

Climate Change and Livelihood Security

Some Conceptual Considerations

Eberhard Weber

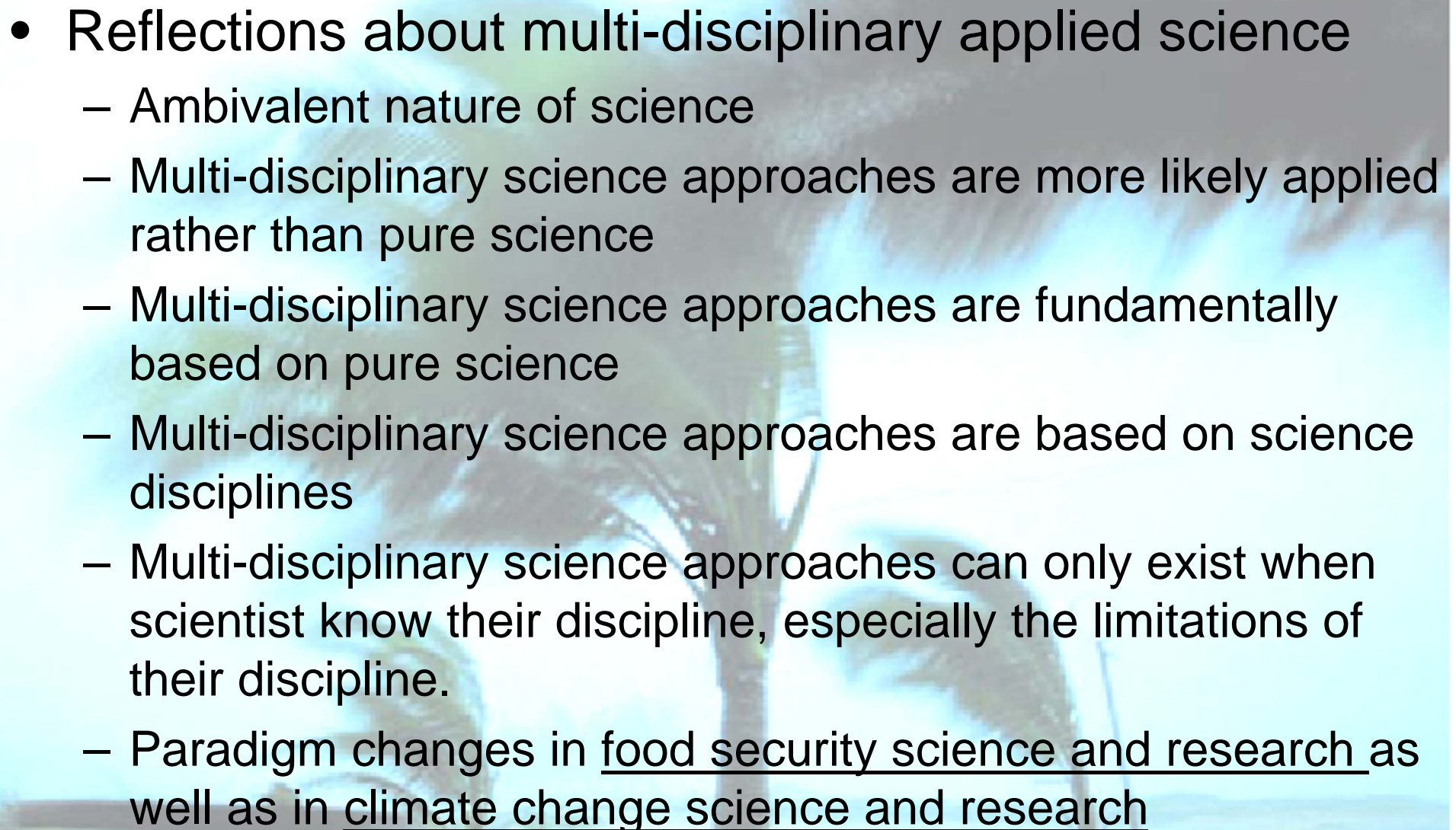
Chemistry – Our Life, Our Future

International Conference on Chemistry, Environment and Climate Change

USP, Laucala Campus Suva

September 14 – 16, 2011

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- A tropical beach scene with palm trees and a thatched roof. The image is slightly blurred and has a soft, warm tone. The palm trees are in the foreground, and the thatched roof is visible in the upper right corner. The background shows a calm sea and a clear sky.
- Reflections about multi-disciplinary applied science
 - From Food Security to Livelihood Security
 - Two examples:
 - Squatter Settlements
 - Kava

- 
- Reflections about multi-disciplinary applied science
 - Ambivalent nature of science
 - Multi-disciplinary science approaches are more likely applied rather than pure science
 - Multi-disciplinary science approaches are fundamentally based on pure science
 - Multi-disciplinary science approaches are based on science disciplines
 - Multi-disciplinary science approaches can only exist when scientist know their discipline, especially the limitations of their discipline.
 - Paradigm changes in food security science and research as well as in climate change science and research

Famine in the Pacific

Losing the Chances for Change*

GeoJournal 4.5 447–466/1980
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Abstract: The Pacific Islands are undoubtedly vulnerable to famine. There is varied evidence of past famines in the local Pacific languages, in the ethnographic accounts of Pacific islands, and in the reports of the missionary groups. This famine vulnerability is because of the prevalence of natural disasters and the limited ability of the different island social systems to adapt to these extreme events. The famine vulnerability in the Pacific islands bears both similarities and dissimilarities to the more researched vulnerability of South Asia. Five recent examples of famines or potential famines strongly suggest that the Pacific islands remain liable to famine and that the rapid influx of foreign food relief recently does not remove the islands' inherent susceptibility to famine. By masking the terminal symptoms of famine crises, the influx of food relief may cause loss of the opportunity to develop more sustainable island food systems.

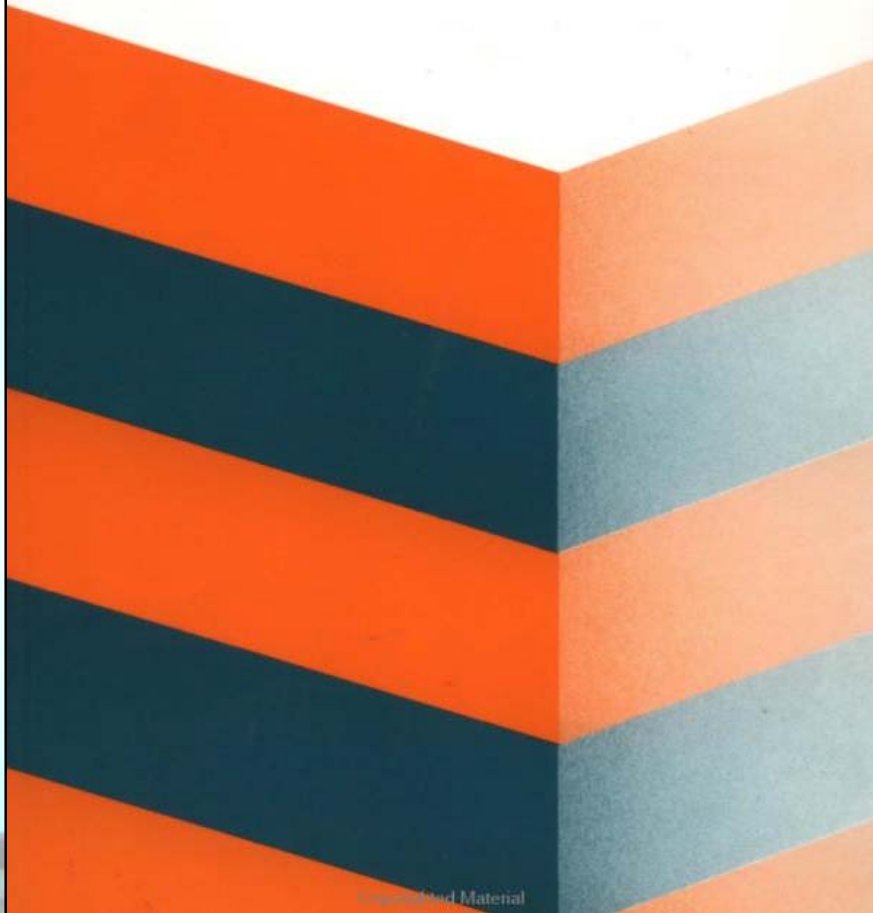
- Impacts of climate change
- Paradigms in Food (In)Security Research
- Vulnerabilities and Sustainable Livelihoods

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Poverty and Famines

An Essay on Entitlement and Deprivation



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DEVELOPMENT AS FREEDOM



AMARTYA SEN

WINNER OF THE NOBEL PRIZE IN ECONOMICS

"Fascinating. . . . The overall argument [is] eloquent and probing."
—*The New York Times*

Strategies arising from Changing Paradigms

Food Availability Decline

- To grow more food
- Green Revolution / Bio-Technology

Food Entitlement Decline

- To strengthen people's capabilities accessing food.
- To reduce people's vulnerabilities
- To make people's livelihoods more secure and sustainable / concept of resilience

Food security...

... exists when all people, at all times, have **physical and economic access** to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life.

(World Food Summit 1996)



.... is much more than just food production....

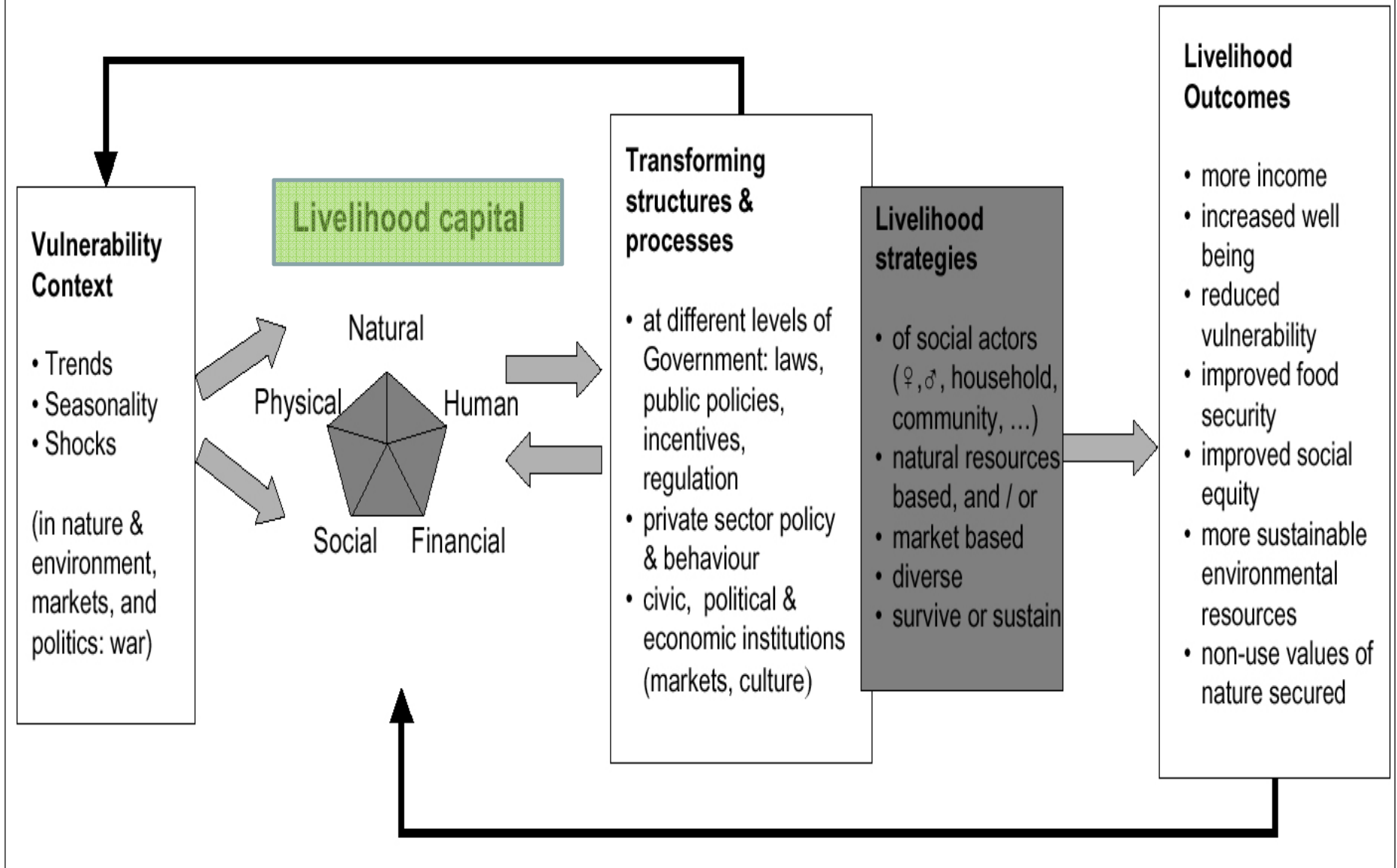
The structural dimension of ***social*** vulnerability

- Vulnerability

"Vulnerability has (thus) two sides: an **external side** of *risks*, shocks and stress to which an individual or household is subject; and an **internal side** which is defencelessness, meaning a lack of means to *cope* without damaging loss"

Robert Chambers 1989

Oxfam's SL framework



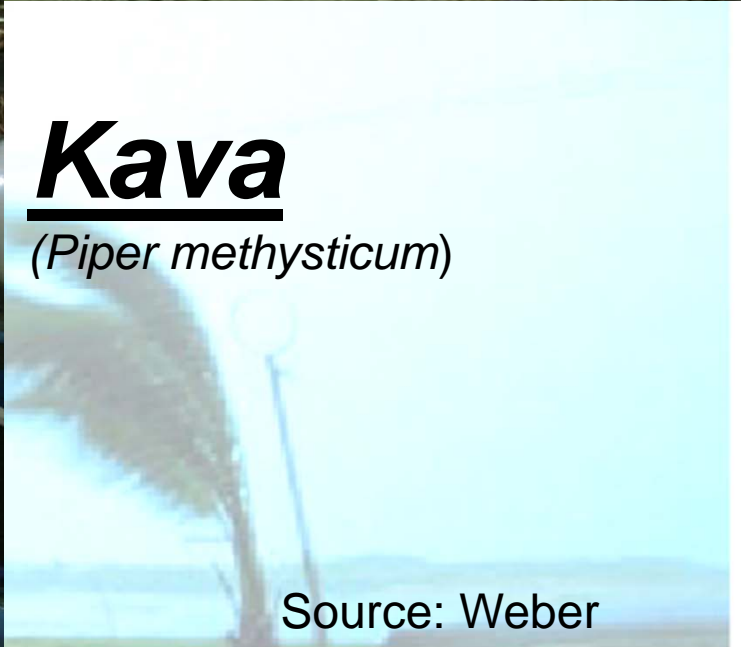
(source: Carney 1999, 11)



Source: Weber



Source: Weber



Kava

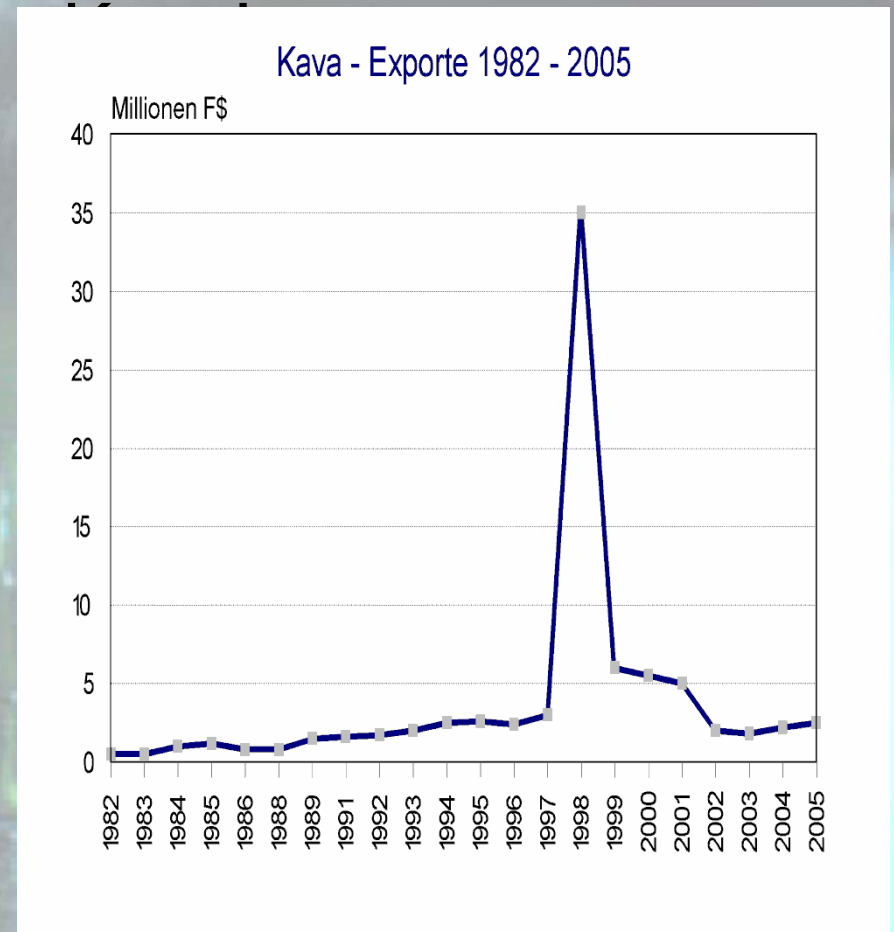
(*Piper methysticum*)

Source: Weber

Kava Ban



- Everyone can enjoy





Thank you very much

Source: Weber

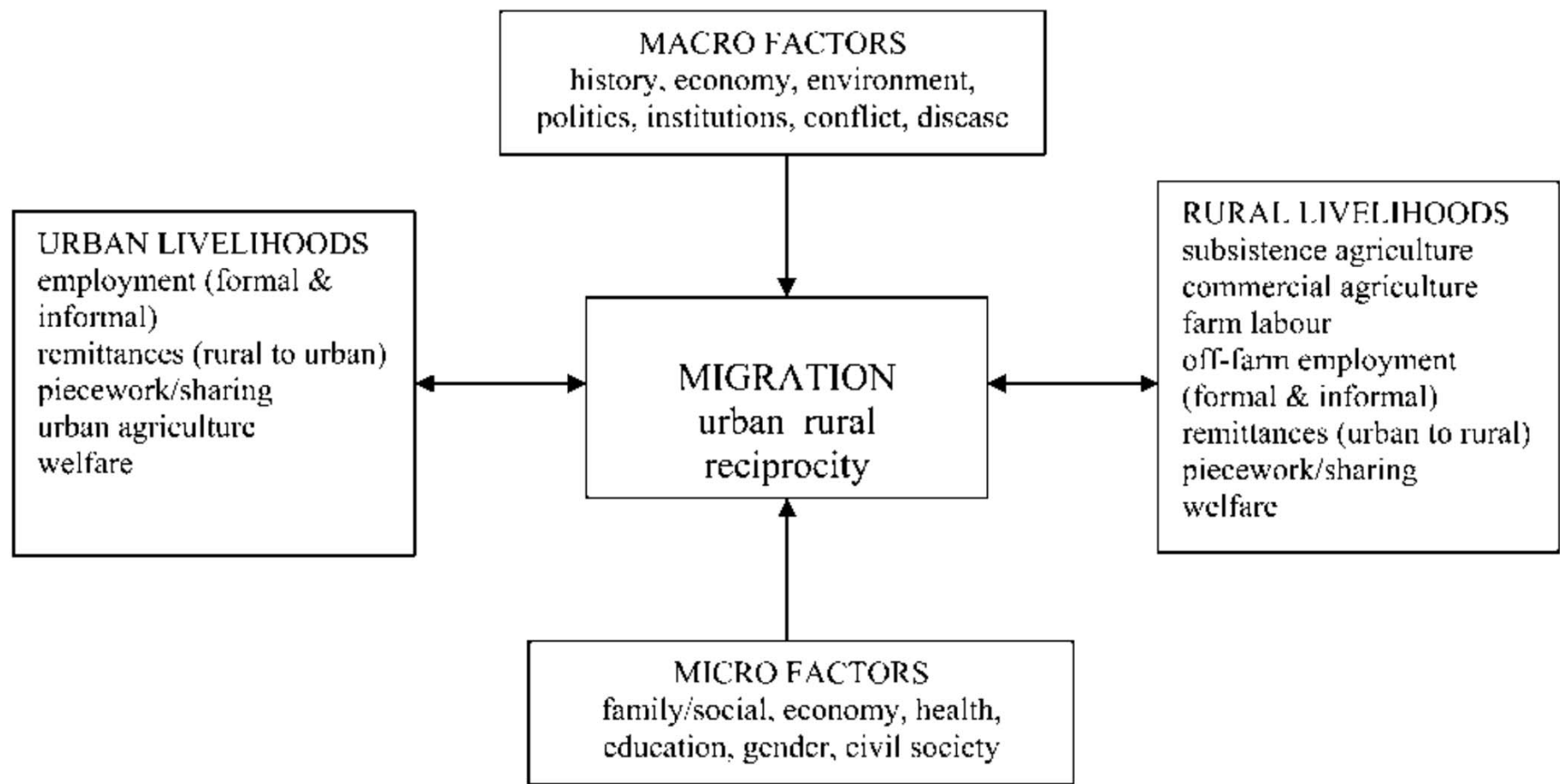
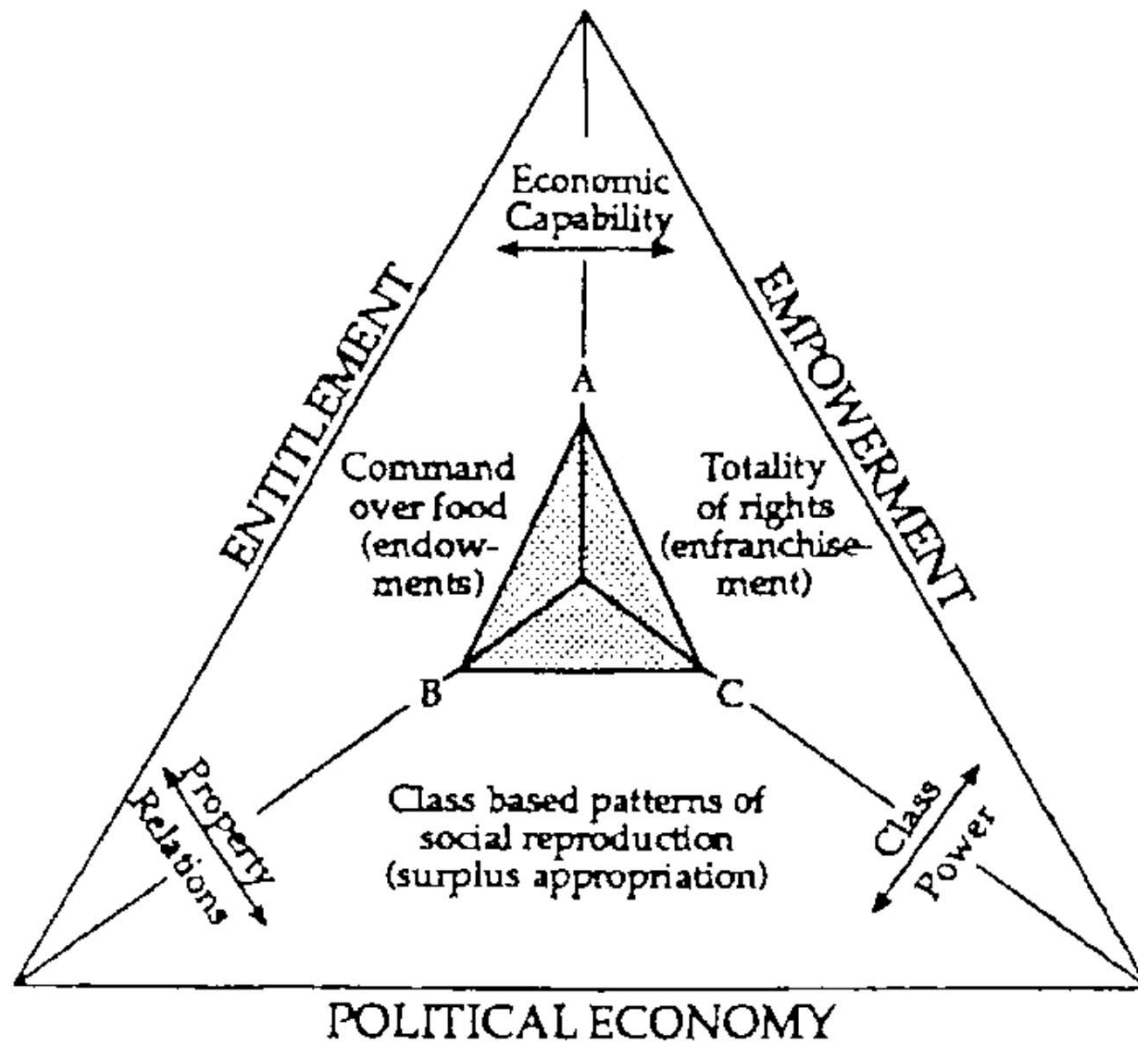
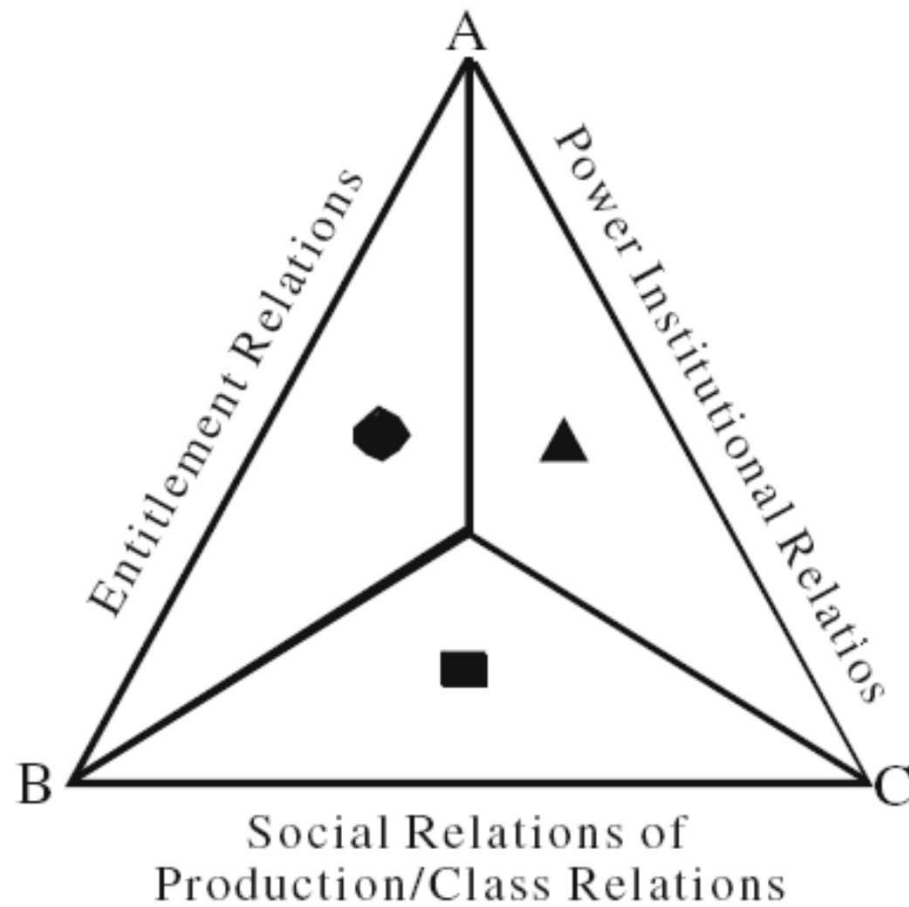


Figure 1: Conceptual framework – reciprocal migration and livelihoods



- △ Space of Vulnerability
- A Vulnerability by lack of POTENTIALITY
- B Vulnerability by EXPOSURE
- C Vulnerability by lack of CAPACITY

Fig. 2. The causal structure of vulnerability (source: Watts & Bohle 1993,



- ◆ Vulnerability as Entitlement Problem
- ▲ Vulnerability as Powerlessness
- Vulnerability through Appropriation and Exploitation

Figure 2. 'Space of vulnerability.' Adapted from Watts and Bohle (1993).