



# Financing Adaptation to Climate Change: Why and how?

Reimund Schwarze

Energy Access & Poverty Alleviation: Reducing Vulnerabilities and Increasing Resilience,  
Copenhagen (COP15), 16.12.2009

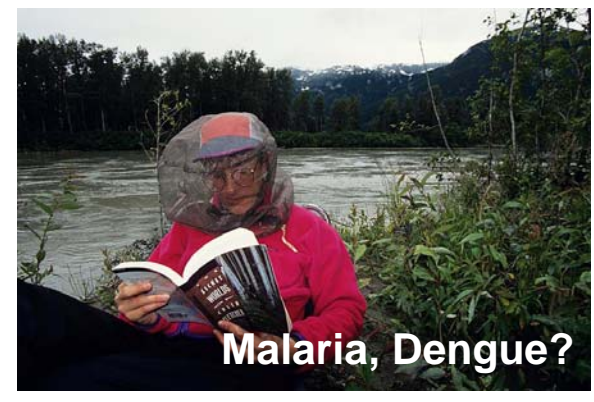


# Climate impacts

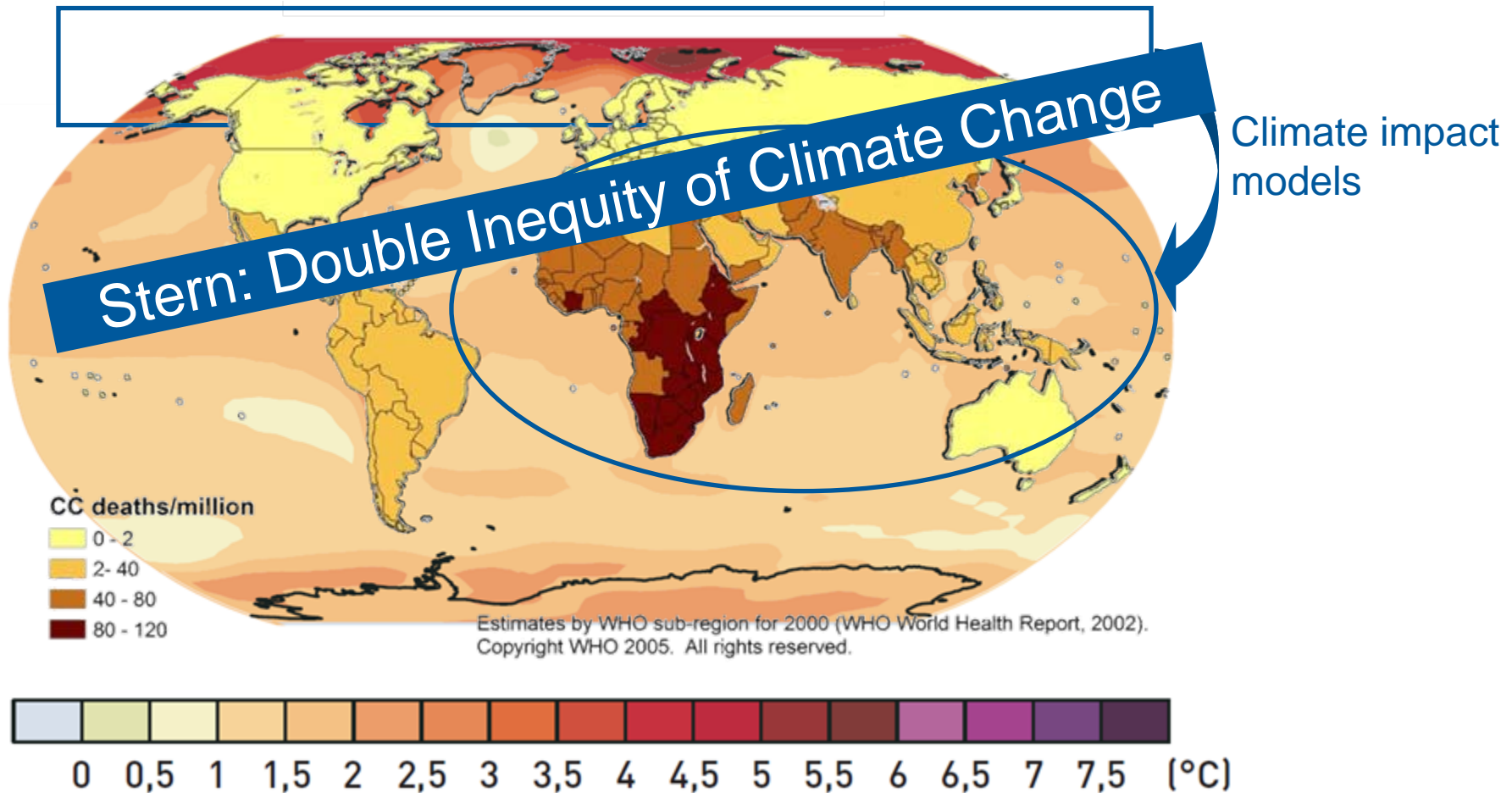




# Climate impacts



# Regional change of temperature in 2100 within the 2°C- from mortality caused by climate change





# Costs of adaptation

Study	Cost (in bill. USD, % GDP)	Time frame	Regional frame	Sectoral frame	Comments
World Bank (2006)	9-41 ( $< 0,1\%$ +/-)	Present	Developing Countries	Unspecified	Financial flows* exposure, climate proofing assumed
Stern Review (2006)	4-37	Present	Developing Countries	Unspecified	WB study + slight modifications
Oxfam (2007)	> 50	Present	Developing Countries	Unspecified	WB study + NAPA + NGO projects
UNDP (2007)	86-109	2015	Developing Countries	Unspecified	WB study + disaster response
UNFCCC (2007)	28-67	2030	Developing Countries	Agriculture, Water supply, human health, Coastal zone infrastructure	WB study +
UNFCCC (2007)	44-166 ( $0,06-0,21\%$ )	2030	Global	Agriculture, Water supply, human health, Coastal zone infrastructure	WB study +

\* ODA (40%),  
FDI (10%)  
GDI (2-10%)  
\*\* Climate proof:  
10-20%

ODA (20%),  
Climate proof:  
5-20%

New ODA (17-33%),  
strengthen  
resilience

Comprehensive  
estimates of the  
costs of adaptation  
are lacking

# Financing climate adaptation – how much and how?

	EU	US	G77+China	UN
Emission reductions in Annex I	-20%(-30%)	-4%(-7%)	>40%	-25%-40%
Emissions reductions in BRIC	Decoupling	MRVable NAMAs	Voluntary, IC-funded NAMAs	Decoupling
Financial funding (adaptation)	2,4 p.a.	Accepted but not quantified	150-500 p.a. (AOSIS: 750 p.a.)	100 p.a. (10 p.a.)

- **Credit-based?**

**Share of foreign/own funding?**

**Relationship to ODA?**

**Role of world bank (UNFCCC)?**

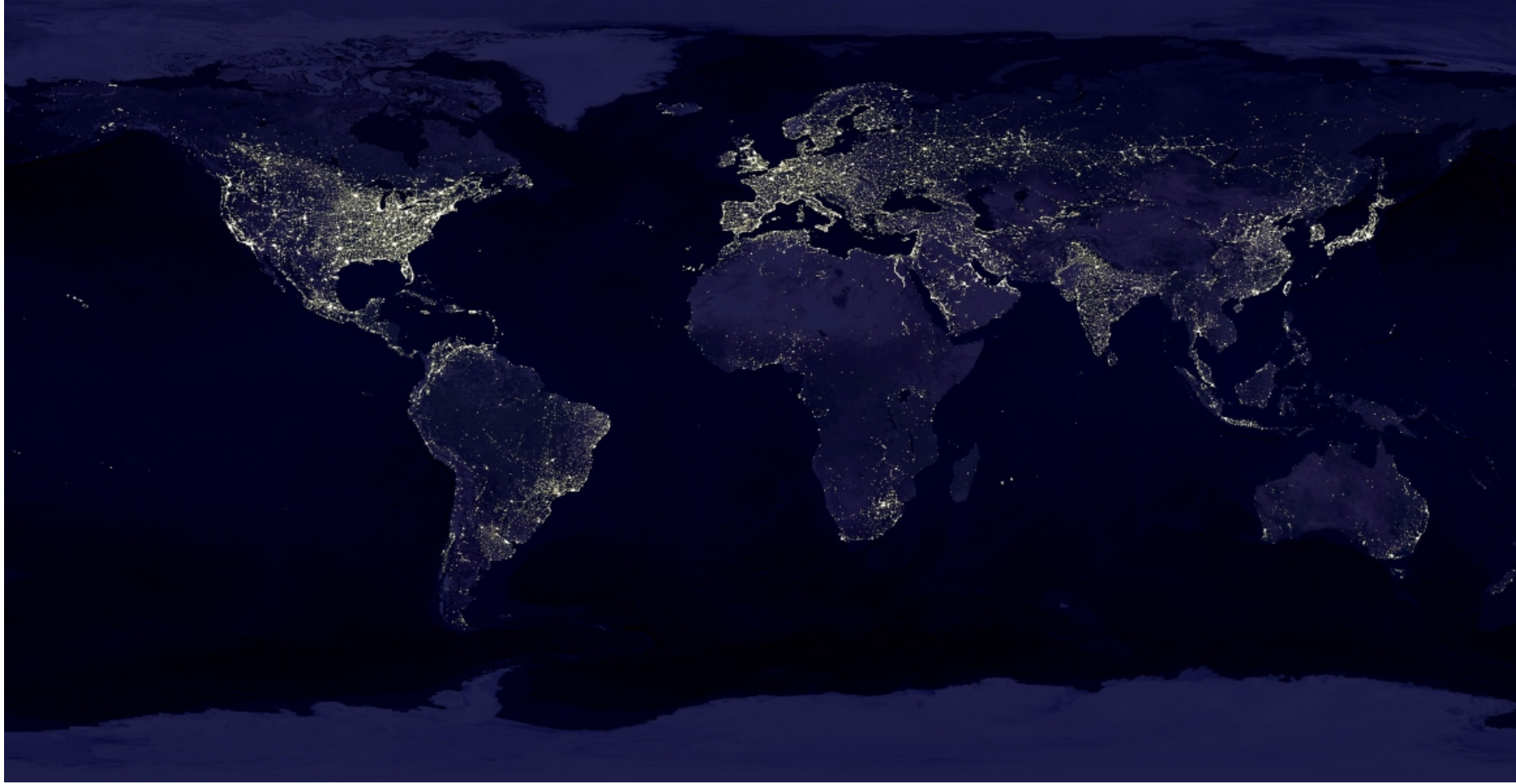
**CDM tax? Tax on international aviation?**

**Green fund? Tobin tax? ...**

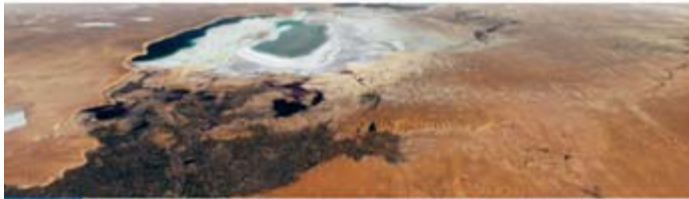
*“Main obstacle for COP15”*

Shape of the deal  
and how much money?

# Financing climate adaptation – Polluters must pay



# Climate impact research at UFZ Leipzig



Kapitel 1: Klimawandel und Wasser



Kapitel 2: Klimawandel und Biodiversität



Kapitel 3: Klimawandel und Sozioökonomie

