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Climate risks beyond adaptation: Balancing principles of distributional and compensatory justice for identifying the space for Loss and Damage

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*Ecological economics in sustainability and
degrowth transformations*

Budapest, 21.06.2017



IIASA, International Institute for Applied Systems Analysis

Loss and Damage

A contested debate on 'dangerous' risks and 'beyond adaptation'

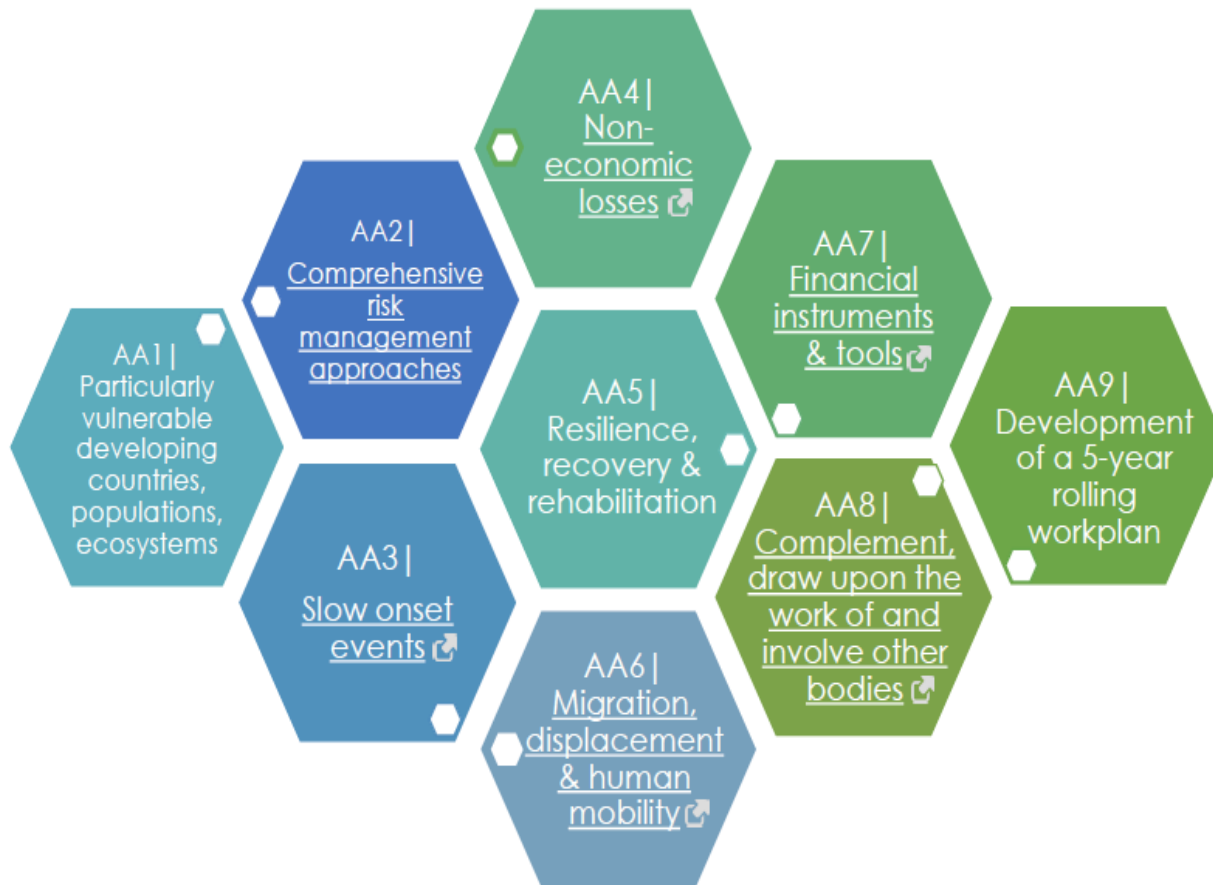
- Debate started in 1990s by AOSIS
- UNFCCC 1992: “Dangerous climate change.”
- Warsaw Loss and Damage mechanism 2013: Executive Committee created
- Stand-alone article in Paris agreement 2015
- Contested terrain
 - ‘Southern countries’ at risk (such as AOSIS) demand **compensation** for losses incurred, reject risk responsibility
 - OECD negotiators willing to support **risk management**, part. insurance, but compensation considered red line
- **Science: As attribution multifactorial**, litigation based on polluter pays principle complex



Aligning plural perspectives?

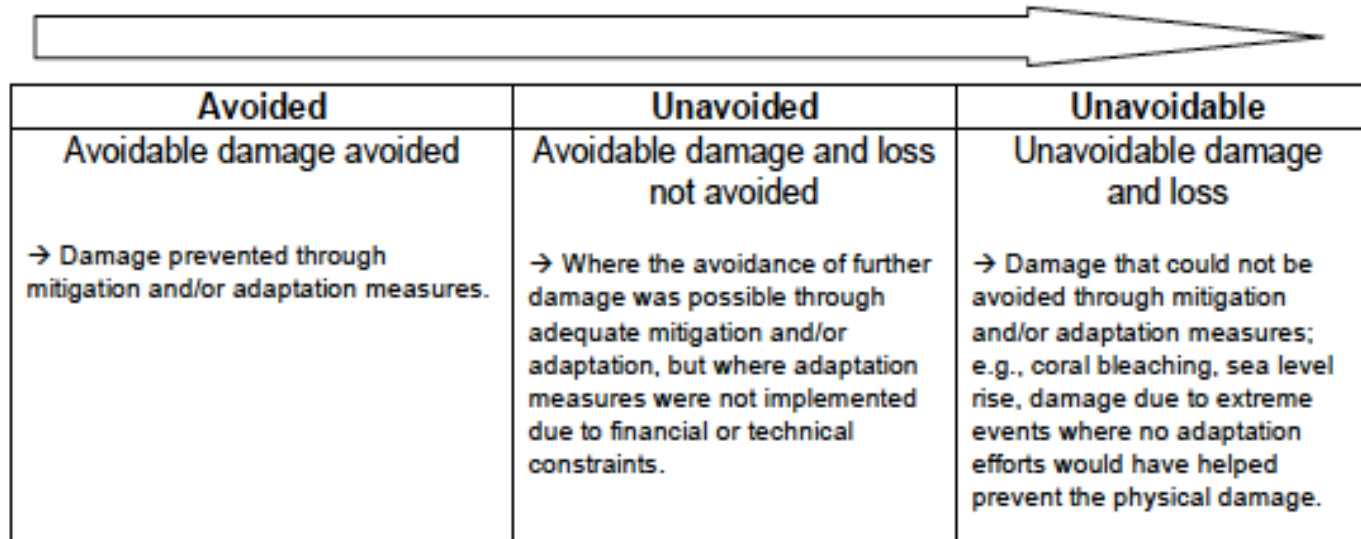
- **Legal:** payments for loss and damage
- **Climate science:** climate attribution of impacts and risks
- **Technical /instrumental:** minimise current and future loss and damage by protecting people, properties and ecosystems against climate-related stressors through technical and insurance solutions.
- **Humanitarian:** crisis and emergency management focus
- **Development:** longer-term building resilience in line with the SDGs
- **Human rights-based:** impairing right to life, health, food, adequate housing, education, work and self-determination.
- **Financial and economic:** cost-efficient solutions for avoiding loss and damage
- **Non-economic:** cultural heritage, ecosystems and landscapes, identity, belonging
- **Activist:** climate change impacts widespread, limiting warming to 1.5 °C

L&D Executive Committee Action areas of 2 year workplan



UNFCCC, 2016

Questions



Avoided	Unavoided	Unavoidable
Avoidable damage avoided	Avoidable damage and loss not avoided	Unavoidable damage and loss
→ Damage prevented through mitigation and/or adaptation measures.	→ Where the avoidance of further damage was possible through adequate mitigation and/or adaptation, but where adaptation measures were not implemented due to financial or technical constraints.	→ Damage that could not be avoided through mitigation and/or adaptation measures; e.g., coral bleaching, sea level rise, damage due to extreme events where no adaptation efforts would have helped prevent the physical damage.

Source: Verheyen, 2008

Dealing with unavoided risks today AND avoiding future risks and preventing unavoidable risks?

How different –or the same- as adaptation and disaster risk management?

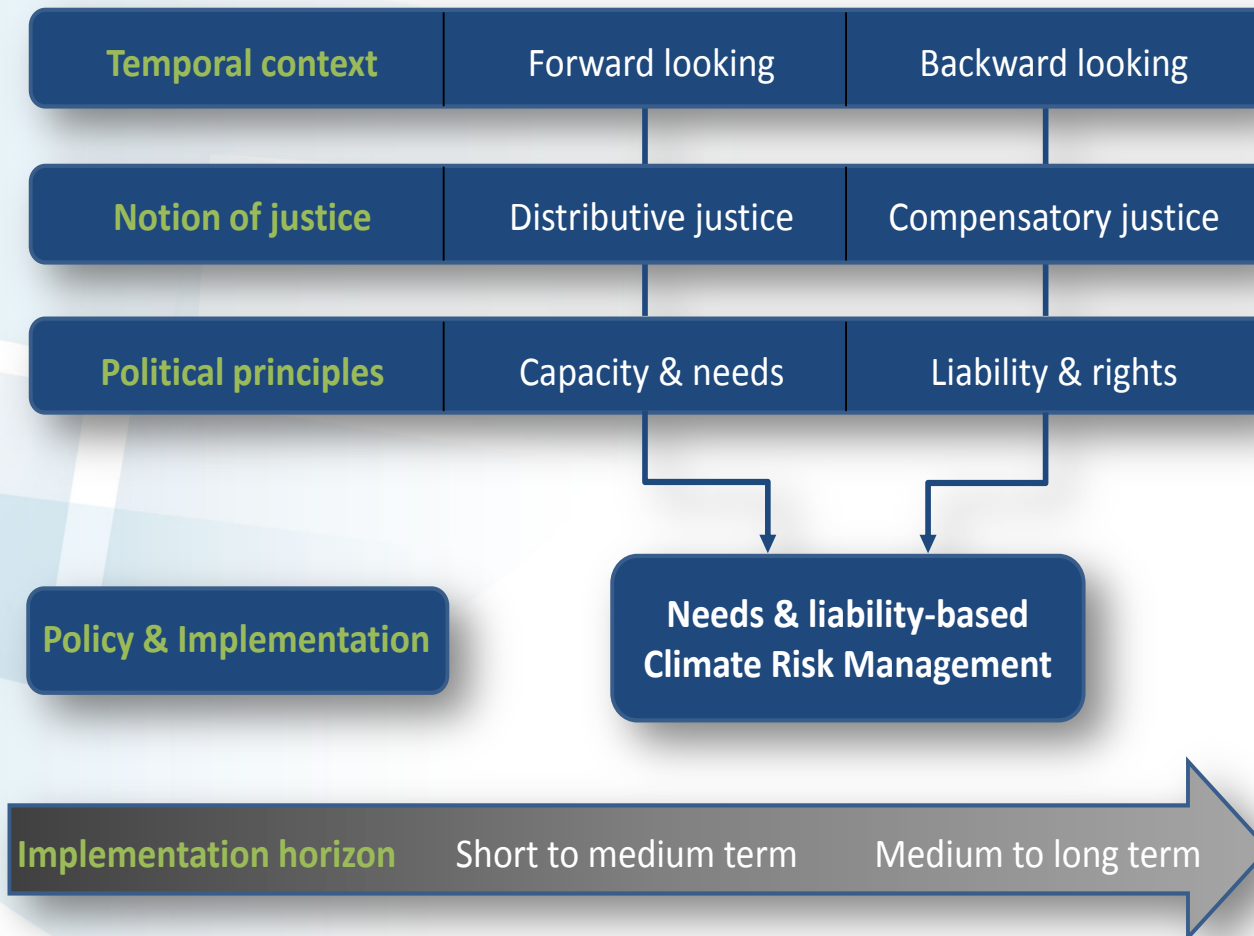
What is the risk and options space?

Risk framing for Loss and Damage

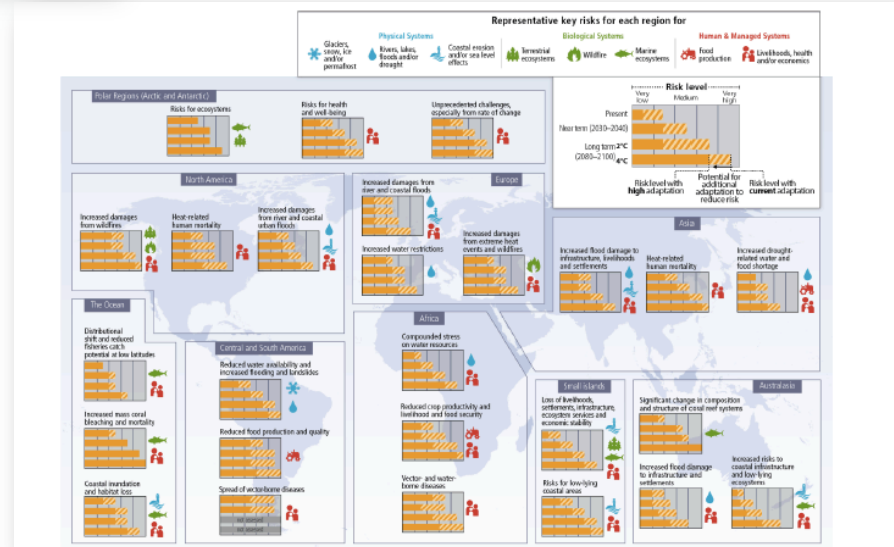
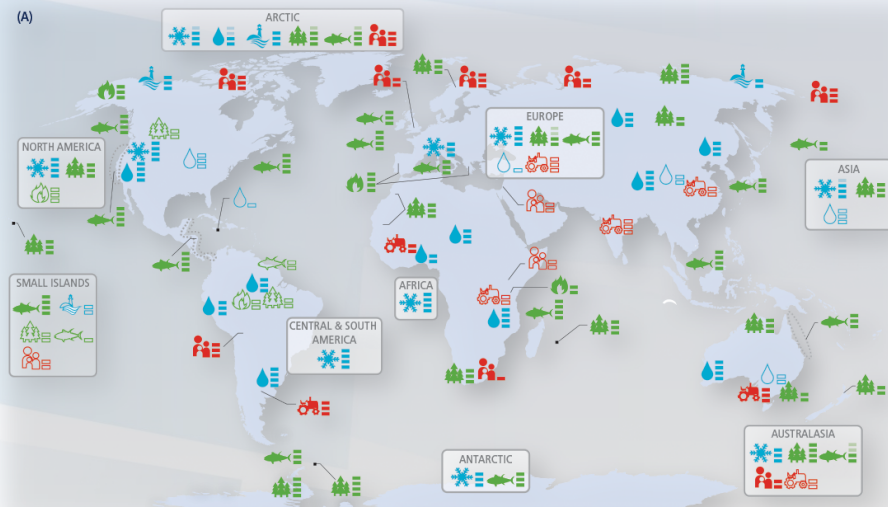
A principled climate risk analytical perspective

- Principled approach to the L&D debate
 - Integrate evidence from attribution studies and work towards **compensatory justice** → curative options
 - Supporting climate risk management via **distributional justice** → transformational options
 - Signaling urgency of 1.5°/2° C ambition
- Building blocks for policy proposal on Loss&Damage
 - Comprehensive risk analytics
 - Risk preference and tolerance
 - Justice principles

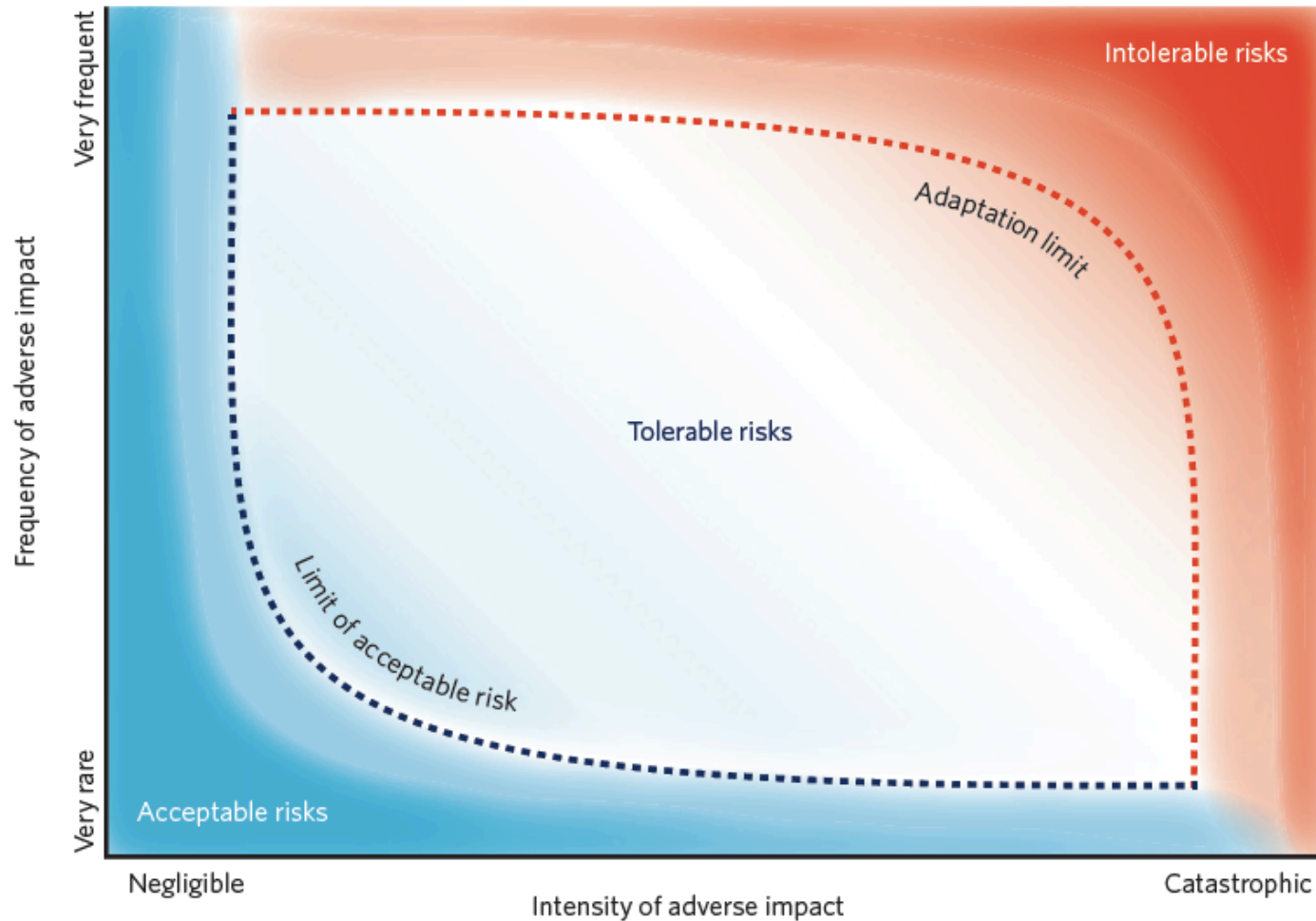
A broad climate risk analytical perspective



Climate impacts and risks



Social sciences: Risk preference and tolerance



Acceptable, tolerable and intolerable risks

Dow et al. 2013b after Klinke and Renn 2002; Renn and Klinke 2013)

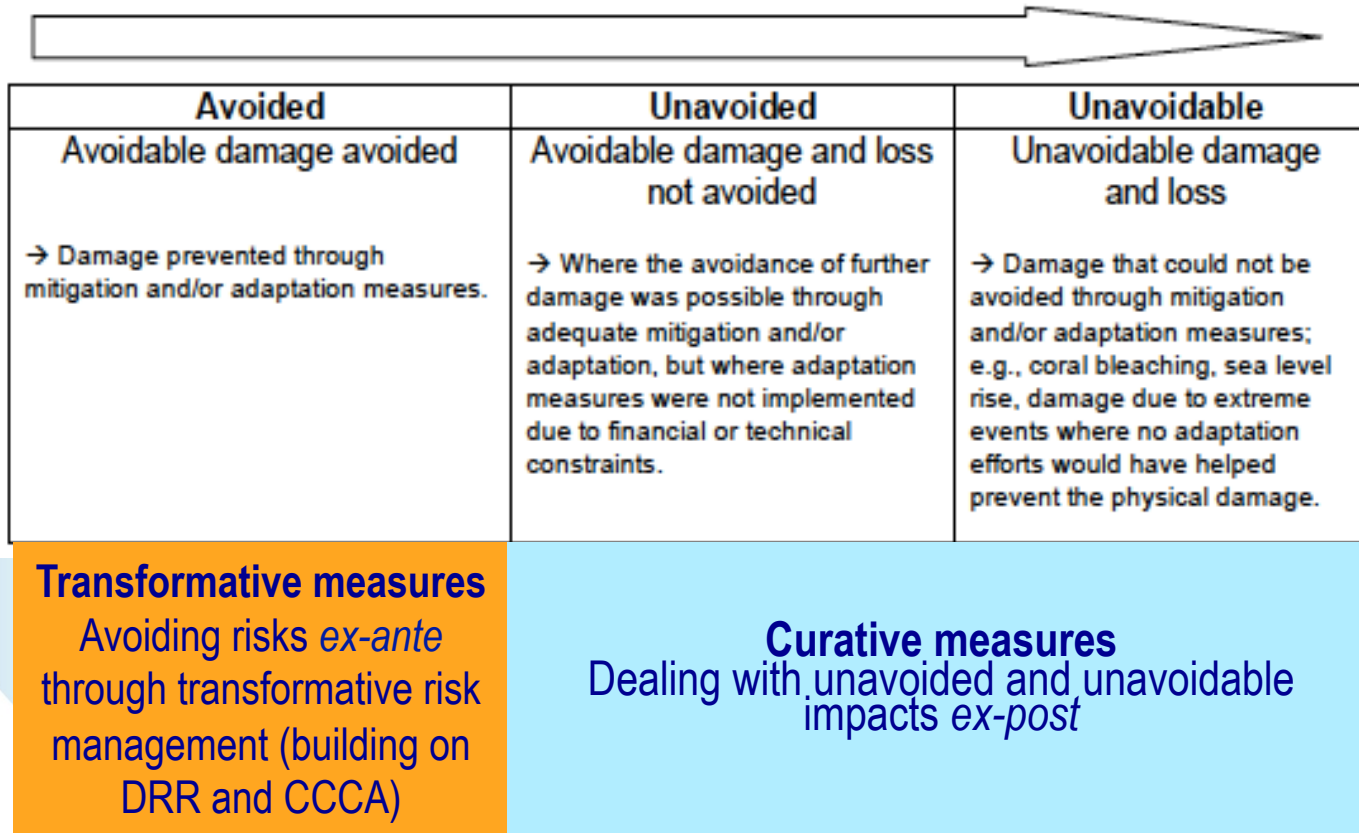
Climate Justice

- Identifying roles and responsibilities for dealing with risks involves attention to climate justice principles
- *Compensatory justice*
 - Polluter-pays principle,
 - due to the unequal distribution of historical and current emissions, as well as potential irreversible loss,
 - attributing impacts to anthropogenic climate change and identifying harm-doing.
- *Distributive justice*
 - Burden sharing necessary as many vulnerable countries in need of international support for tackling today's adaptation deficits
 - Does not require climate attribution of past, present and future risks for generating international support, such as provided via the Global Facility for Disaster Risk Reduction (GFDRR).

The space

- Employing broad risk science principles and insights a policy space for Loss & Damage can be delineated as composed of classes of
 - *curative measures* for unavoided and unavoidable impacts, and
 - *transformative measures* for avoiding and managing intolerable risks.

What are the risks we are talking about and what set of measures can be used?



Source: Verheyen, 2008

Mechler and Schinko, 2016

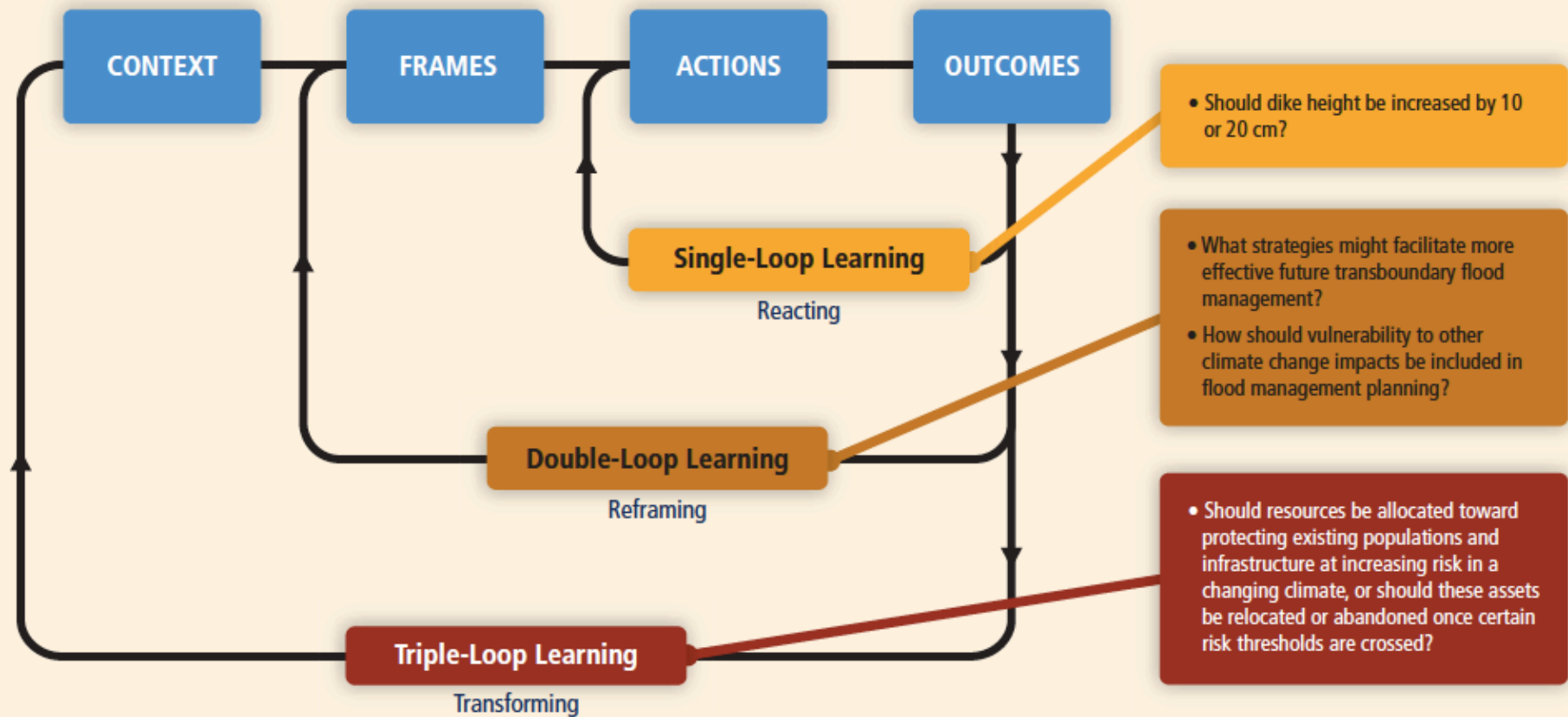
Curative options

- Support increased costs attributable to climate change (e.g., coastal defense)
- National-level L&D mechanisms/pools being set-up: Bangladesh, Philippines etc.
- Compensation as loss sharing → link to insurance systems
- Displacement coordination facility:
 - Legal protection by international law and finance for forced migration
 - Nansen Initiative: state-led effort for tackling disaster-induced cross-border displacement

Transformative measures for risk management

- Comprehensive risk management part of the workplan
- Debate largely on insurance
 - Pooling and sharing risks to diversify risks integrated with a broader view towards comprehensive DRM and building resilience
 - Innovative instruments involving Public Private Partnerships
- Livelihood transformation (+up-side risk taking, .e.g. R4 in Eastern Africa)
- Migration
- Building resilience throughout while aligning with SDGs

Transformation in a learning-loop framework



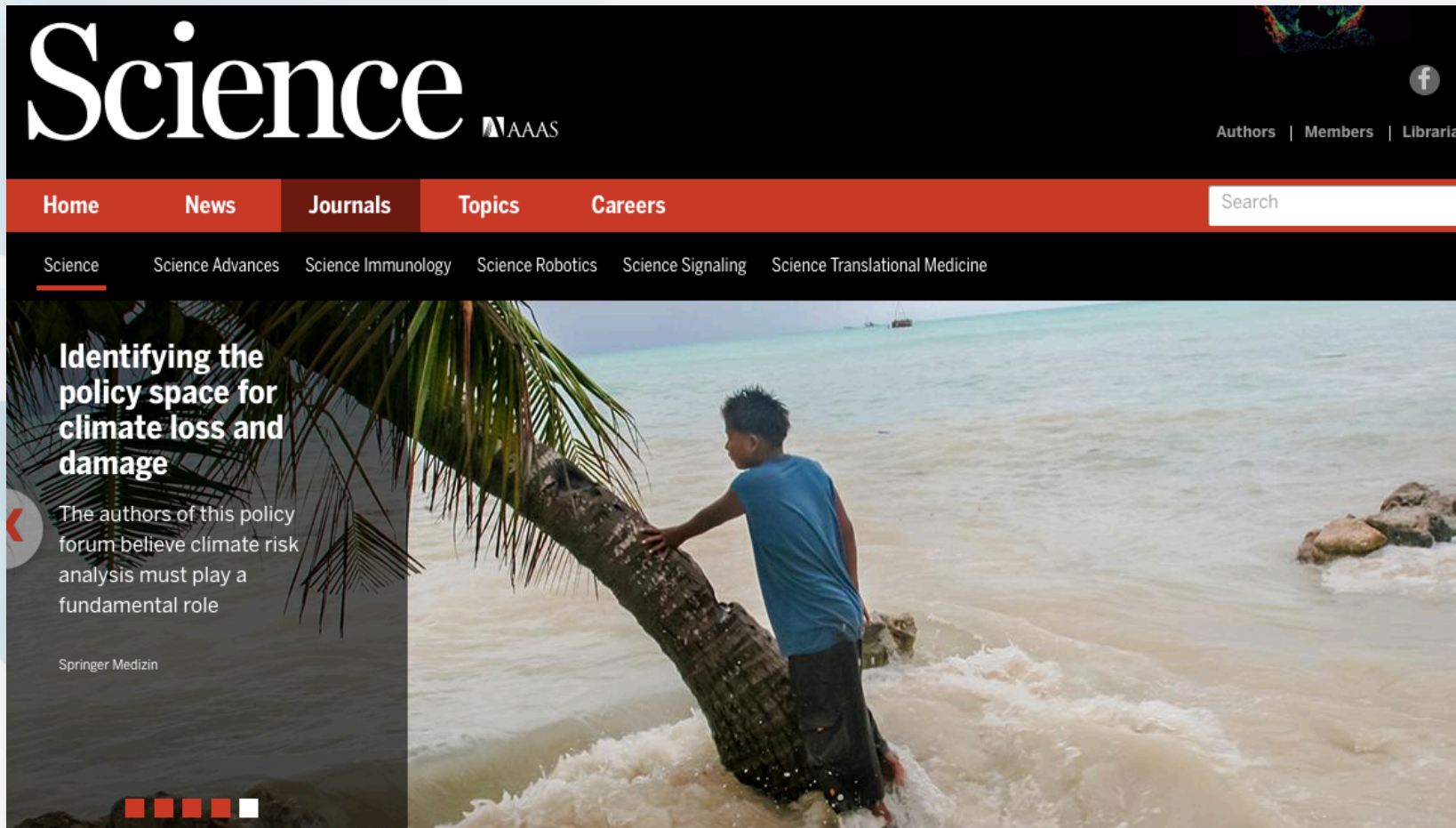
Transformation on the ground

R4 Rural Resilience Initiative (Oxfam, UNWFP)

- Ethiopia, Senegal, Malawi, Zambia
- Partners: farmers, local relief society, insurers, reinsurers, rural banks, university, government and donors
- Smallholder farmers' livelihoods in drought-prone northern state of Tigray in Ethiopia exposed to weather shocks
- Integrated risk management framework
 - Improved resource management (risk reduction)
 - Microinsurance (risk transfer)
 - Individual/group savings and (risk reserves)
 - Microcredit (risk taking)
- “Insurance-for-work” program on top of the government’s “food and cash-for-work” Productive Safety Net Programme (PSNP)



Example: Small Island States Risk from sea level rise and sea surge



The screenshot shows the Science journal website. At the top left is the "Science" logo with the AAAS logo to its right. In the top right corner, there are links for "Authors", "Members", and "Librarian", along with a Facebook icon. Below the logo is a navigation bar with "Home", "News", "Journals", "Topics", and "Careers". A search bar is located on the right side of this bar. Underneath the navigation bar, there are links for "Science", "Science Advances", "Science Immunology", "Science Robotics", "Science Signaling", and "Science Translational Medicine". The main content area features a large image of a boy standing on a beach, holding onto a palm tree trunk as waves crash against the shore. Overlaid on the left side of this image is a text box with the following content:

Identifying the policy space for climate loss and damage

The authors of this policy forum believe climate risk analysis must play a fundamental role

Springer Medizin

Risk space

Very high

Intolerable

Tolerable

Acceptable

Very low

Options space

TLD: Voluntary resettlement, alternative livelihoods

CLD: Involuntary migration and displacement

CCA: Maintenance and restoration of coastal landforms and marine and terrestrial ecosystems, improved management of soils and freshwater resources, appropriate building codes and settlement patterns

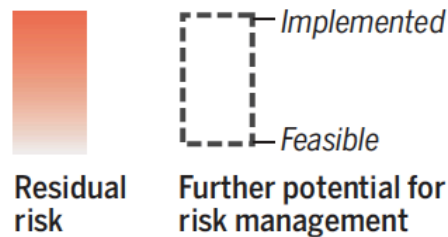
DRR: Seawalls, early warning, insurance

CLD: Absorbing increasing costs of DRR & CCA with rising risk

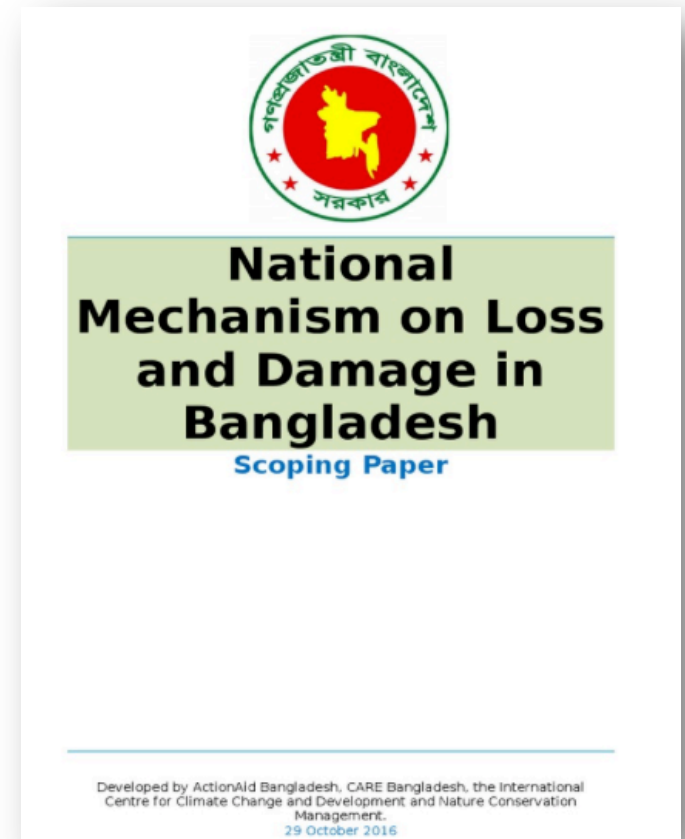
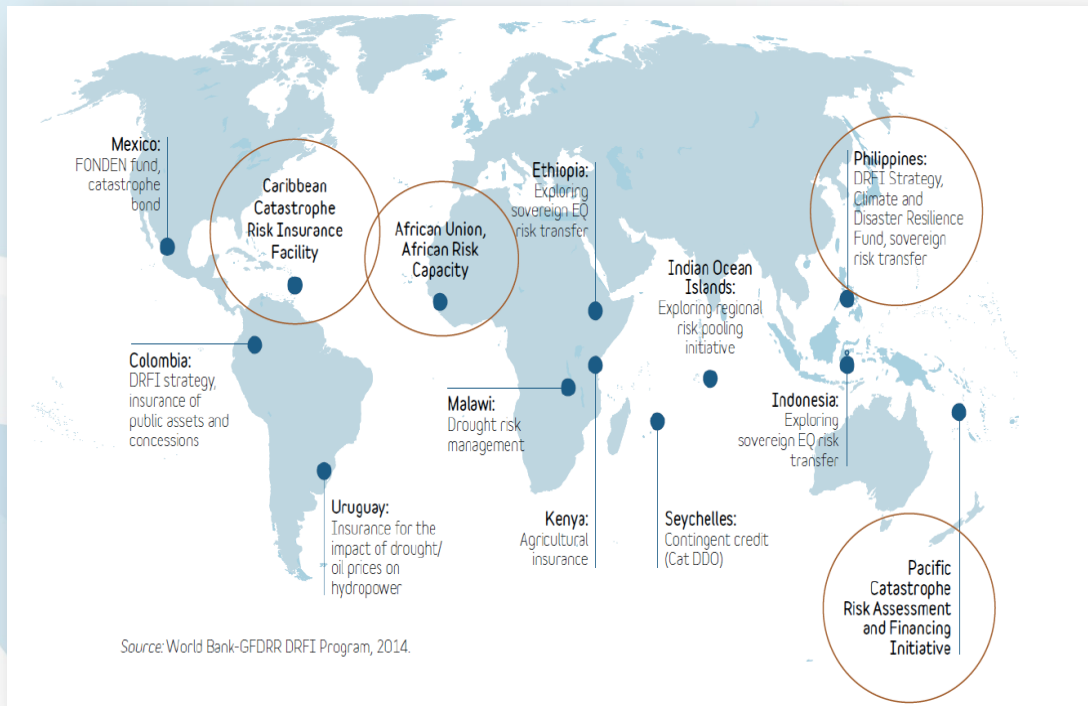
BRR: no further measures beyond those already implemented

Present Near term (2030-40) 2°C Longer term (2080-2100) 4°C

- ⇨ Transformative Loss & Damage (TLD)
- ➔ Curative Loss & Damage (CLD)
- ➔ Climate Change Adaptation (CCA) & Disaster Risk Reduction (DRR)
- ➔ Baseline Residual Risk (BRR)



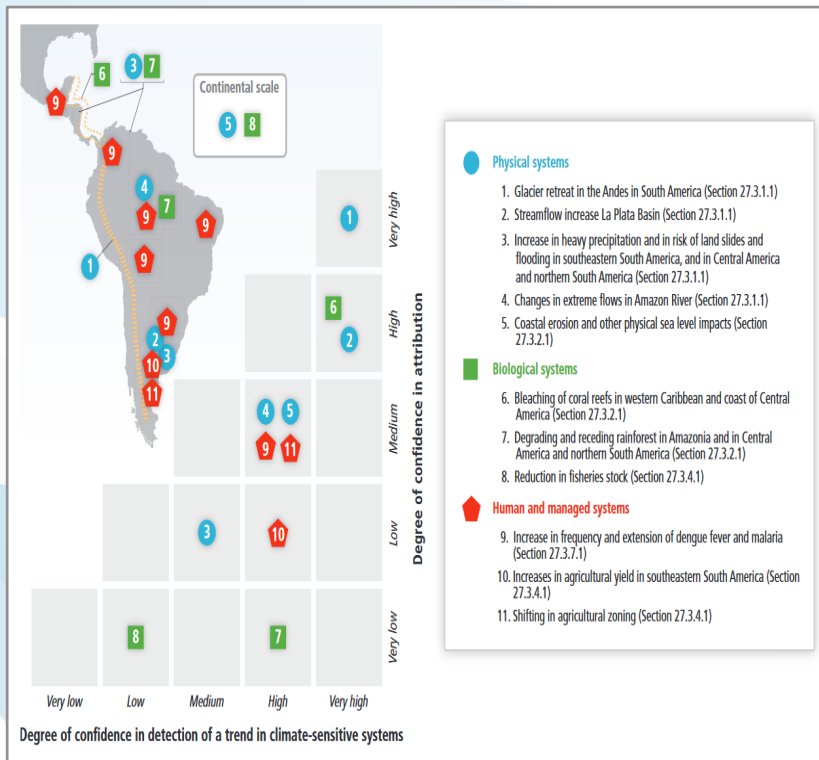
Implications-regional&national



Regional and national pools/national mechanisms

- Curative: Increased capitalisation in a changing climate
- Transformative: Linking risk pools to resilience building
- Eastern Africa-drought risk management: risk reduction, insurance, credit, risk taking

Broader implications of distributive justice- the Huaraz case



IPCC, 2014



Germanwatch, 2017



The Mountain Institute, 2017

Summary

- Principled approach for identifying risk and policy space for the 'beyond adaptation' debate
- Building on justice principles
- Transformative and curative measures → seeing attention already
- Climate risk lense to motivate 1.5/2° C ambition and understanding 'dangerous' climate change

Loss and Damage Network

Members' institutional affiliations



Contact



@LossDamage

Further reading

Mechler R. and Schinko T. (2016). Identifying the policy space for climate loss and damage. *Science* 354, 6310:290-92



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ABOUT THIS SERIES

TITLES IN THIS SERIES

Mechler, Bouwer, Linnerooth-Bayer, Schinko, Surminski (eds.)
"Loss and Damage from Climate Change. Concepts, Principles
and Policy Options." Springer, 2017