



Insuring Climate Change-related Risks

19 February 2016 – Austrian Climate Change Workshop Day 2

Tobias Grimm
Senior Project Manager Corporate Climate Centre
Climate & Renewables

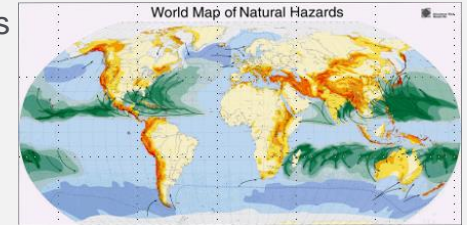
About Munich Re...

- Munich Re founding by Carl von Thieme, Theodor von Cramer-Klett and Wilhelm Finck
- Munich Re (Group):

Munich RE  MUNICH HEALTH  ERGO  MEAG 
- Staff (end 2014): 43,000
- Financial facts (2015): Gross premiums written €50.4bn, consolidated result €3.1bn
- Munich Re first climate change alert in 1973
- **1974 - Foundation of Geo Risks Research department**

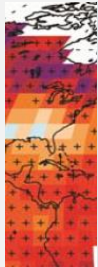
About Geo Risks Research department...

- Munich Re's NatCatSERVICE data base is the largest in the world for natural catastrophe losses
- Analyses of NatCat events in Topics *geo* (annual review) and special publications
- „World Map of Natural Hazards“ and NATHAN
- Since 2007: Climate change is strategic topic for Munich Re → Foundation of the Corporate Climate Centre
- Development and implementation of Munich Re's climate change strategy
- Initiation of flagship projects: Munich Climate Insurance Initiative, 2005 and Dii GmbH (“Desertec”), 2009



Munich Re's activities relating to climate change focuses the following fields of activity

RISK ASSESSMENT



Detecting and assessing climate change impacts on frequency and intensity of natural hazards

- Own analyses (e.g. NATHAN, NatCatSERVICE data base)
- Latest research findings (IPCC a.o.)
- Changes in political and regulatory environment

RISK TRANSFER SOLUTIONS



Realizing business growth areas as a leading provider of innovative, climate-friendly risk transfer solutions

- Performance Guarantee for PV manufacturers
- Serial loss cover for suppliers and manufacturers
- Geothermal cover for drilling success / exploration risk
- Promoting climate insurance

ASSET MANAGEMENT



Adjusting investment strategy

- impact of climate policy
- expanding investments in infrastructure and renewable energy projects

Investment goal: up to € 8 bn. In infrastructure could be considered

- ~ 50% equity investments
- ~ 50% debt- finance

Already invested:
in PV and wind parks, power grids, gas pipeline, gas power plant

UN Climate Change Conference COP21 Paris (12/2015)

Munich Re's view on the success of Paris

- **Emission Reduction – limiting climate change**

Goal of holding global warming well below 2°C, aiming for 1.5°C

- **Climate Finance**

Mobilizing \$100bn p.a. by 2020, considerable debate over what counts as (additional) climate finance

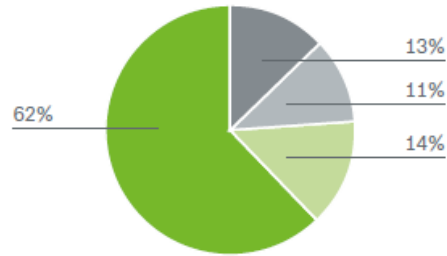
- **Climate Insurance**

- The Warsaw International Mechanism for Loss and Damage (WIM) introduced at COP19 to further investigate and organize the topic
- Climate-related losses and damages are acknowledged as a third climate strategy pillar next to adaptation and mitigation. A clearinghouse for risk transfer will be established serving as a repository
- Insurance is considered as an essential tool to address loss and damage, referenced directly under § 49 of the Decisions as well as § 8 of the Agreement
- At the insistence of developed countries, the accompanying COP decision specifies that the loss and damage provision “does not involve or provide a basis for any liability or compensation.”

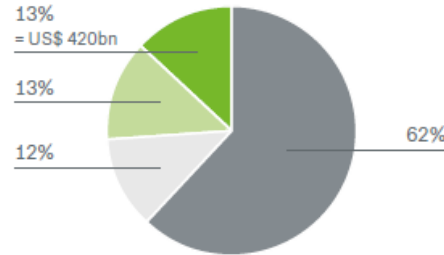
Weather related losses worldwide 1980 – 2014

Low income economies suffering most

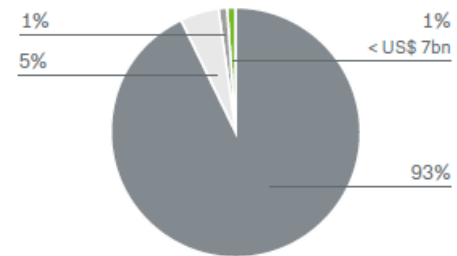
850,000 Fatalities¹



Overall losses² US\$ 3,300 bn



Insured losses² US\$ 940 bn



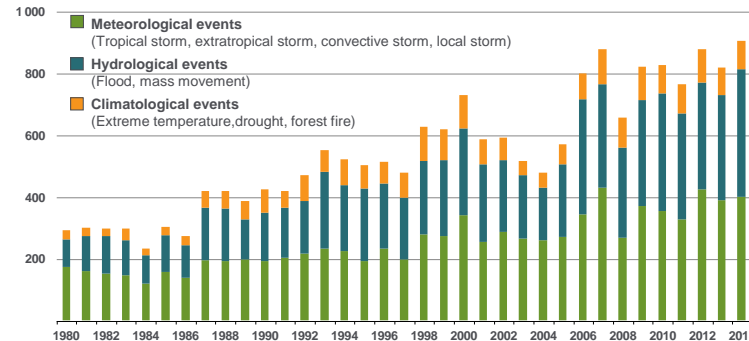
Income Groups defined by World Bank (2014)

- High income economies (GNI ≥ 12,746 US\$)
- Upper middle income economies (GNI 4,126 – 12,745 US\$)
- Lower middle income economies (GNI 1,046 – 4,125 US\$)
- Low income economies (GNI ≤ 1,045 US\$)

- 1) Number of fatalities without famine
- 2) Losses in 2014 values, adjusted to inflation based on individual country CPI.

NatCatSERVICE

Weather-related loss events worldwide 1980–2014 (Number of events)



Catastrophe insurance: the role of the insurance sector

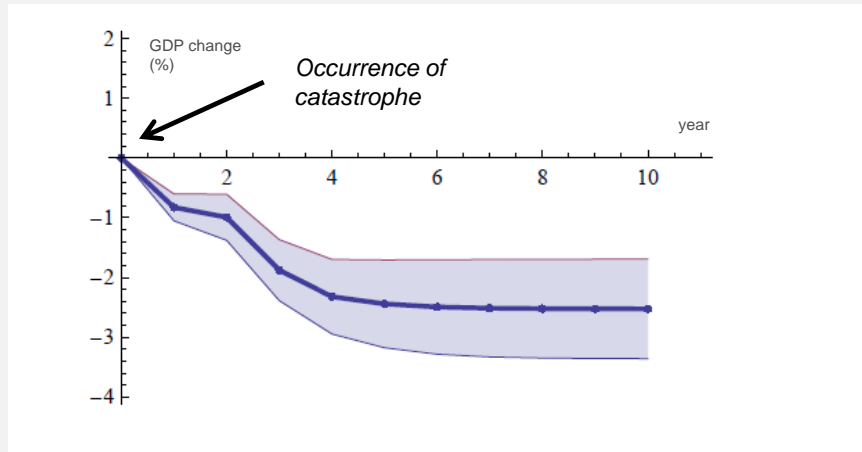
Ex-ante: vulnerability and risk information; loss-prevention measures

Ex-post: recovery financing and resilience-building support

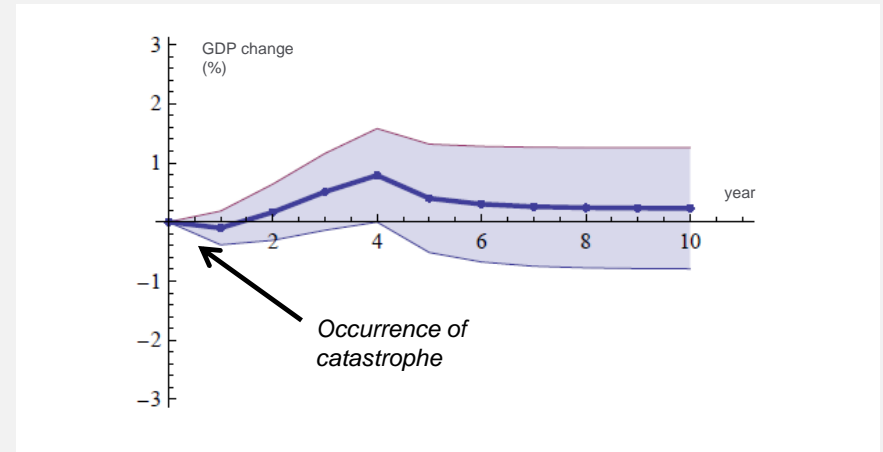
Mid-term development perspective of low income economies affected by large catastrophes:

- government's debts following natural catastrophes considerable influenced without risk financing/insurance schemes
- reconstruction potentially delayed

Cumulative effect on GDP in the case of a completely uninsured catastrophe event



Cumulative effect on GDP in the case of a fully insured catastrophe event



Climate Risk Insurance Initiative: 5-year project funded by G7 to implement direct and indirect extreme weather insurance for additional 400 million people in developing countries:

Direct (beneficiaries: people)

- Addressing risk awareness and resilience of households - but households need general understanding of insurance.
- High transaction costs and thus comparatively high loadings on premium. Even with substantial premium subsidies most NatCat pilot projects with voluntary insurance for climate risks failed.

Indirect (beneficiaries: governments / institutions)

- Sovereign risk transfer reduces economic costs of climate change-induced natural disasters due to rapid payout and early efforts to fix critical infrastructure.
- Sovereign risk transfer can be combined with preparedness efforts → enhance awareness and preparedness on sovereign level but little loss mitigation incentive at individual level.

Side-Event in Paris with members of BMZ, G7 and other stakeholders

- Pledges amounting to USD 420 mn, with additional announcements tbd
- Initial Accomplishments: Expansion of ARC (additional countries and perils), CCRIF (Central-American countries) and PCRAFI (additional Small Island Nations)
- Project will continue under German auspices even after Japan formally takes G7 Chair
- New Secretariat for InsuResilience to be installed in Bonn



Source: Peter Höppe

MCII – Munich Climate Insurance Initiative

Promoting insurance solutions for developing countries

MCII has been established in 2005 by Munich Re and other companies (Allianz, Germanwatch) in order to develop insurance solutions for a better adaptation to climate change.

MCII aims:

- Development of risk transfer solutions to support adaptation mechanisms to climate change
- Conduct and support pilot projects for the application of insurance- related solutions
- Collaboration with academic and financial institutes on the development of risk transfer solutions
- Identifying and Implementing measures for loss reduction

Milestones:

- Agreement in Cancun on two year programme on “Loss and Damage” including insurance solutions.
- New “Warsaw International Mechanism” for management of weather extremes in developing countries decided at COP19 in Warsaw. MCII will support UNFCCC in this programme
- MCII has received funding from German Environmental Ministry (€ 2m) for pilot projects in the Caribbean (project partners CCRIF, MicroEnsure). Development of Livelihood Protection and Lender Portfolio Protection covers.
- Climate Insurance has been a topic at the G7 Summit in June 2015

- The insurance industry is directly affected by climate change in its core business and asset management and has to adapt its risk models.
- Natural catastrophes primarily affect low-income economies with low insurance penetration.
- Insurance industry can support climate change mitigation / adaptation by providing new insurance solutions for and investments into clean energy and energy efficiency projects and the provision of know how on disaster prevention.
- Munich Re supports the implementation of the G7-InsuResilience initiative.
We support the initiative with risk-transfer solutions, we offer input and/or exchange of Munich Re data and insurance know how.



Thank you!

19 February 2016

Tobias Grimm
Senior Project Manager Corporate Climate Centre
Climate & Renewables