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Indirect international impacts of climate change – setting the scene

Workshop in Zurich, 26 September 2017



Impact of Irma and Harvey on US GDP



BUSINESS
INSIDER

MARKETS

Hurricanes Irma and Harvey cause Goldman Sachs to slash its outlook for the US economy



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13h 1,542



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Goldman Sachs has cut its third-quarter **GDP** forecast following a pair of catastrophic hurricanes.

More Charts



The firm now sees GDP expanding by 2% during the period, down 0.8 percentage points from its previous forecast.

Goldman currently estimates that **Hurricane Irma** will result in \$30 billion in total losses, adding to the \$85 billion of damage already caused by **Hurricane Harvey**, which rocked the city of Houston last month.

"The uncertainty around all of these figures is high, but there is little doubt that the combined

Agenda

1. Background:

- Introduction to international indirect impacts of climate change
- Swiss research project

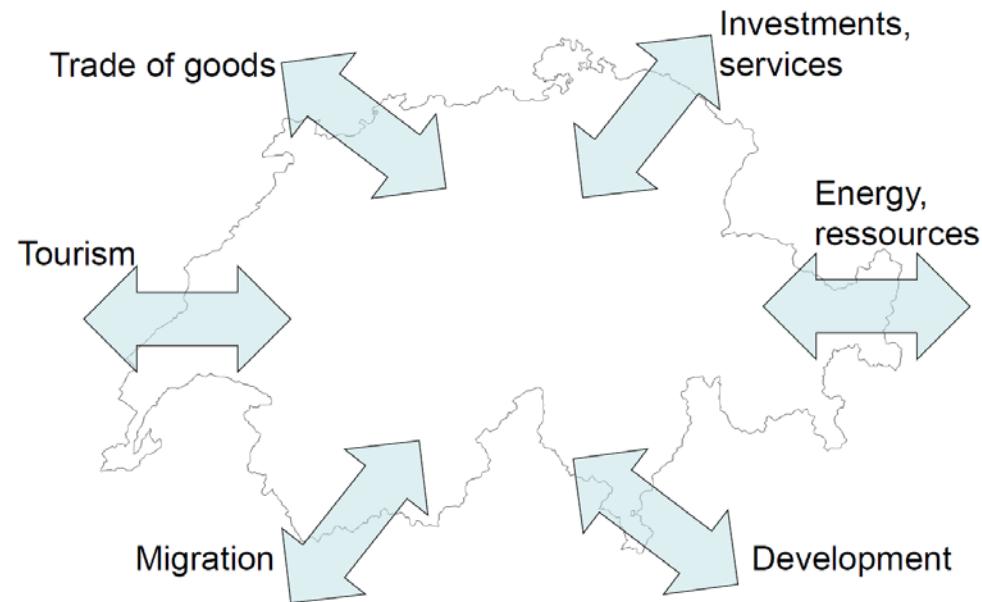
2. Illustrative examples

- Economic interconnectedness
- Food supply
- Foreign affairs and security
- Finance/ insurance industry

3. Preliminary mapping: indirect international impact channels

Background: international indirect impacts

- IPCC AR5: large potential impacts of climate change on the global environment, economy and society
- Paris Agreement Art. 7(2): Adaptation to climate change is a global challenge with not only local but also international dimensions
- National adaptation strategies
→ focus on local impacts
- Countries such as CH, GER, NL, SWE, UK etc. with a high degree of international interconnectedness may be affected strongly by international impacts of climate change in third countries



Background: research project 2017-2018

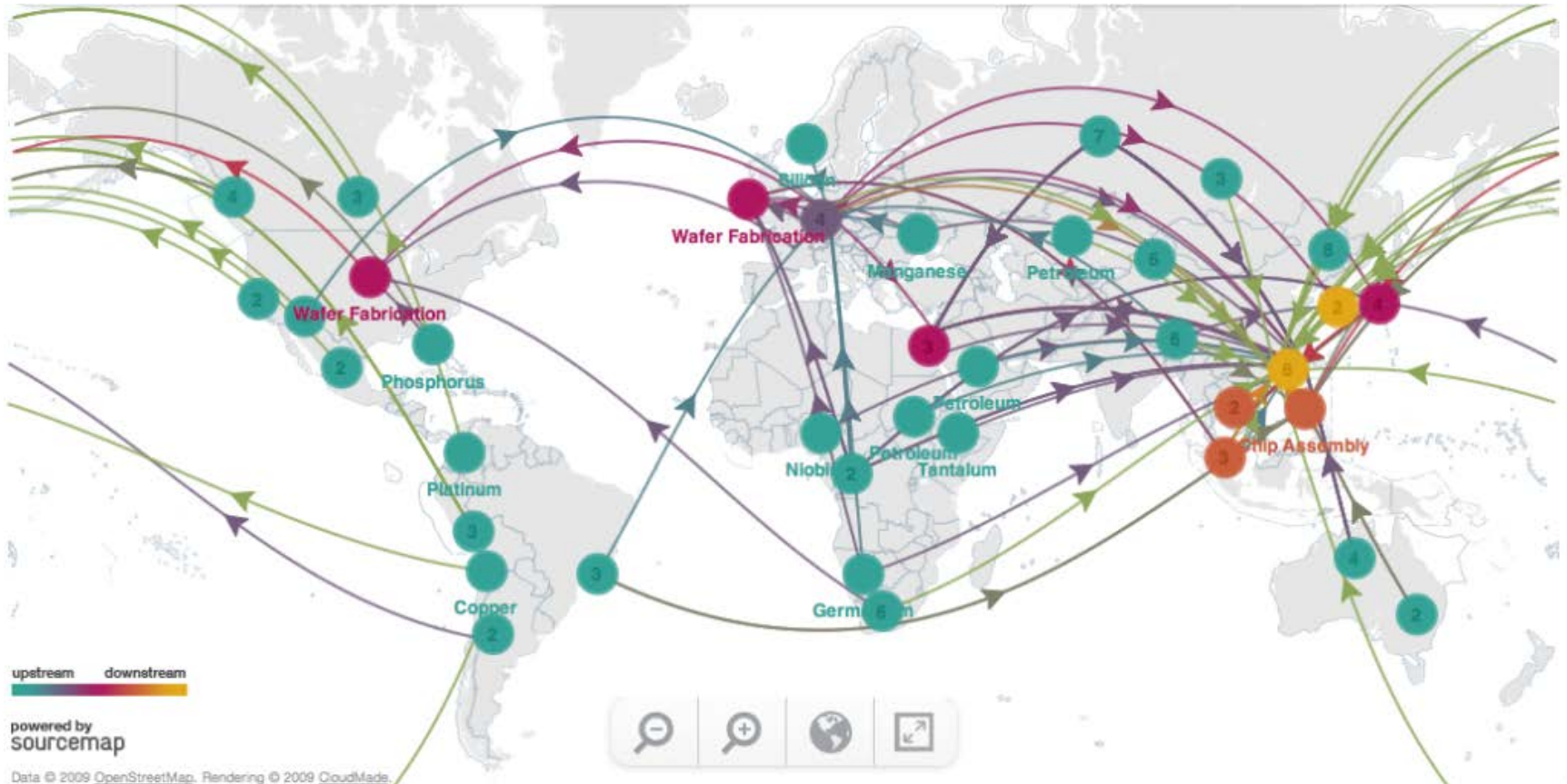
Objective of research project:

- Identification and analysis of relevant international channels through which climate change impacts abroad may affect Switzerland
- Overview – very broad interdisciplinary and cross-sectoral approach
- Awareness raising and collaboration with relevant national stakeholders
- Development of lessons learnt and recommendations for the Swiss adaptation strategy

Team: INFRAS and ETH Zürich, with SwissTPH and ProClim

Commissioned by Swiss Federal Office for the Environment FOEN with Federal Department of Foreign Affairs FDFA

Inter-connectedness: Supply chain of laptops



Food supply: higher prices, supply risk

Concentration of global exports of maize, wheat, rice and soybean by country, 2015



Source: Chatham House 2017

Foreign affairs: example «Arab spring» 2011



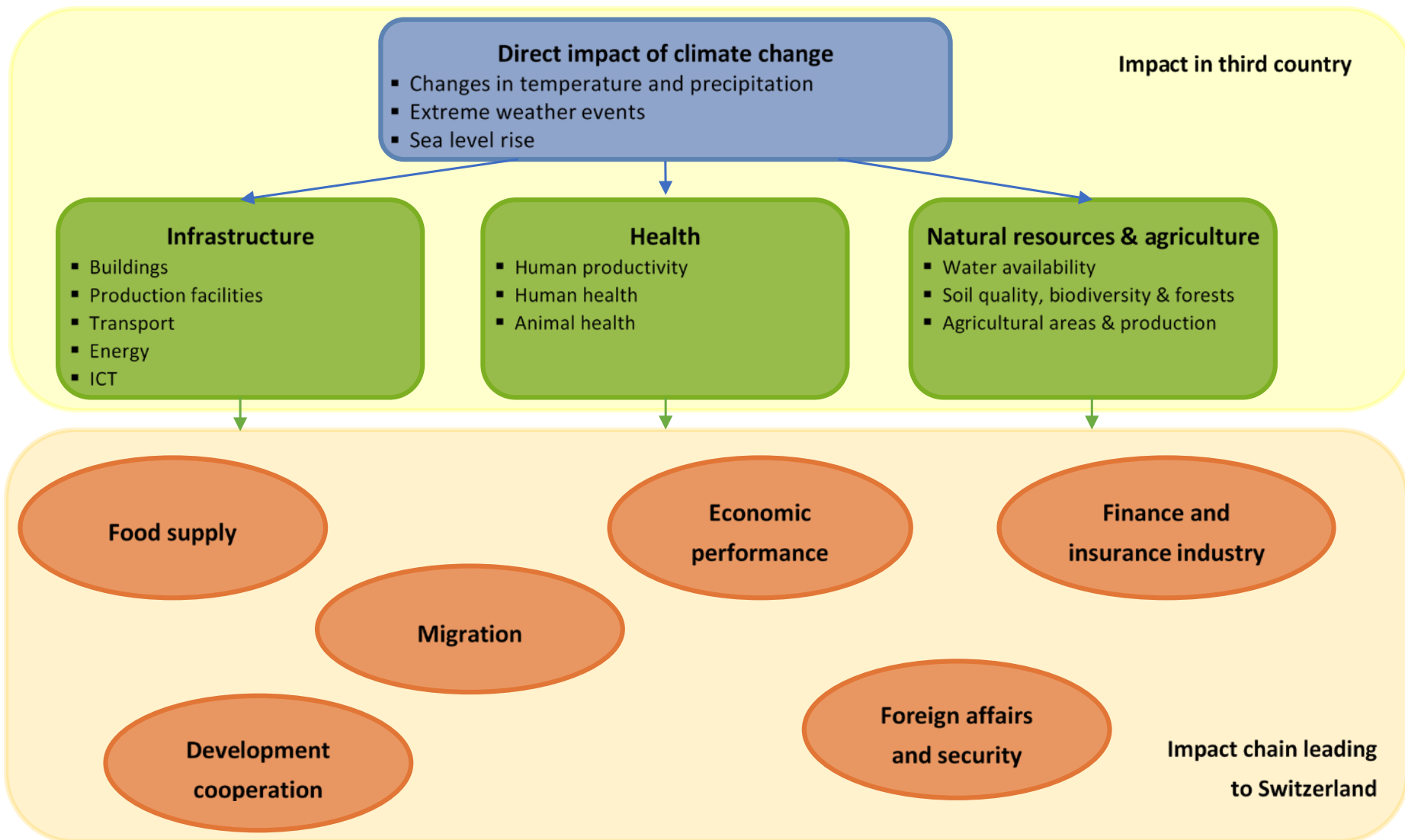
Source: Center for American Progress et al. 2013

Finance & insurance: Floods in Thailand 2011

- \$21bn direct damage to physical assets
- Further \$26.5bn in lost economic opportunities
- Pay out \$12bn by insurers and reinsurers of which 70% written outside Thailand, including \$2.2bn by Lloyd's of London
- Underlines important role of (re-) insurance
- Issue: access to and affordability of insurance



Preliminary mapping of impacts and topics



Thank you

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