Vulnerability, Adaptation and Links to Economic Development Planning

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Outline

- Introduction to vulnerability and adaptation
- What to do about climate change vulnerability?
- OECD and Climate Change
- Development and Climate Change Project
- Key issues regarding project scope
- Framework for analysis
- Principles for case study selection
- Next steps

1. Introduction to Vulnerability and Adaptation

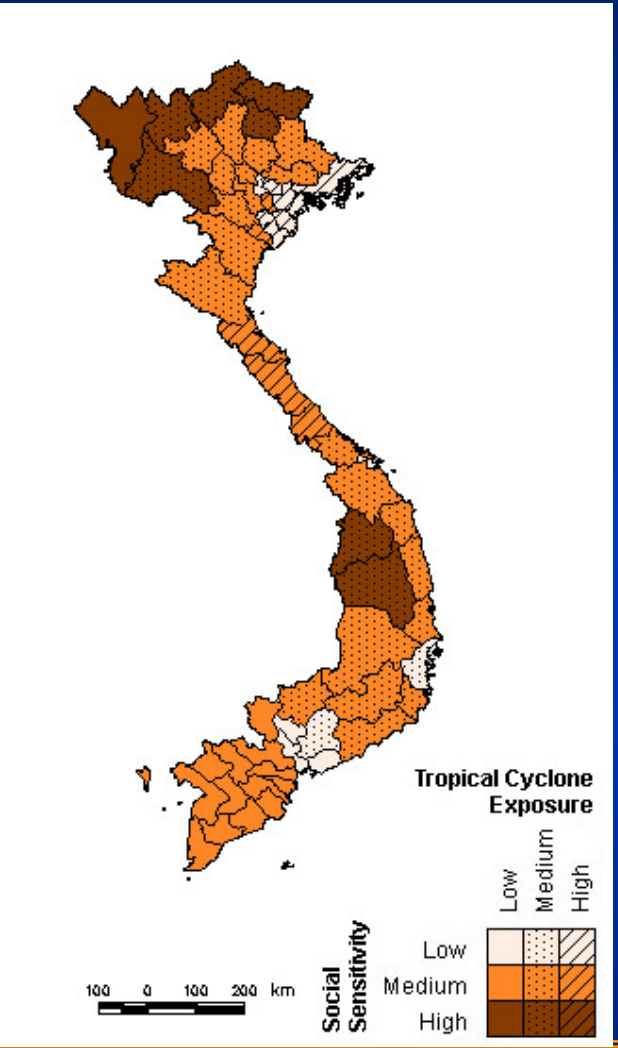
Vulnus (Latin) : wound

Vulnerabilis: wounded soldier on the battlefield
(at risk from further attack)

"Vulnerability has two sides: an external side of risks, shocks and stress to which an individual or household is subject; and an internal side which is defenselessness, meaning a lack of means to cope with damaging loss" (Chambers 1989)

1.1 Quick Example: Vulnerability to Cyclones in Vietnam

V = fn (Exposure, {Sensitivity, Coping Capacity})



2. What to do about Vulnerability to Climate Change?

- Rich research agenda on assessing climate change vulnerability (e.g. IPCC, UNDP-GEF Adaptation Policy Framework, etc.)

- Risk of getting into a "Vulnerability Beauty Contest"

- Interest limited to academics, **Environment Side** of Multilateral Donors and Government Agencies

- **Development side** of donors and government agencies have typically lacked interest or specific guidance on how to incorporate climate change concerns in their decision-making

3. OECD and Climate Change

- OECD: Organization for Economic Cooperation and Development. 30 Member states.
- "Think tank" as opposed to a lending or an implementation agency.
- Main emphasis of climate change work on Annex-1 mitigation. Emerging interest in vulnerability and adaptation because OECD provides a coordinating forum for industrialized country donors (OECD-DAC).

4. OECD Development & Climate Change Project

Joint project between Development Co-operation and Environment Directorates

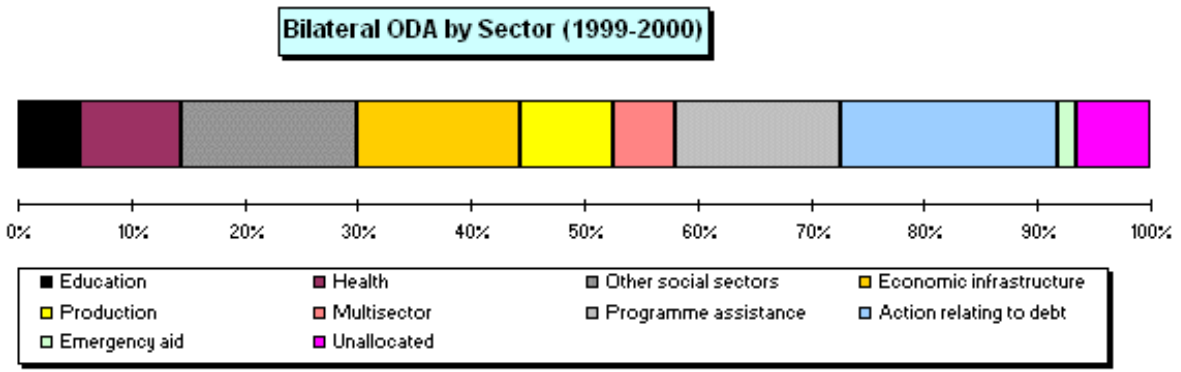
***Objective**: To provide guidance (to donors and developing country planners) on how to mainstream responses to climate change within economic development planning and assistance, with natural resource management as an overarching theme.*

Bangladesh

Receipts	1998	1999	2000
Net ODA (USD million)	1 263	1 215	1 172
Bilateral share (gross ODA)	50%	48%	51%
Net ODA / GNI	2.8%	2.6%	2.4%
Net Private flows (USD million)	150	- 105	53

For reference	1998	1999	2000
Population (million)	125.6	127.7	129.8
GNI per capita (Atlas USD)	360	370	380

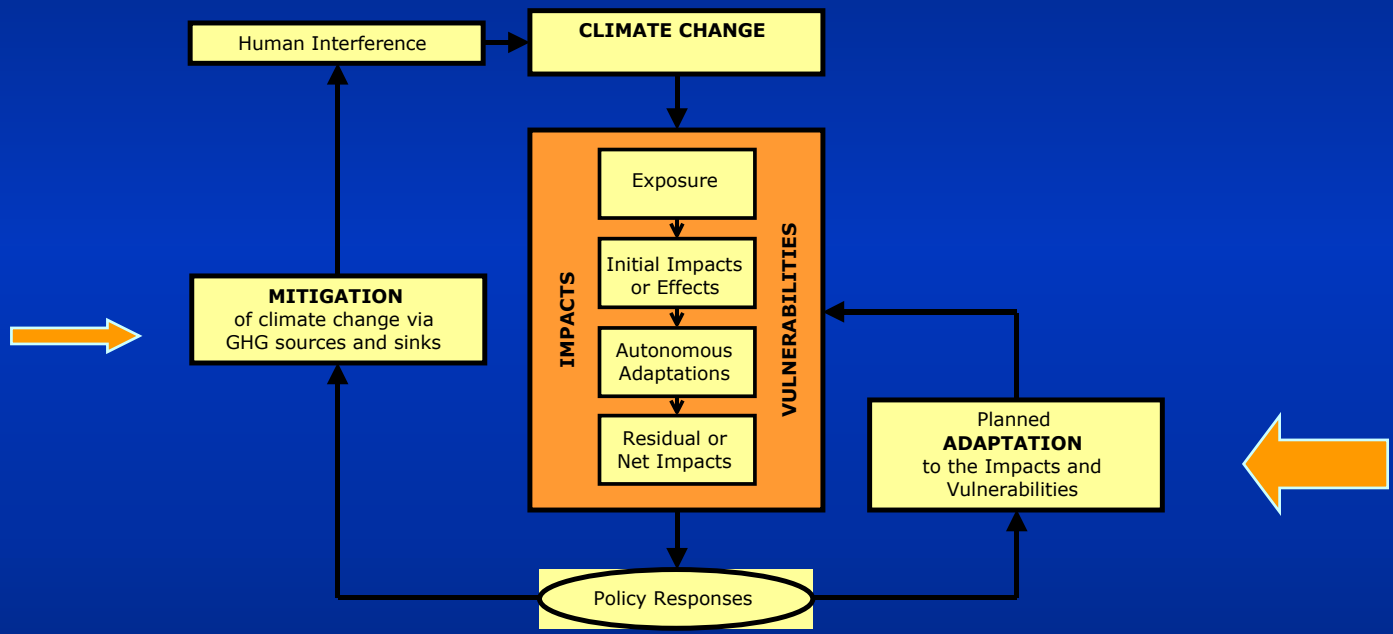
Top Ten Donors of gross ODA (1999-2000 average)		(USD m)
1	IDA	385
2	JAPAN	354
3	AS. D B SPECIAL FUNDS	267
4	UNITED STATES	110
5	UNITED KINGDOM	104
6	EC	66
7	GERMANY	42
8	DENMARK	38
9	NETHERLANDS	34
10	CANADA	34



Source: OECD-DAC/World Bank

5. Key Issues Regarding Project Scope

5.1 Mitigation and Adaptation Responses



5. Key Issues Regarding Project Scope

5.2 Type of Adaptation Responses Covered

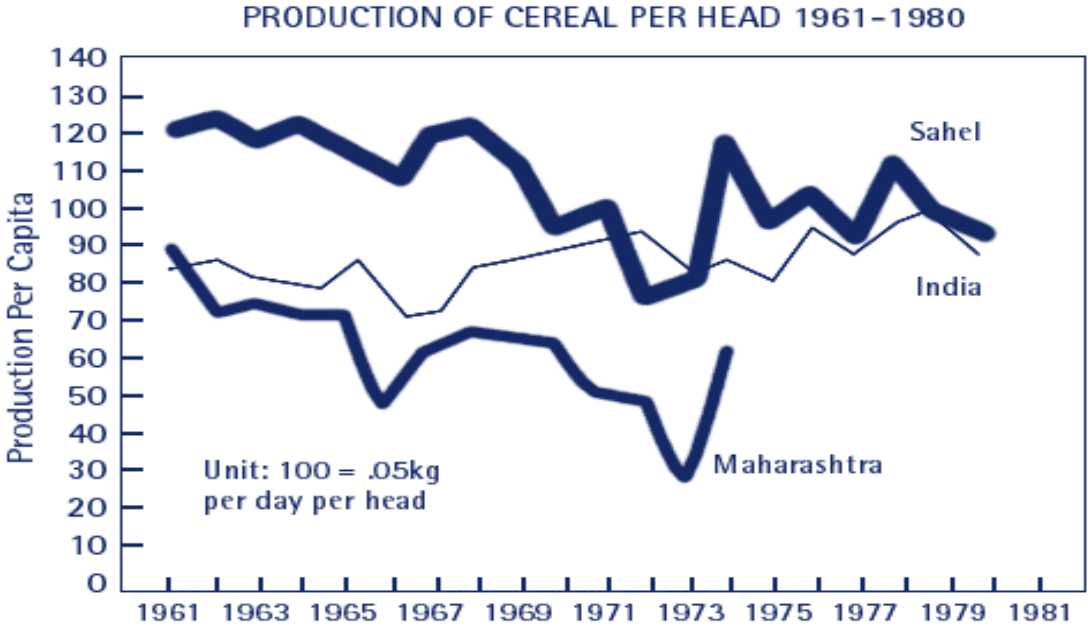
		Anticipatory	Reactive
Natural Systems			· Changes in length of growing season · Changes in ecosystem composition · Wetland migration
Human Systems	**Private**	· Purchase of insurance · Construction of house on stilts · Redesign of oil-rigs	· Changes in farm practices · Changes in insurance premiums · Purchase of air-conditioning
	Public	· Early-warning systems · New building codes, design standards · Incentives for relocation	· Compensatory payments, subsidies · Enforcement of building codes · Beach nourishment

5. Key Issues Regarding Project Scope

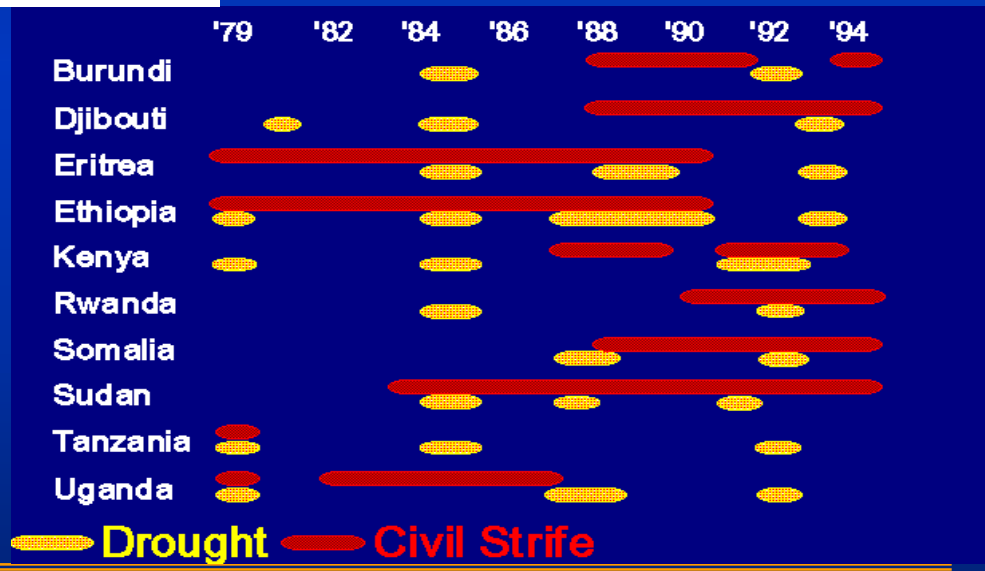
5.3 Climate variability and climate change

- Adaptation to current variability is already sensible, and in *many cases* will enhance adaptive capacity to longer term climate changes.

- Coping with climate variability, while clearly important, is not straightforward – coarse spatial and temporal resolution of climate forecasts; inability to predict weather within climate; and root causes of social vulnerability often lie in variables other than climate.



Dreze and Sen, *Hunger and Public Action(1986)*



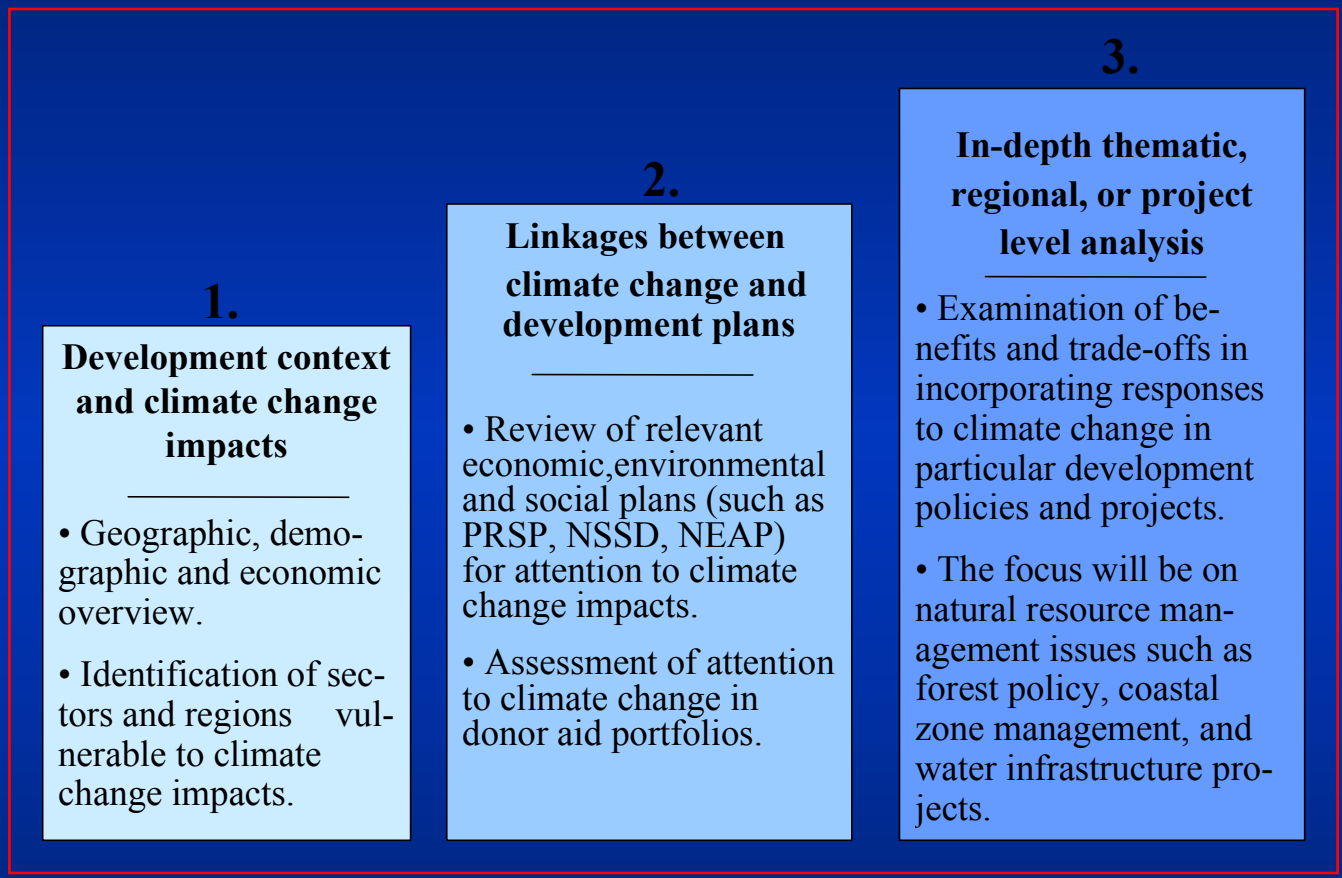
Broad and Agrawala, *Science* 289 (2000)

5. Key Issues Regarding Project Scope

5.3 Climate variability and climate change (cont'd)

- At the same time, climate change might require a set of medium to long term adaptation responses that go above and beyond coping with climate variability

6. Framework for Analysis



7. Principles for Case Study Selection

- **Scientific criteria:** Reasonably robust signals in climate change projections (temperature and sea level rise mediated impacts primarily, precipitation less so); Scale of projections must be in sync with scale of planning.
- **Socio-political criteria:** Culture of long term planning, political and economic stability
- **Pragmatic criteria:** Pre-existence of climate change impacts information, suitable partners, available resources.

8. Potential Case Study Countries

Asia: Bangladesh, Bhutan, Nepal, Vietnam, Philippines

Americas: Belize, Mexico, Peru, Uruguay

Africa: Egypt, Tanzania, Mozambique

Pacific Island States: Fiji, Kiribati, Tuvalu, others?

Information and Updates

http:// www.oecd.org/env/cc