurance Industry contributions to Managing  
Extreme Events and Climate Risks: from words to action***

---

Dr. Maryam Golnaraghi  
Director of Extreme Events and Climate Risks  
Programme

4 November 2016

- \ About The Geneva Association
- \ The Geneva Association Climate Risk Statement (19 November 2015) – Signed by 68 CEOs of Global (re)insurance industry
- \ GA Facilitated High-level Consultations on role of the insurance industry in managing extreme events and climate risks 2015/2016
- \ Underpinning GA Research Conducted to date to guide the prioritization for action:
  - ✓ Report: An Integrated Approach to Managing Extreme Events and Climate Risks: Towards a Concerted Public-Private Approach
  - ✓ Report: The COP 21 Paris Agreement: What Does It Mean for the (Re)insurance Sector?
  - ✓ Global Stakeholder Landscape and Initiatives
- \ From Statement to Action on Extreme Events and Climate Risks Programme – GA Work Plan (2016-2018)
  - Pillar 1: Disaster Risk Management and Climate Change Adaptation
  - Pillar 2: Transitioning to Low Carbon Economy

- \ The Geneva Association is the leading international insurance think tank for strategically important insurance, economics and risk management issues.
- \ The membership comprises a statutory maximum of 90 chief executive officers (CEOs) from the world's top insurance and reinsurance companies, whose companies have gross written premiums of nearly \$2 trillion, more than \$14tn in total assets, more than 2 million employees, and serving customers in more than 140 countries.
- \ We work directly with C-Level executives, chief economists, and leading experts in the industry as well as other partners.



19 November 2015

\ The Geneva Association issued its Climate Risk Statement, a commitment to progress on climate resilience and adaptation signed by 68 chief executive officers of the global (re)insurance industry.

## Some Highlights:



### Climate Risk Statement of The Geneva Association

The new Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) strongly indicates that climate change is happening, mankind's influence is very material and the changes are occurring faster than earlier projected. The prospect of extreme climate change and its potentially devastating economic and social consequences are of great concern to the insurance industry.

Against this backdrop, we, the leaders of the world's largest insurance and reinsurance companies as assembled in The Geneva Association, want to make known our view through the following key messages.

#### Customers

- We are committed to enhancing our research capabilities in order to provide a better evaluation and management of climate risks.
- We promote mitigation efforts by developing products which incentivise offsetting or reducing greenhouse gas emission levels.
- We are willing to design insurance products to support low-carbon energy development projects and to help attract investments to such projects.
- As a major institutional investor, the insurance industry encourages mitigation and adaptation efforts, such as investing in low-carbon energy projects.

#### Policymakers

- The insurance industry is prepared to help counter climate risks through active cooperation in implementing building codes or similar measures which encourage the use of sustainable practices.
- We offer to work closely with policymakers on communicating to our customers their climate risk levels, possible strategies of mitigation and adaptation, and in quantifying the financial benefits of those strategies.
- The insurance industry provides innovative solutions for climate risk issues. These include funding relevant research and providing tools to its members to assess and counter climate risks.
- We recognise the significant benefit of pooling climate risks. We urge policymakers to collect robust data and make it freely available to allow risk assessment and to facilitate efficient solutions where premiums are risk-based.

#### United Nations

- The insurance industry is uniquely positioned to provide specialised services for countries and businesses facing climate risks worldwide.
- Insurers have the expertise to develop a broad range of affordable private insurance solutions for climate risks.
- Insurance mechanisms are an effective tool to promote climate-related risk management and reduction.
- We recognise that no stakeholder can succeed alone in solving the challenges of climate change. Insurance can and should be a strong complementary mechanism in a wider framework of adaptation and disaster risk reduction.

#### Insurance industry

- We encourage political processes to work towards a better understanding of the potential costs of climate change and the advantages of market-based solutions.
- We continue to work towards further reducing the—relatively moderate—carbon footprint of the insurance industry.
- We are willing to play a major and concerted role in the global efforts to counter climate risks.

The Geneva Association offers a unique platform to pool the knowledge and expertise of the insurance sector. It acts as a hub for expert networking within the industry as well as with external communities. The Geneva Association strives to create opportunities for the insurance industry to join their forces to deal with climate risks where relevant and appropriate.

Toronto, 16 May 2014

Investment in research and Knowledge Sharing: Risk Modeling, 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.

\ Link to the GA Climate Risk Statement: <https://www.genevaassociation.org/media/934317/geneva-association-commits-statement.pdf>

The GA has organized a number of high-level consultations on Insurance and Climate Change (engaging CEOs, Heads of UN and other International Organizations, Ministries of Finance.)

- \ Special Session on Climate Change and the Insurance Sector : A joint Event of OECD and The Geneva Association (3 December 2015, Paris)

<https://www.genevaassociation.org/media/939001/ga2016-oecd-ga-special-session-on-climate-change.pdf>

- \ Former Executive Secretary of UNFCCC, Christiana Figueres joined The Geneva Association Board meeting to discuss the role of (re)insurance and climate change (2 February 2016, Munich)
- \ The Geneva Association, in collaboration with IIS and ICMIF, led a High-Level Meeting on Resilience, hosted by the UN Secretary General, Ban-Ki Moon, engaging the CEOs of the insurance industry and high level officials from the international organizations (13 April, UN HQ, NYC)
- \ A panel discussion at *ClimateAction 2016* (4 May 2016, Washington DC)

In 2015/2016 timeframe GA has completed a number of studies to underpin the dialogue and consultations:

### 1) An Integrated Approach to Managing Extreme Events and Climate Risks

Towards a Concerted Public-Private Approach

With recommendations to harness potential contributions of the insurance industry

**Authors:** Maryam Golnaraghi, Swenja Surminski, and Kai-Uwe 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) COP 21 Paris Agreement: What Does it Mean for the (Re)insurance Sector?

**Author:** Maryam Golnaraghi with contributions from: David Bresch, Peter Hölpe, 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)

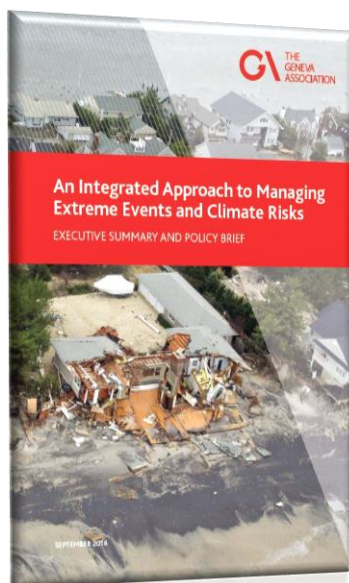
### 3) Overview of Global Stakeholder Landscape and Initiatives

**Authors:** Maryam Golnaraghi and Patrick Khalil

(Forthcoming, 2016)

### The report provides insights about:

- \ *The causes and effects of mounting social and economic risks,*
- \ *International policy dialogue and latest developments,*
- \ *The stakeholder landscape*
- \ *Obstacles and opportunities to fully capturing the insurance industry's contributions.*
- \ *Concrete recommendations on how to leverage and further expand the contributions of the insurance industry in building economic resilience to extreme event and climate risks.*



## An Integrated Approach to Managing Extreme Events and Climate Risks

### Towards a Concerted Public-Private Approach

With recommendations to harness potential contributions of the insurance industry

#### Authors:

- \ **Maryam Golnaraghi**, Director Extreme Event and Climate Risks Programme, The Geneva Association;
- \ **Swenja Surminski**, Senior Research Fellow, Grantham Research Institute on Climate Change and the Environment, London School of Economics and Political Science;
- \ **Kai-Uwe Schanz**, Special Advisor to The Geneva Association.

September 2016

- \ Link for the report: [https://www.genevaassociation.org/media/952146/20160908\\_ecoben20\\_final.pdf](https://www.genevaassociation.org/media/952146/20160908_ecoben20_final.pdf)
- \ Link for the report summary: [https://www.genevaassociation.org/media/952149/20160909\\_ecoben4\\_final.pdf](https://www.genevaassociation.org/media/952149/20160909_ecoben4_final.pdf)
- \ Link for the press release: <https://www.genevaassociation.org/media/952152/pr-08-an-integrated-approach-final.pdf>



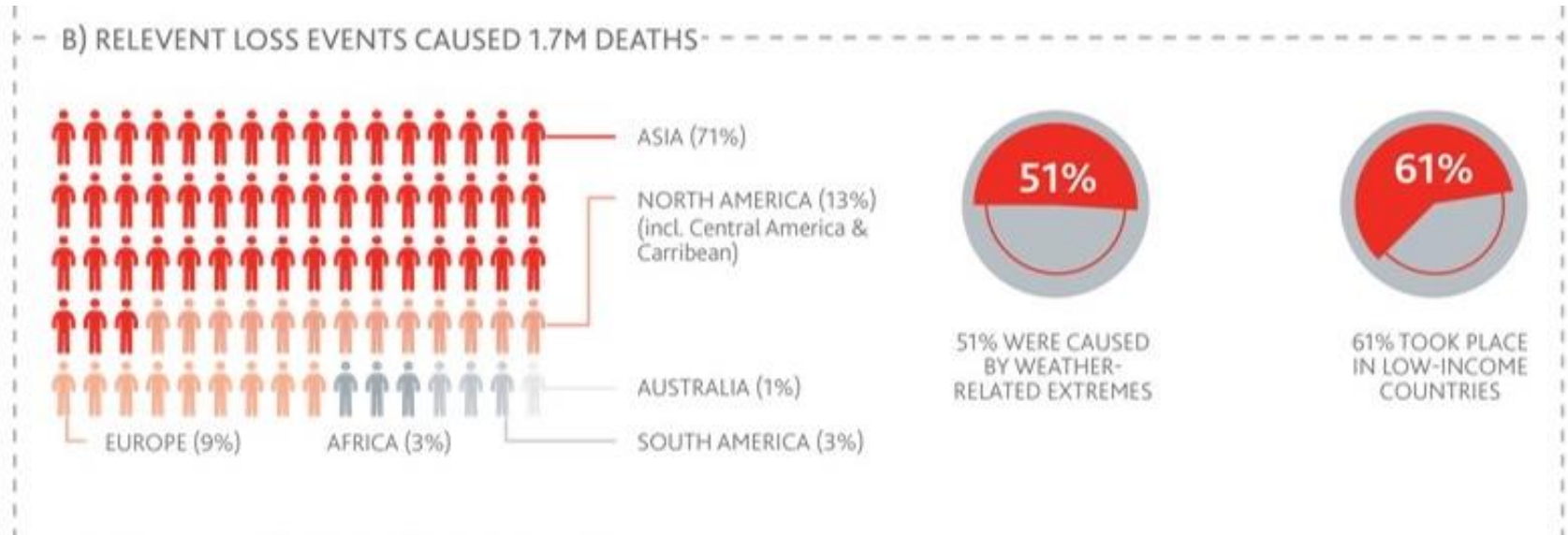
### *Natural disaster losses worldwide (1980-2015)*



**THERE IS STILL A LARGE AND, IN SOME PLACES, GROWING INSURANCE PROTECTION GAP, INDICATING THAT THE POTENTIAL OF INSURANCE IS NOT FULLY UTILIZED GLOBALLY**

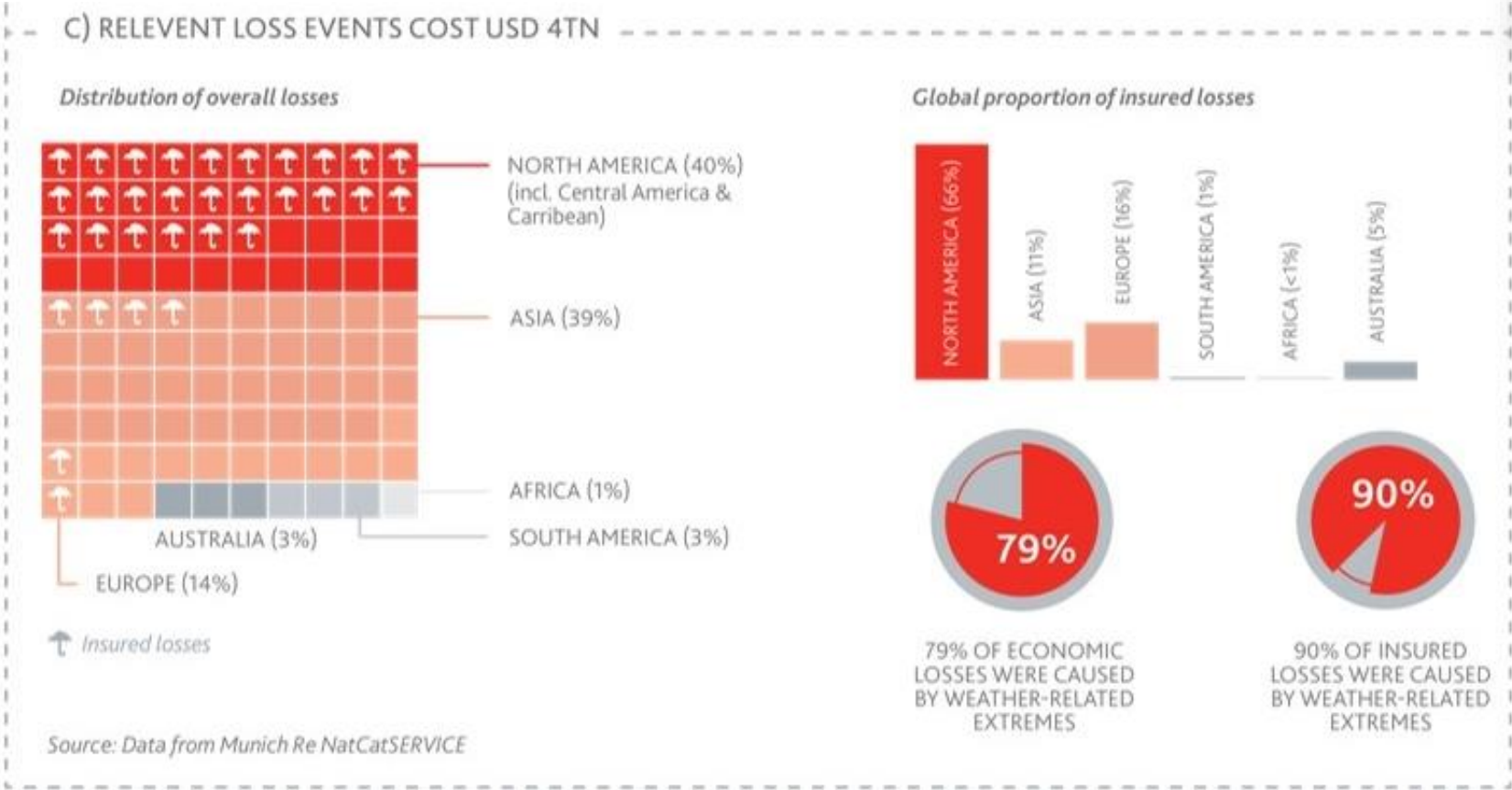


### *Natural disaster losses worldwide (1980-2015)*



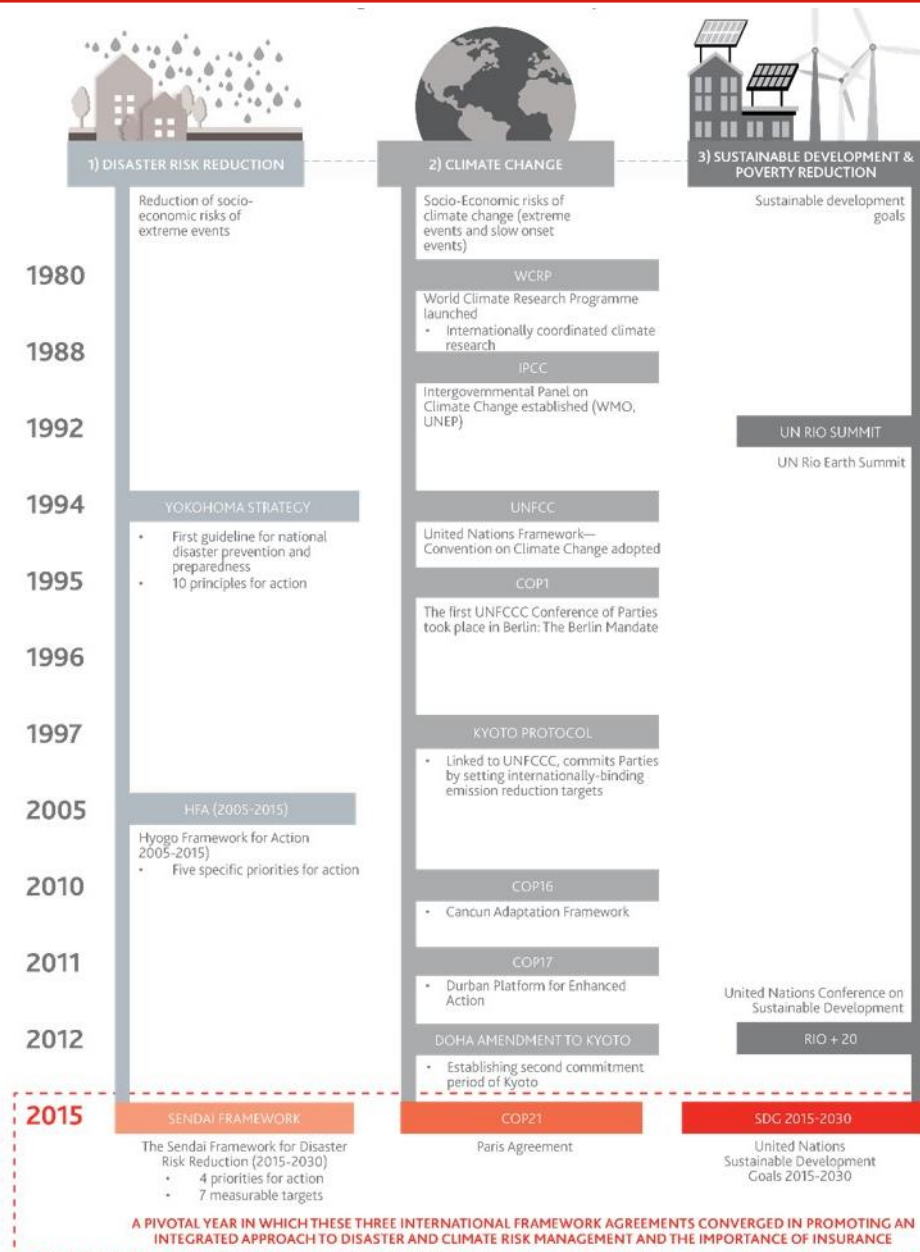
**THERE IS STILL A LARGE AND, IN SOME PLACES, GROWING INSURANCE PROTECTION GAP, INDICATING THAT THE POTENTIAL OF INSURANCE IS NOT FULLY UTILIZED GLOBALLY**

Natural disaster losses worldwide (1980-2015)



**THERE IS STILL A LARGE AND, IN SOME PLACES, GROWING INSURANCE PROTECTION GAP, INDICATING THAT THE POTENTIAL OF INSURANCE IS NOT FULLY UTILIZED GLOBALLY**

# KEY MILESTONES IN INTERNATIONAL POLICY DIALOGUE ON DISASTER RISK REDUCTION, CLIMATE CHANGE AND SUSTAINABLE DEVELOPMENT





***THESE THREE INTERNATIONAL FRAMEWORK AGREEMENTS HIGHLIGHT THE IMPORTANCE OF AN INTEGRATED APPROACH TO DISASTER AND CLIMATE RISK MANAGEMENT AS WELL AS THE IMPORTANCE OF INSURANCE IN BUILDING ECONOMIC RESILIENCE ACROSS DIFFERENT ECONOMIC SECTORS, LEVELS OF GOVERNMENT AND SOCIETY.***





## ROLE OF GOVERNMENT

- **Provide enabling environments** including sound policies and regulatory frameworks
- **Layout institutional foundations** to enable better planning and budgeting across government layers
- **Address and facilitate systemic collection of reliable hazard and socio-economic data** (including loss and damage and hazard databases)
- **Realise opportunities for risk reduction and risk transfer** through public-private partnerships
- **Invest in educating and raising awareness** about risks and benefits of risk management including insurance

## COMPONENTS OF AN INTEGRATED APPROACH TO EXTREME EVENTS AND CLIMATE RISKS MANAGEMENT



## ROLE OF INSURANCE INDUSTRY

- **Share risk knowledge and risk pricing expertise**
- **Share research and knowledge in preventative measures**
- **Innovation in risk transfer programs and products** to build financial protection for governments, businesses, communities, individuals (incentives to change behaviour)
- **faster and more efficient claims settlements** management and payouts
- **Support development of sound risk transfer programmes through** public-private partnerships



(1) ENHANCE RISK ASSESSMENT CAPACITIES AND EXPAND TO PUBLIC SECTOR	(2) PROMOTE AN INTEGRATED APPROACH TO MANAGING EXTREME EVES AND DISASTER RISKS
<p><b>RISK KNOWLEDGE DEVELOPMENT:</b></p> <ul style="list-style-type: none"> <li>• <u>Global</u>: Global Risk Assessment Report (GAR), World Economic Forum (WEF), Global Earthquake Model (GEM), Tsunami risk by RMS</li> <li>• <u>Regional</u>: Caribbean Catastrophe Risk Insurance Facility (CCRIF), The African Risk Capacity (ARC), Pacific Catastrophe Risk Assessment and Financing Initiative (PCRAFI)</li> <li>• <u>Country</u>: Studies by RMS, AIR with World Bank Group and other development banks</li> <li>• <u>Local</u>: Risky Business</li> </ul> <p><b>INSTITUTIONAL CAPACITY DEVELOPMENT:</b></p> <ul style="list-style-type: none"> <li>• Central American Probabilistic Risk Assessment (CAPRA)</li> </ul> <p><b>PRODUCTS/PLATFORMS/TOOLS:</b></p> <ul style="list-style-type: none"> <li>• <u>Open versus proprietary</u>: various open source models (see World Bank report), OASIS (open source), versus risk modeling firms (proprietary)</li> <li>• <u>Tools for development practitioners</u>: ThinkHazard</li> </ul>	<p><b>UNITED NATIONS GLOBAL CAMPAIGNS:</b></p> <ul style="list-style-type: none"> <li>• United Nations International Strategy for Disaster Reduction (UNISDR), UN Habitat, Global and Regional DRR Platforms</li> </ul> <p><b>INDUSTRY:</b></p> <ul style="list-style-type: none"> <li>• <u>Many (re)insurance company R&amp;D programmes and centers of excellence</u></li> <li>• <u>Multi-laterally funded R&amp;D</u>: Insurance Institute for Business and Home Safety (USA), Insurance Research Lab for Better Homes (Canada), Prevention and Safety Testing Institute (Germany)</li> <li>• <u>Multi-lateral</u>: ClimateWise</li> <li>• <u>With governments and international partners</u>: A joint Event of OECD and The Geneva Association (3 December 2015, Paris), High Level Forum on Resilience (13 April, UN HQ, NYC), Climate Action 2016 (4 May 2016, Washington DC), Launch of Insurance Development Forum (IDF)</li> <li>• <u>Rating agencies</u>: DRR and climate research teams at S&amp;P, Moody's</li> </ul> <p><b>NGOs:</b></p> <ul style="list-style-type: none"> <li>• 100 Resilience Cities, Compact of Mayors and ICLEI</li> </ul>



### (3) BUILDING SOLUTIONS FOR DISASTER RISK FINANCING AND INSURANCE

#### **COUNTRIES AND FLOODS:**

- Sweden, Portugal and Ireland voluntary flood insurance, UK Flood Re, Netherlands Flood Insurance, Australia, Canada

#### **COUNTRIES AND OTHER PERILS:**

- France, Spain, Mexico, India, Mongolia, Turkey Turkish catastrophe insurance, New Zealand Earthquake Authority, Kenya and Ethiopia indexed based livestock insurance

#### **REGIONAL SOCIO-ECONOMIC GROUPINGS WORKING GROUPS AND INITIATIVES**

- The Association of Southeast Asian Nations (ASEAN), Asia-Pacific Economic Cooperation (APEC), The Caribbean Community Market (CARICOM), G20 InsuResilience

#### **REGIONAL FACILITIES:**

- Caribbean Catastrophe Risk Insurance Facility (CCRIF), The African Risk Capacity (ARC), Pacific Catastrophe Risk Assessment and Financing Initiative (PCRAFI)

#### **GLOBAL INSTITUTIONS AND PROGRAMS:**

- Global Index Insurance Facility (GIIF) of the World Bank, The Global Action Network (GAN), The International Labour Organisation (ILO) in cooperation with several private insurers, The World Food Programme (WFP), Global Parametrics, Blue Marble, LeapFrog
- The Access to Insurance Initiative (A2ii), 5-5-5 Mutual Microinsurance Strategy of the International Cooperative and Mutual Insurance Federation (ICMIF)

#### **INDUSTRY:**

- The Munich Climate Insurance Initiative (MCII), Lloyd's Syndicate Disaster Risk Finance Facility for developing economies

#### **PRODUCT INNOVATION:**

- Indexed Based Insurance (IBI), Microinsurance, Access to Capital markets: PennUnion Re Ltd. (Series 2015-1), MetroCat Re Ltd

### (4) AGRICULTURE SECTOR AND RISK FINANCING

#### **INITIATIVES FROM GOVERNMENTS AND NGOS HAVE LED TO A RISE IN THE USE OF AGRICULTURE INSURANCE IN SEVERAL DEVELOPING COUNTRIES:**

*The total number of insured smallholders worldwide is 177 million divided into approximately ~440,000 in Africa, ~3.3 million in Latin America and the Caribbean, about ~173 million in Asia (of which 140 million are in China, and 33 million in India).*

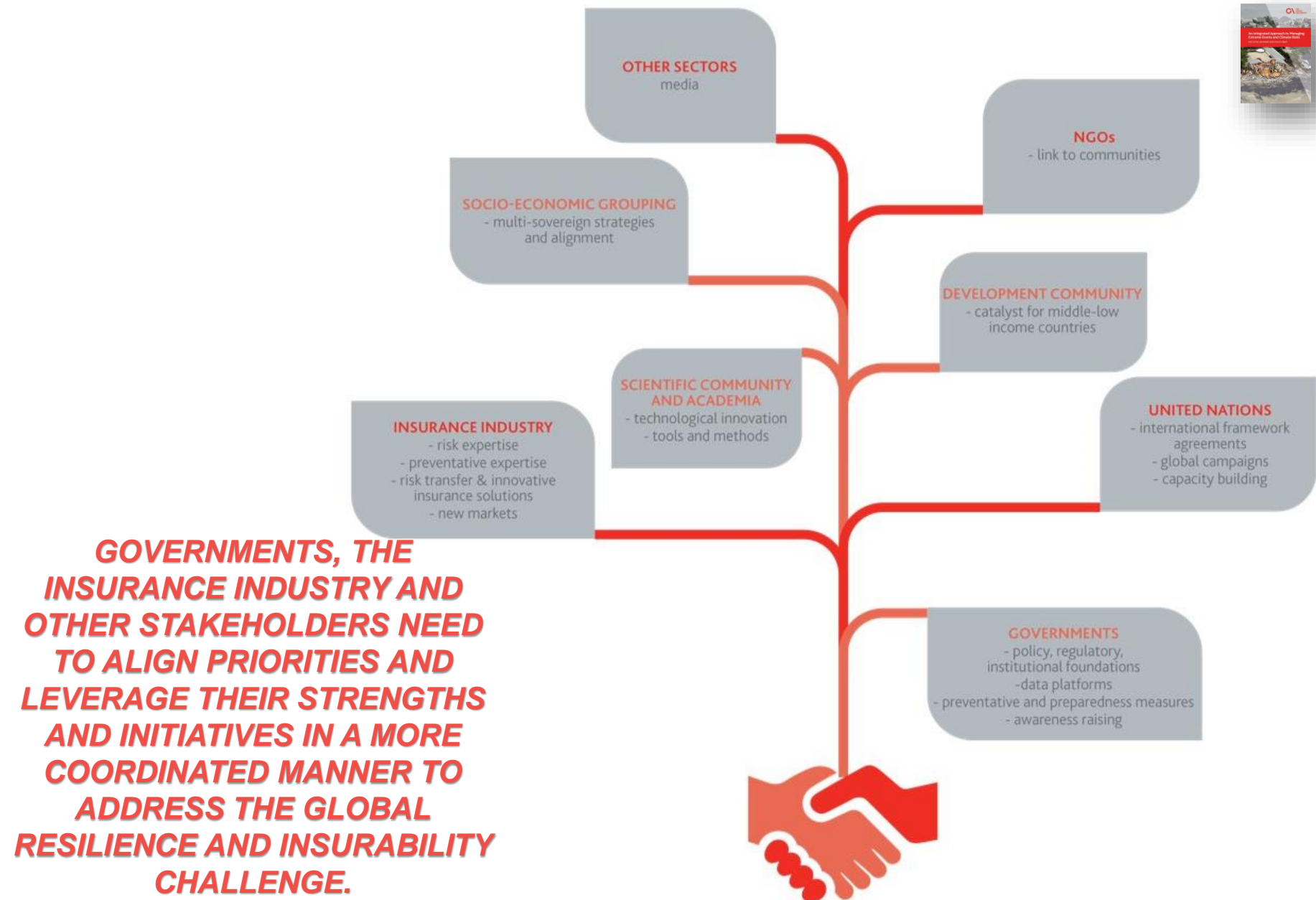
*So far, the private sector has played only a minor role in insuring farmers and rural communities*

#### **NATIONAL AGRICULTURAL INSURANCE PROGRAMMES**

- India, Mexico, etc.

#### **GLOBAL INSTITUTIONS AND PROGRAMS:**

- Global Index Insurance Facility (GIIF) of the World Bank, The Global Action Network (GAN), The International Labour Organisation (ILO) in cooperation with several private insurers, Global Parametrics
- The R4 Rural Resilience Initiative (WFP & Oxfam America), The Livelihoods, Early Assessment and Protection (LEAP) (Ethiopia & WFP), The Food Security Climate Resilience Facility (FoodSECuRE) (WFP), Weather Risk Management Facility (WRMF) (WFP & International Fund for Agricultural Development)





## BUILDING ON STRONG PUBLIC-PRIVATE PARTNERSHIPS

### 1 RAISE AWARENESS OF SOCIO-ECONOMIC BENEFITS OF PREVENTION AND RISK TRANSFER MEASURES

- Document and share good practices demonstrating socio-economic benefits of prevention and risk transfer measures and their interlinkages



### 2 EXPAND RISK MODELLING CAPACITIES

- Sharing risk knowledge and expertise with the public sector
- Contribute to the development of next generation of forward-looking models in partnership with scientific community



## RECOMMENDATIONS

### 4 RESILIENCE OF MEGA-CITIES AND URBAN AREAS

- Explore and realise the role of insurance in enhancing resilience of mega-cities and urban systems



### 3 RESILIENCE OF CRITICAL INFRASTRUCTURE

- Explore and realise the role of the insurance industry in investing and building critical infrastructure



In 2015/2016 timeframe GA has completed a number of studies to underpin the dialogue and consultations to converge to priorities for action:

### 1) An Integrated Approach to Managing Extreme Events and Climate Risks

Towards a Concerted Public-Private Approach

With recommendations to harness potential contributions of the insurance industry

**Authors:** Maryam Golnaraghi, Swenja Surminski, and Kai-Uwe 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) COP 21 Paris Agreement: What Does it Mean for the (Re)insurance Sector?

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

Link for the report:

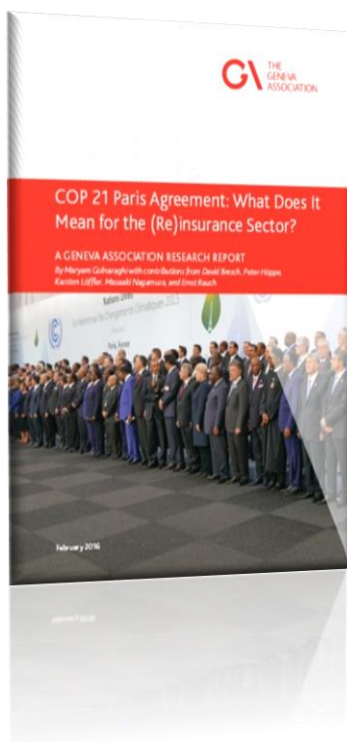
[https://www.genevaassociation.org/media/942906/whatdoescop21meanforinsurance\\_complete\\_digital.pdf](https://www.genevaassociation.org/media/942906/whatdoescop21meanforinsurance_complete_digital.pdf)

### 3) Overview of Global Stakeholder Landscape and Initiatives

**Authors:** Maryam Golnaraghi and Patrick Khalil

(Forthcoming, January 2017)

- \ *This paper analyses the relevance of the COP21 Paris agreement outcomes for the (re)insurance industry, the strategy of COP21 and its differences with previous negotiations and what it means for the industry*



### COP 21 Paris Agreement: What Does It Mean for the (Re)insurance Sector? A GENEVA ASSOCIATION RESEARCH REPORT

#### Author:

\ By **Maryam Golnaraghi**, Director Extreme Event and Climate Risks Programme, The Geneva Association  
**with contributions from:**

- \ **David Bresch**, Head Business Development GP, Director, Global Partnerships, Swiss Re;
- \ **Peter Höppe**, Head of Geo Risk Research, Corporate Climate Centre Work, Munich Re;
- \ **Karsten Löffler**, Managing Director (Geschäftsführer), Allianz Climate Solutions GmbH, Allianz;
- \ **Masaaki Nagamura**, Division Head of Corporate Social Responsibility, Corporate Planning Department at both Tokio Marine Holdings, Inc. and Tokio Marine & Nichido Fire Insurance Co., Ltd;
- \ and **Ernst Rauch**, Head of Corporate Climate Centre, Munich Re

*February 2016*

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

### COP 21 Paper – Excerpts

- \ It is clear from the explicit inclusion of insurance in the COP21 decisions and the Paris Agreement that countries recognise the importance of insurance as an integral part of national climate risk management strategies and the high potential for building financial resilience
- \ The outcomes of COP21 (and the Sendai Framework for DRR) have opened the doors for innovative insurance solutions, in developed and developing nations. The insurance industry has the potential to contribute significantly to making societies more resilient with respect to the adverse effects of climate change and, at the same time, creating new business.
- \ The public sector is required to lay the institutional foundations, whilst the insurance industry is challenged to think and act more creatively to understand the risks, actively participate in defining the role of the private sector and consider new markets, products and strategies. To this end, active engagement in relevant public–private partnerships and closer cooperation amongst (re)insurance, policymakers, governments, regulators and other stakeholders is critical to paving the way.
- \ It seems inevitable that by 2020 the (re)insurance sector will not only be providing a wider range of risk-transfer solutions, but also be supporting emission reduction efforts and transitioning to a low-carbon economy through its investment strategies as well as actively managing its carbon footprint.
- \ Furthermore, with the agreements for the net-zero emission target by 2050, the (re)insurance industry has the opportunity to engage proactively with other key stakeholders to find the best investment strategies towards a low carbon economy.
- \ Fragmentation of national climate and sectoral policies under COP 21 agreement will pose challenges





Since the issuance of the GA Climate Statement in November of 2015, The GA through its research and high-level consultations has focused its 2016-2018 work plan priorities around two main pillars. The work plan is being implemented through engagement with the industry and a variety of strategic partners.

### \ **Pillar 1: Explore and expand role of insurance industry in increasing resilience to extreme events and climate change adaptation**

- ✓ **Project 1:** Raise awareness of benefits of effective public-private partnerships and interplay of risk-based preparedness, preventive and risk transfer measures
- ✓ **Project 2:** Expand risk-based decision-making through : (i) partnerships for sharing the industry's risk knowledge and expertise with governments; and (ii) systematic partnership with the scientific community to develop next generations of risk models
- ✓ **Project 3:** Explore the role of insurance industry in investing in and increasing climate resilience of critical infrastructure

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

- ✓ **Project 4:** Challenges and opportunities related to sound transitioning towards a low carbon economy
- ✓ **Project 5:** A risk-based study of alternative energy sources





## Thank You

For further discussion, questions or to send your feedback, please contact:

Dr. Maryam Golnaraghi

Director Extreme Events and Climate Risks Programme

[maryam\\_golnaraghi@genevaassociation.org](mailto:maryam_golnaraghi@genevaassociation.org)