

ADVANCING OUR UNDERSTANDING OF AGRICULTURE'S VULNERABILITY TO CLIMATE CHANGE

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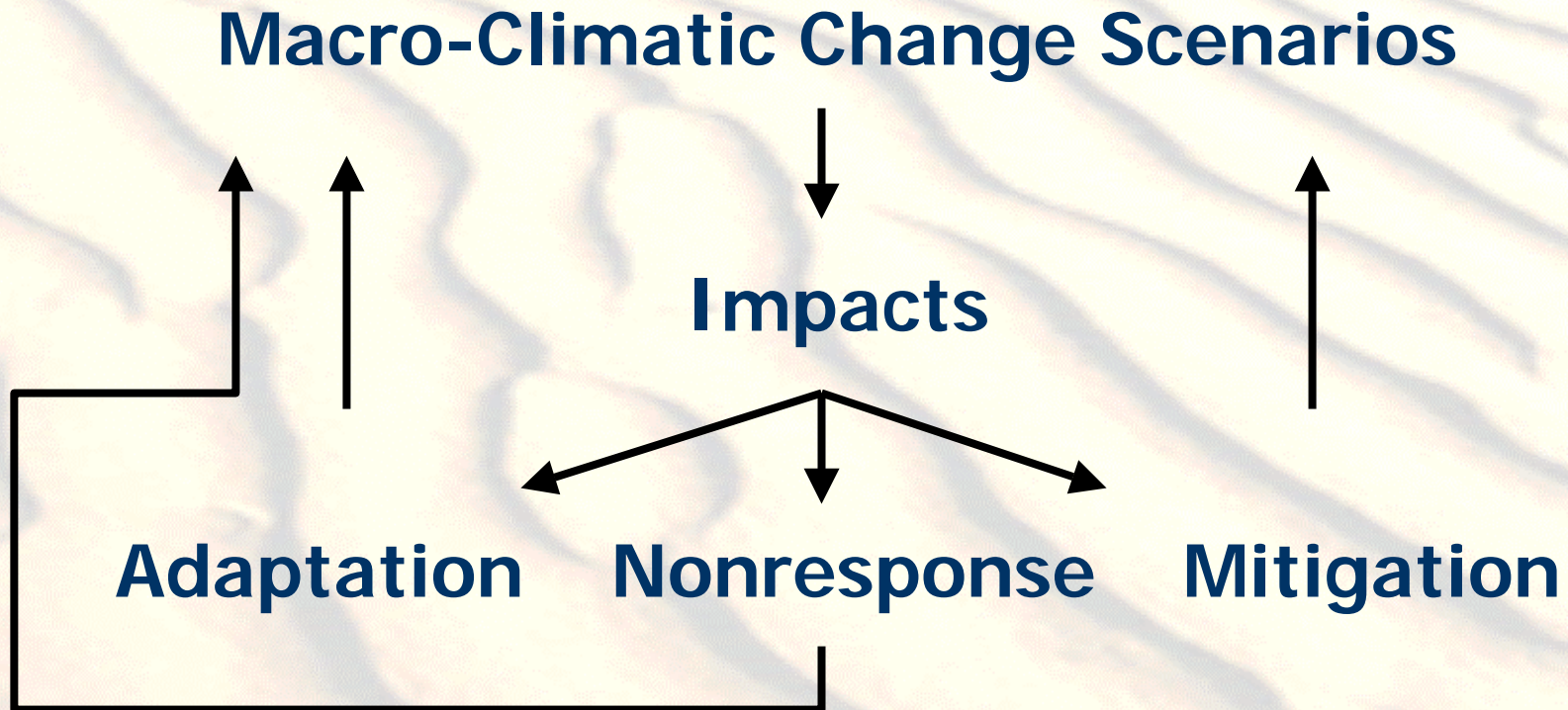


Overview

- *Review of Impacts, Adaptation & Vulnerability Concepts*
- *Central Canada Vulnerability Case Studies*
- *Comparing Vulnerability Concepts to Practice*



Climatic Change: Impacts & Response Frameworks



Impacts & Adaptation Attributes

➤ *Impacts/Adaptation Attributes*

a) Climatic change entry point

b) Impacts assessed first

c) Adaptations considered sequentially

d) Single stressor

e) Vulnerability as a residual of impacts

f) Farmers as victims



Rethinking Vulnerability

- *Influence of famine and hazards research*
 - a) *Vulnerability as a system property*
 - b) *External and internal stressors*
 - c) *Dual role of exposure and coping capacity*
 - d) *Differential vulnerabilities*
 - e) *Multiple stressors*

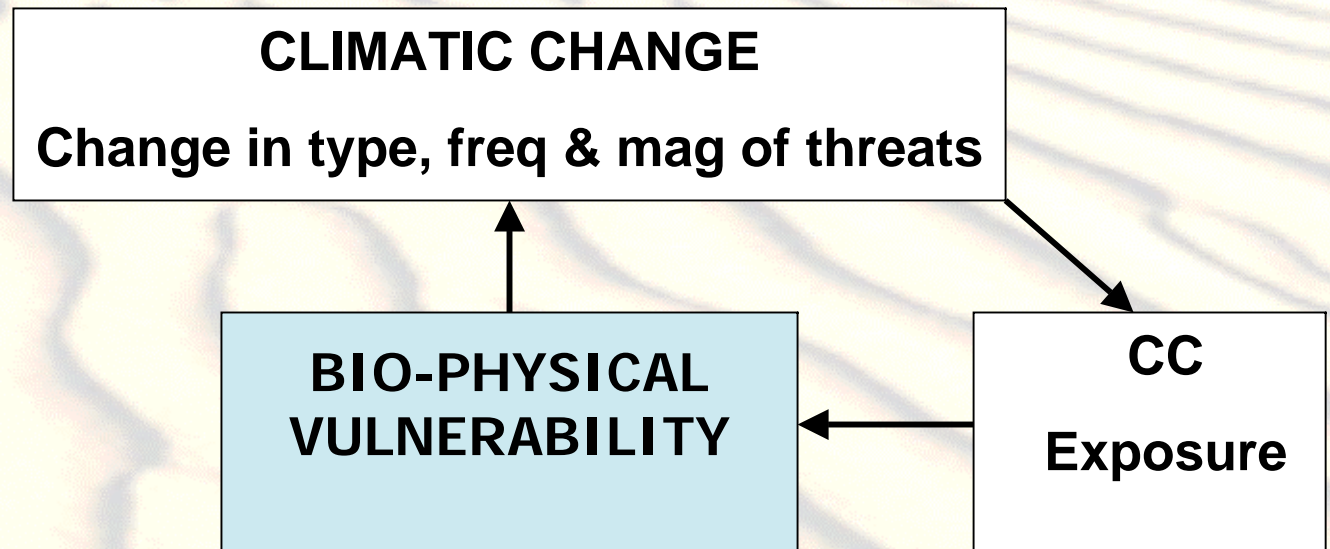


Contemporary Views on Vulnerability

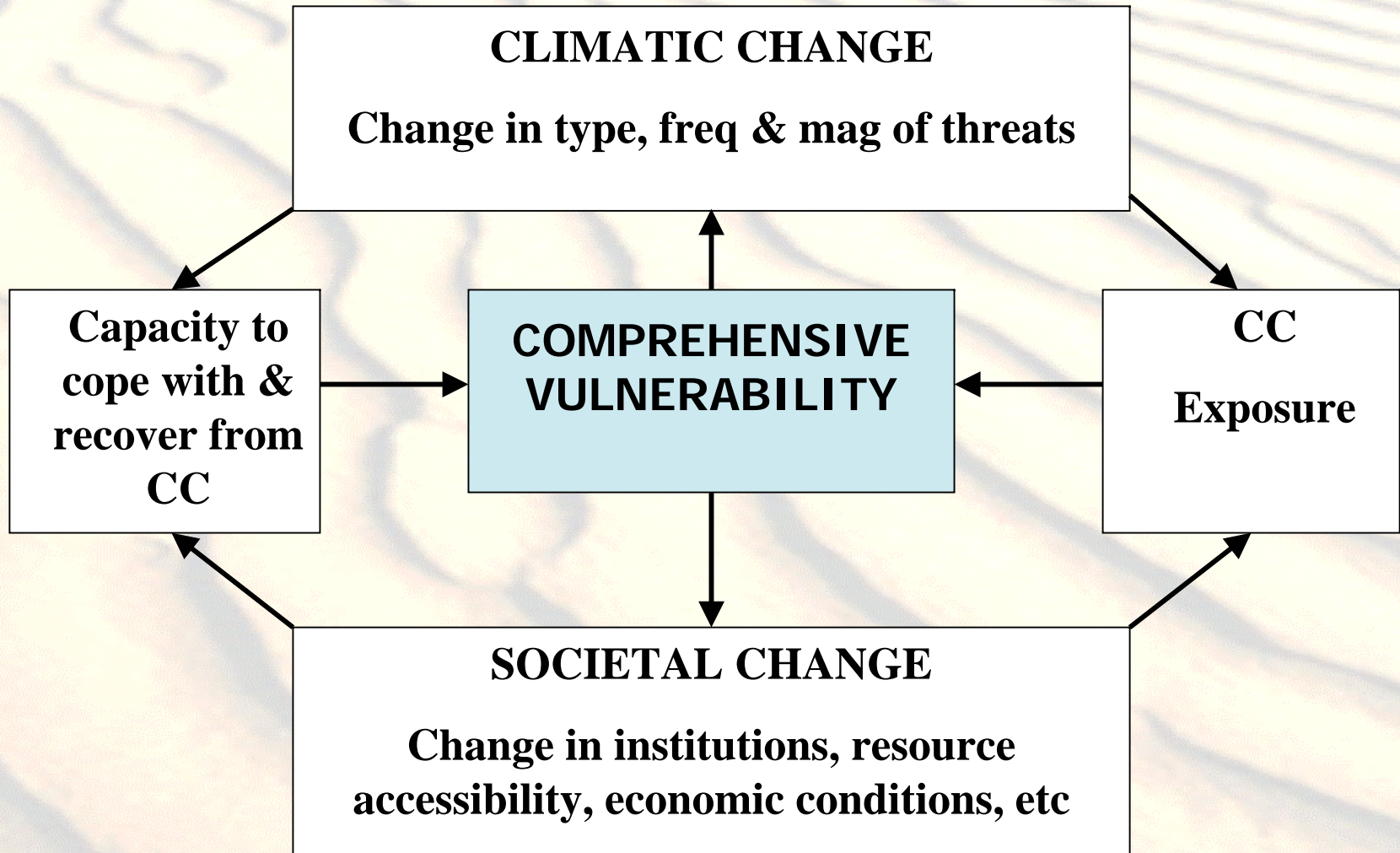
- *Capacity of communities to anticipate, cope with, resist and recover from the impacts of environmental change (Vogel 1998)*



Building A Framework To Link CC & Vulnerability Research



Building A Framework To Link CC & Vulnerability Research cont'd



Central Canada Case Studies: Vulnerability of Farming Systems

- *West Quebec & Eastern Ontario*
- *Position climatic change within broader decision-making context*
- *Process*

Initial Focus Group Mtg (FGM)

Intensive surveys

Follow-up FGM



Initial Focus Group Mtg (FGM)

- *Early 2003: 2 West Quebec, 1 Eastern Ont*
- *Hosted by local agricultural community*
- *Moderated discussion*
 - a) Recent changes (major changes, affects on farming, reasons)*
 - b) Looking forward (key factors prompting future change, climatic change influence)*



FGM: Recent Changes

- *Fewer but larger farms*
- *Prices stagnant, costs increasing*
- *Aging farmers*
- *Urban, non-farm encroachment*
- *Inferior land brought into prod't'n*
- *Enhanced efficiency from new technology*
- *Low land prices reduce options*



FGM: Recent Changes cont'd

- *Loss in agricultural services*
- *Emergence of environmental regulation*
- *Exiting by middle-aged farmers*



FGM: Looking Forward

- *Farm size continues to increase*
- *Greater importance on mgt skills*
- *Increased regulation & administration*
- *Increased pluri-activity farming*
- *Further erosion of agriculture's position*
- *Threats to supply mgt*
- *Increased contract farming*



FGM: Looking Forward cont'd

➤ *Climatic Change*

Drought more of a concern than warming

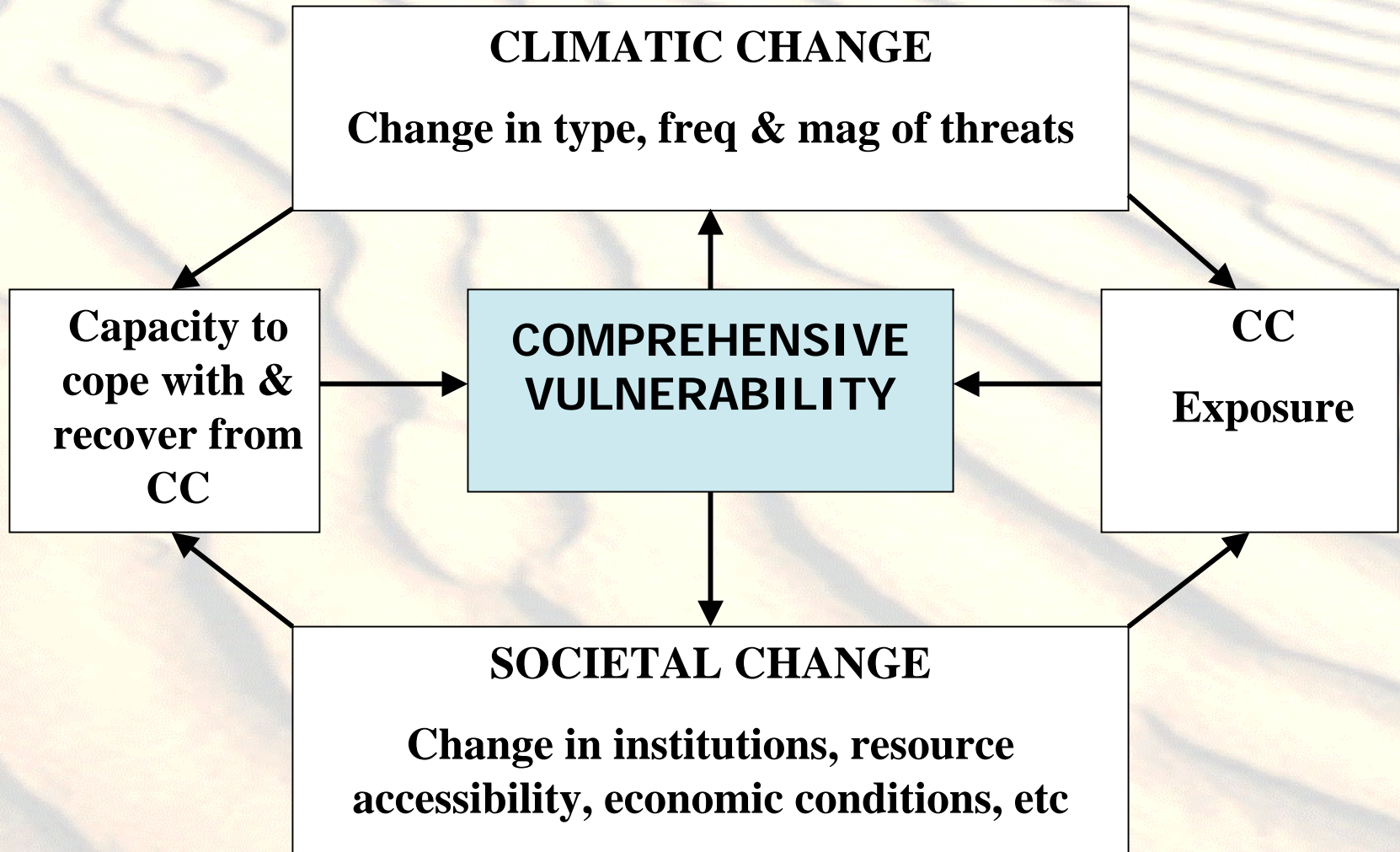
Climatic extremes of concern

Greater need for reliable local forecasts

Broader agricultural trends of greater concern than CC



Building A Framework To Link CC & Vulnerability Research cont'd



Comparing Concepts to Practice

- *Multiple stressors rather than a climatic change focus is required*
- *Declines in coping capacity greater threat than climatic change*
- *External and internal stressors valid approach*
- *Differential vulnerabilities evident*
- *Vulnerability exposed not caused by extreme event(s)*



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