AIACC VULNERABILITY AND ADAPTATION TRAINING

Vulnerability Module for Nairobi Kick-off Meeting

Objectives:

- To introduce the range of definitions of vulnerability
- To look at range of methods in vulnerability assessment
- To consider ways to apply vulnerability assessment in AIACC projects

Module plan:

Vulnerability concepts and definitions (20 min)

- Using the attached 'vulnerability diagrammes', brainstorm regarding framing vulnerability in the context of climate change and using vulnerability frameworks in AIACC projects
- List of definitions
- Six principles of social vulnerability

Range of vulnerability assessment methods (15 min)

- Table with checklist of uses

Vulnerability indicators and mapping (35 min)

- Indiscriminate aggregation or structured
- Bangladesh example of hierarchy of indicators
- Mapping examples from Clark Idrisi labs
- Moss example of link to global change models
- Yohe/Tol vulnerability indicators

How might this approach and techniques be used in AIACC projects? (15 min)

- Flip chart of practical applications
- List of potential constraints
- Requirements for further training

Evaluation (5 min)

- Sheets with likes/dislikes comments

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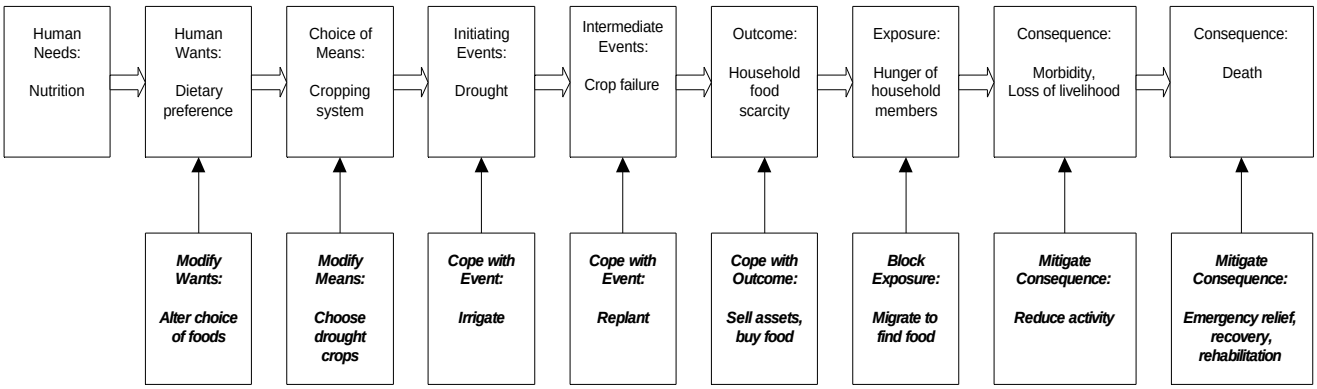
Definitions of hazard, vulnerability, risk and disasters

Hazard	**:**	**potential threat to humans and their welfare**
+		
vulnerability	**:**	**exposure and susceptibility to losses**
=		
risk	**:**	**probability of hazard occurrence**
disaster	**:**	**realization of a risk**

✓ **Strengths:**

☒ **Weaknesses:**



Causal chain of hazard development

Source: after Downing (1991, see also Millman and Kates 1990).

✓ **Strengths:**

☒ **Weaknesses:**

Vulnerability and capability

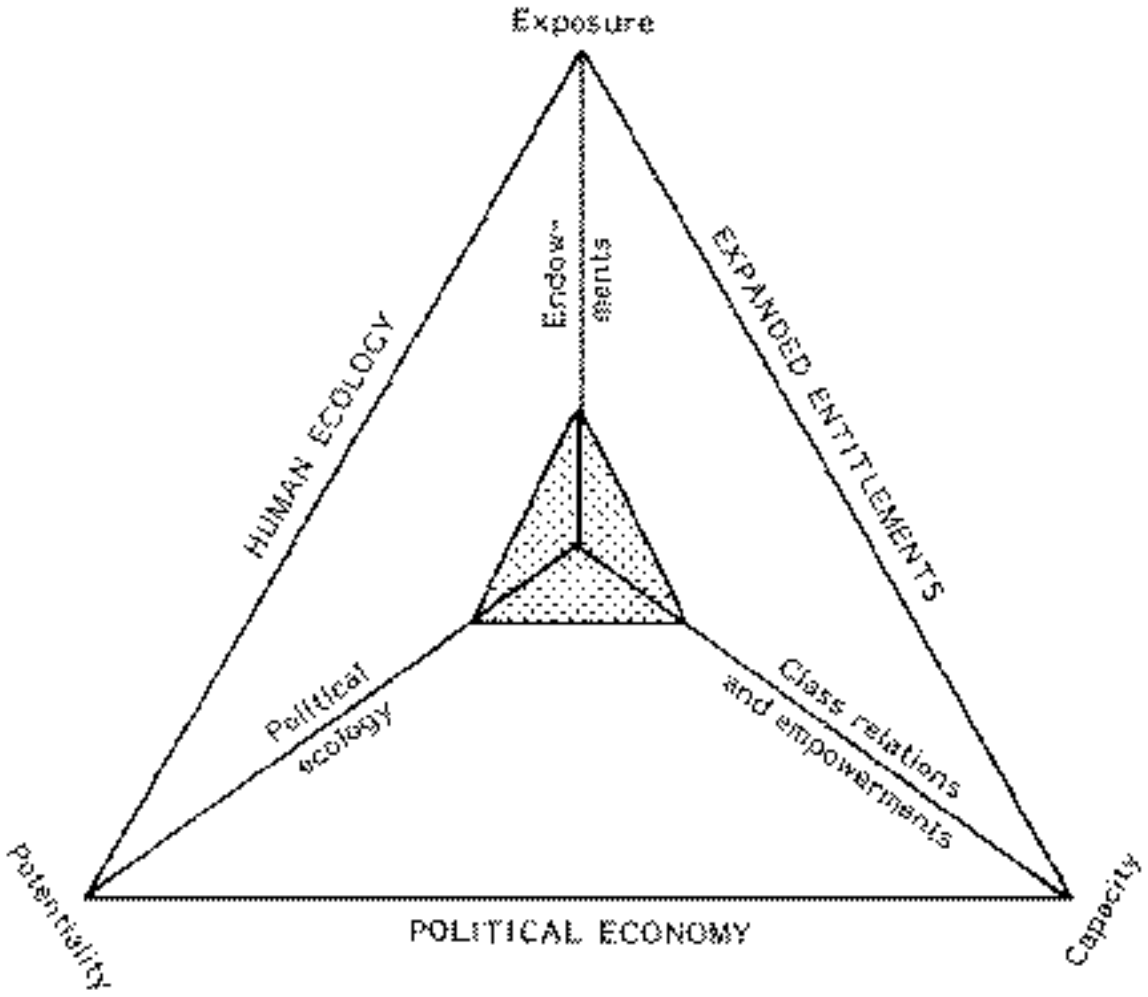
RESOURCES	VULNERABILITY	CAPABILITY
Physical/material		
Social/Organizational		
Motivational/attitudinal		

Source: Anderson and Woodrow (1989).

✓ **Strengths:**

☒ **Weaknesses:**

Three dimensions of vulnerability



Source: after Bohle et al. ***(1994).***

✓ **Strengths:**

☒ **Weaknesses:**

PROGRESSION OF VULNERABILITY

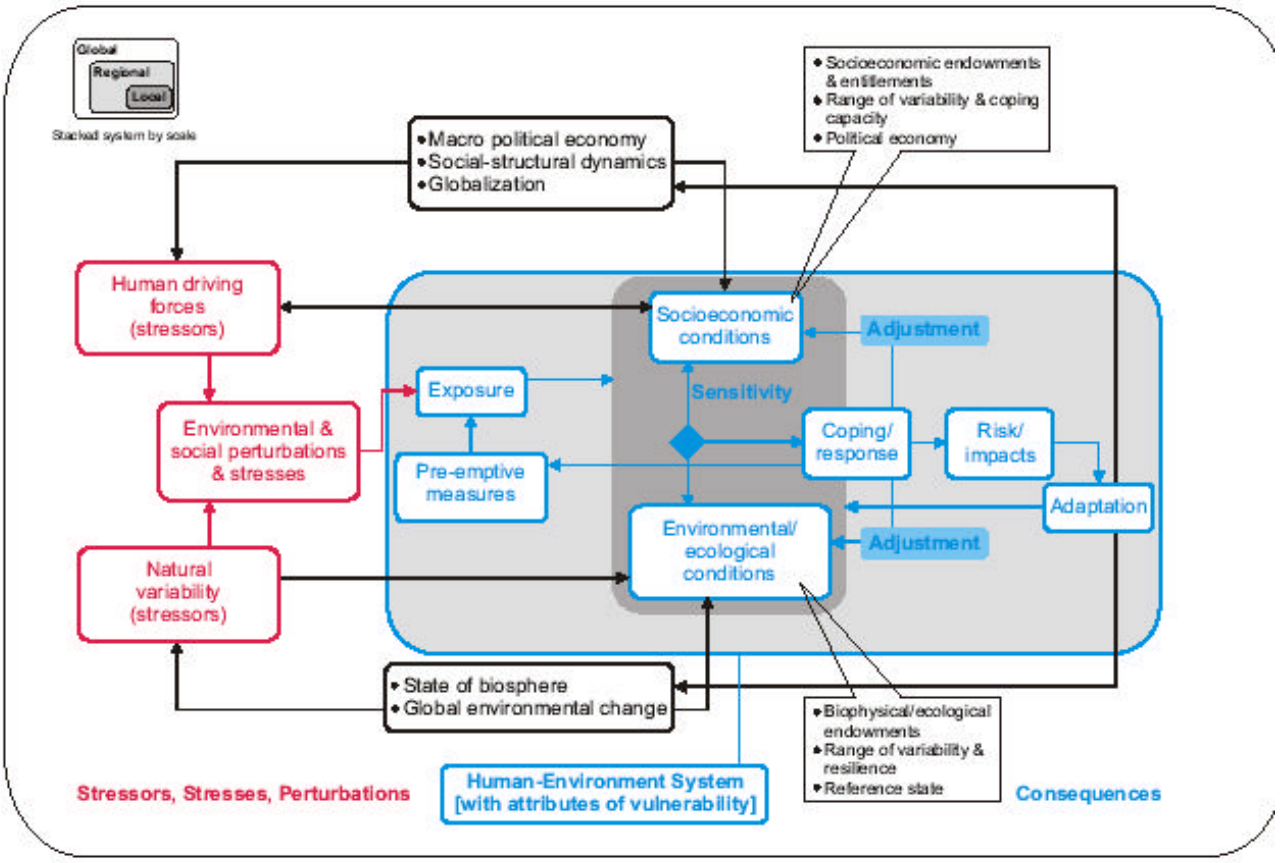
ROOT CAUSES ⇒	*DYNAMIC PRESSURES* ⇒	**UNSAFE CONDITIONS** ⇒	***DISA***
Limited access to	**Lack of**	**Fragile physical environment**	
· Resources	· Institutions	· Dangerous locations	**F**
· Structures	· Training	· Unprotected structures	
· Power	· Skills		
	· Investment	**Fragile local economy**	
Ideologies	· Markets	· Livelihoods at risk	**HA**
· Political systems	· Press freedom	· Low income	
· Economic systems	· Civil society		
		Vulnerable society	
	Macro-forces	· Groups at risk	**VULNE**
	· Population growth	· Little capacity to cope	
	· Urbanisation		
	· Arms expenditure	**Public actions**	
	· Debt repayment	· Lack of preparedness	
	· Deforestation	· Endemic disease	
	· Soil degradation		

Structure of vulnerability and disasters. Source: Blaikie et al. ***(1994).***

✓ **Strengths:** ☒ **Weaknesses:**

Concepts of Vulnerability

Environmental vulnerability



Source: Kasperson, et al.

✓ **Strengths:**

☒ **Weaknesses:**

Concepts of Vulnerability

DEFINITIONS

vulnerability: the degree to which a person, system or unit is likely to experience harm due to exposure to perturbations or stresses.

exposure: the contact between a system and a perturbation or stress.

sensitivity: the extent to which a system or its components is likely to experience harm, and the magnitude of that harm, due to exposure to perturbations or stresses.

resilience: the ability of a system to absorb perturbations or stresses without changes in its fundamental structure or function that would drive the system into a different state (or extinction).

stress: cumulating pressure on a system resulting from processes within the normal range of variability, but which over time may result in disturbances causing the system to adjust, adapt, or be harmed.

perturbation: a disturbance to a system resulting from a sudden shock with a magnitude outside the normal vulnerability.

adjustment: a system response to perturbations or stress that does not fundamentally alter the system itself. Adjustments are commonly (but not necessarily) short-term and involve relatively minor system modifications.

adaptation: A system response to perturbations or stress that is sufficiently fundamental to alter the system itself, sometimes shifting the system to a new state.

hazard: the threat of a stress or perturbation to a system and what it values.

risk: the conditional probability and magnitude of harm attendant on exposure to a perturbation or stress.

Source: Kasperson, et al. (2002)