

# **A Sociology of Disaster and Development (Disaster Risk Reduction) and its Contribution to Society**

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# Overview

1. Society in disaster risk reduction
2. Examples of social organisation for disaster risk reduction and development
3. Limitations and opportunities in contributing disaster risk reduction to society
4. Concluding comments

# 1. Society in Disaster, Development and Risk

1. Disaster Risk =  $\frac{\text{Hazard probability} \times \text{Expected Loss}}{\text{Loss Mitigation}}$

or

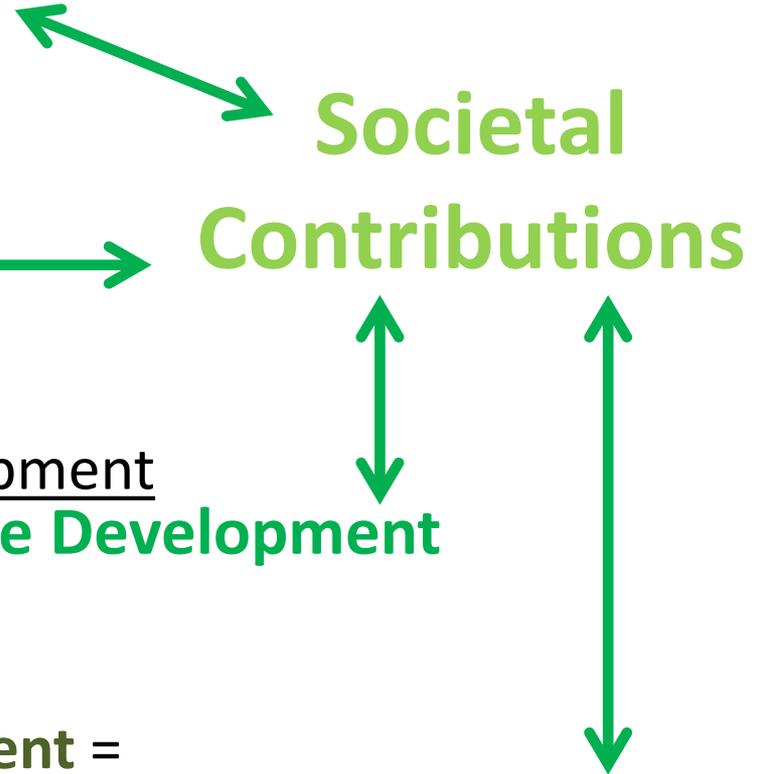
2. Disaster Risk =  $\frac{\text{Hazard} \times \text{Vulnerability}}{\text{Capacity}}$

or

3. Disaster Risk =  $\frac{\text{Unsustainable Development}}{\text{Capacity for Sustainable Development}}$

or

4. Disaster Risk Reduction as Development =  
**Risk Conscious, Wellbeing Motivated Sustainable Development**



# Sociologies of disaster and development together

‘to address disasters in development and  
development in disasters’

... which includes implications and applications in fields  
such as for example:

*community based disaster reduction*

*health centred disaster risk reduction*

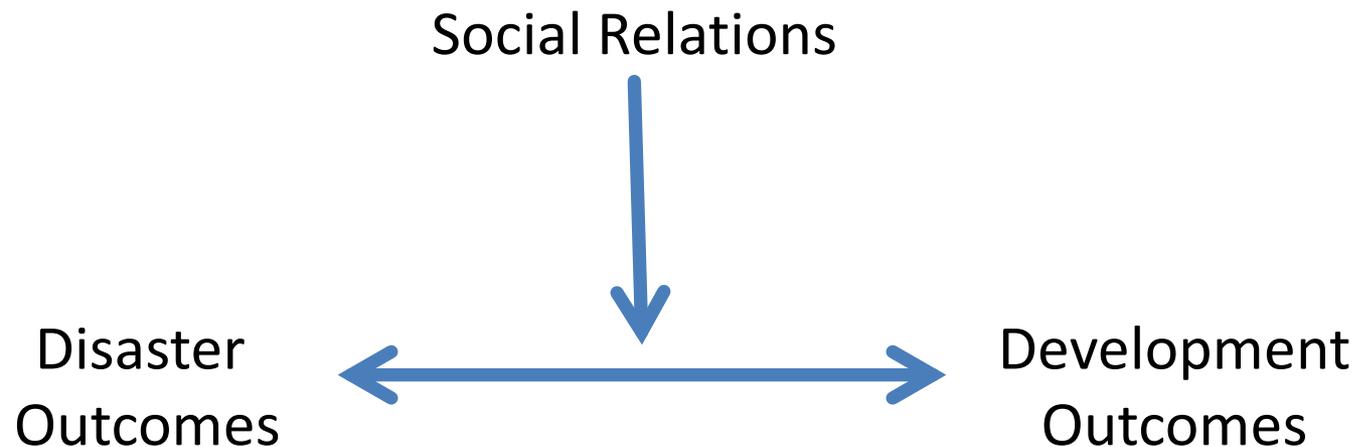
*social resilience, adaptation and wellbeing*

*disaster response as sustainable restoration and development*

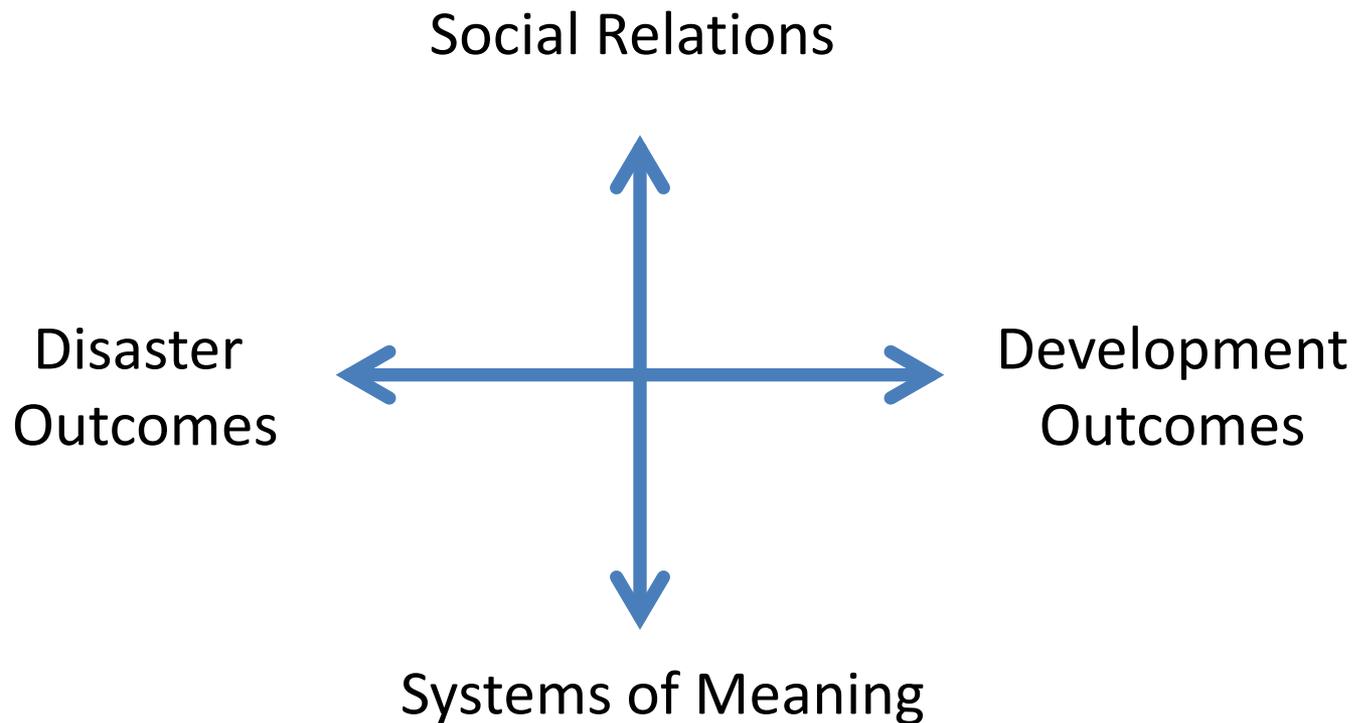
*livelihood security*

... amongst others.

# Societal Influence in D&D: Social Relations mediating disaster and development



D&D Influence in Society:  
i.e. Social relations and systems of meaning mediating  
disaster and development outcomes

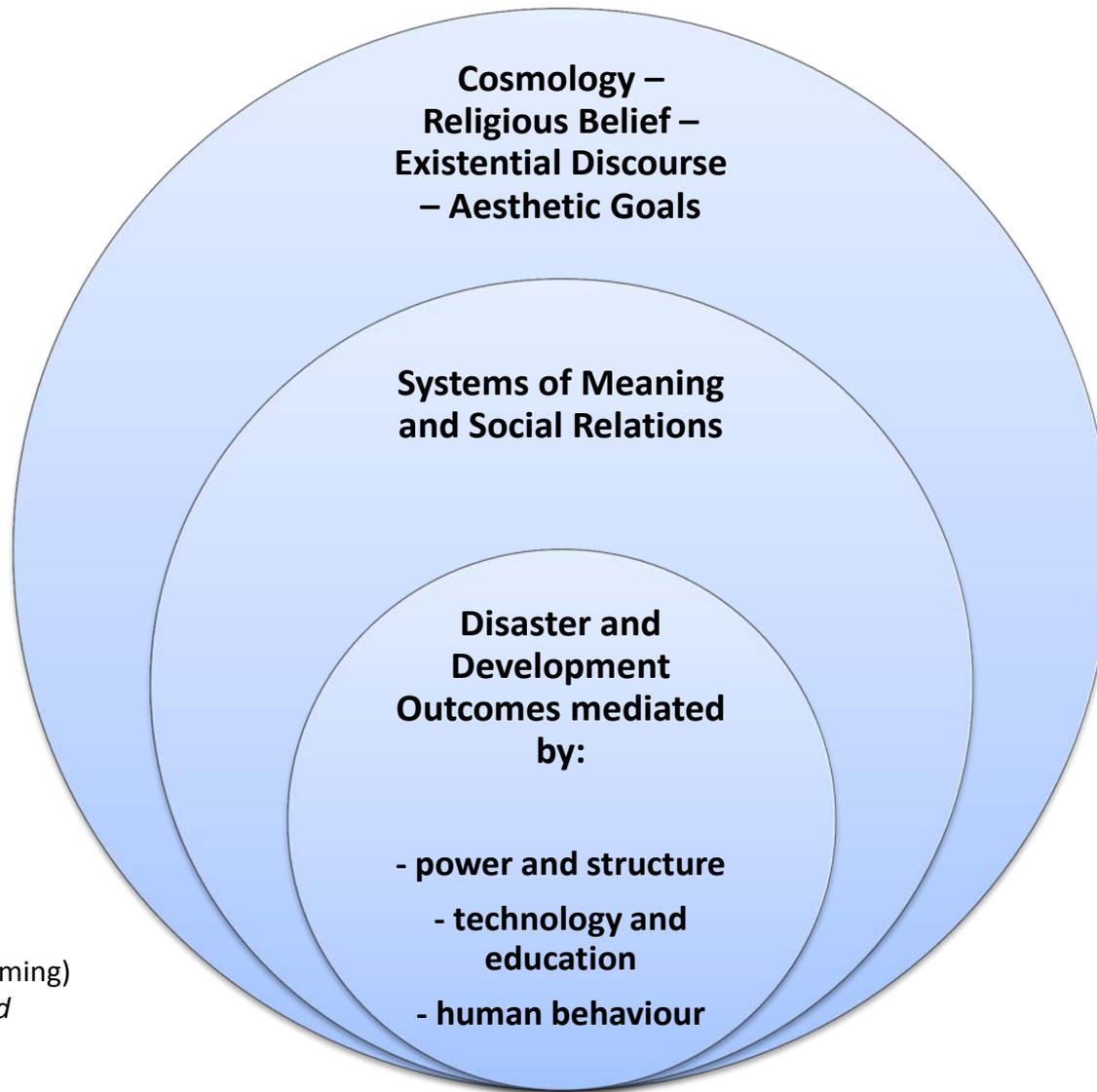


Collins, A.E. (2013 forthcoming) *A Sociology of Disaster and Development*, Palgrave.

# Social relations and systems of meaning in disaster and development

Social Relations	Systems of Meaning
Support networks – social capital	Intrinsic value of natural systems
Communication	Intrinsic value of human life
Accountabilities	Mediation and cooperation
Responsibilities	Hope and expectation
Dependencies	Trust – Mistrust
Emotional ties	Consciousness
Kinship ties	Rationality
Symbioses	Justice
Empathy	Rights

# Systems of meaning and social relations in the sociology of disaster and development



Collins, A.E. (2013 forthcoming)  
*A Sociology of Disaster and  
Development*, Palgrave.

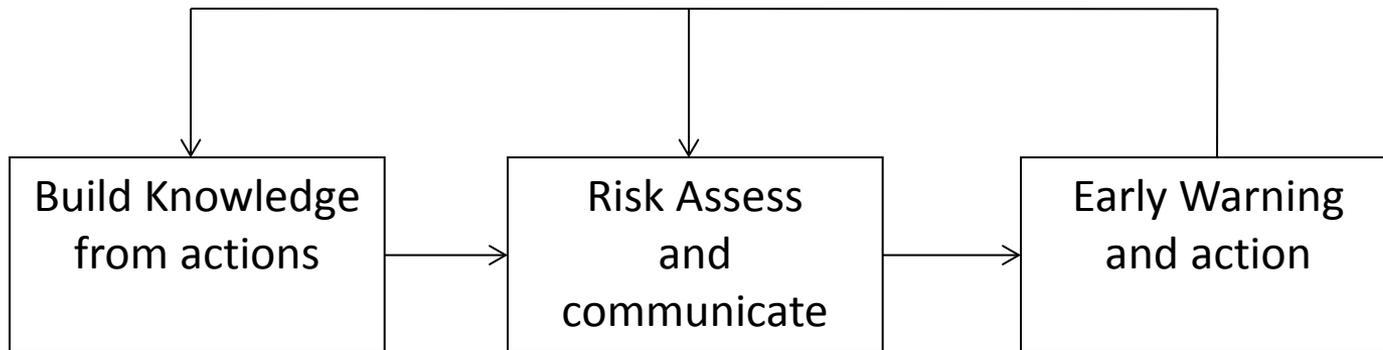
# Why engaging people in disaster risk reduction can be complicated

<b>Core Theme</b>	<b>Contextual Influences</b>	<b>Intervening Influences*</b>	<b>Risk Management Emphases</b>
Knowledge	Experience - age, activity, education	experience, lack of experience, education	Knowledge base for reacting to risk
Power	Structure - economy, politics, society	uneven development, technology, access and rights	Presence or not of constraints to being able to react to risk
Culture	Social origin - agency, tradition, faith	personality, altruism, strength of kinship, gender based risks, beliefs in immortality, faith and non-faith based traditions,	Rationale to choice, motivation or belief in reactions to risks
Environment	Environment - systemic and chaotic hazards, changing nature of places	vulnerable and resilient people in hazardous or safe locations	Place oriented interactions with risk

\* Stakeholder reactions to the composition and context of risk

(Collins, A.E. 2009 *Disaster and Development*,  
Routledge p.151)

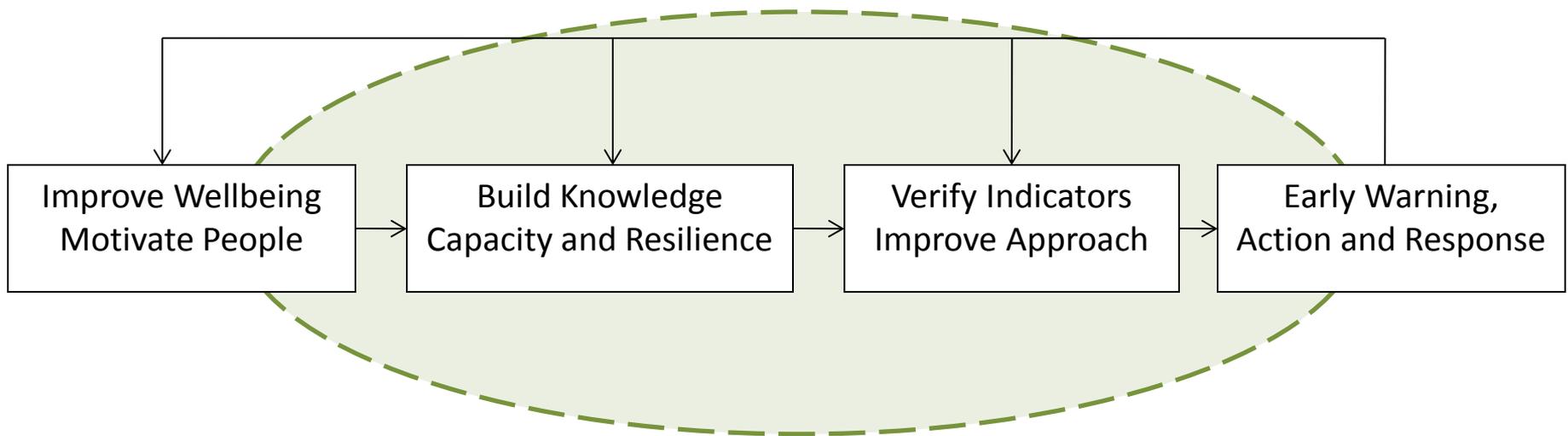
## a) Community Involvement in Early Action – idealised, knowledge based, without cultural complexity



Collins A.E. (2009) *World Disasters Report*, International Federation of the Red Cross and Red Crescent Societies (IFRC) Chapter 2, p.43.

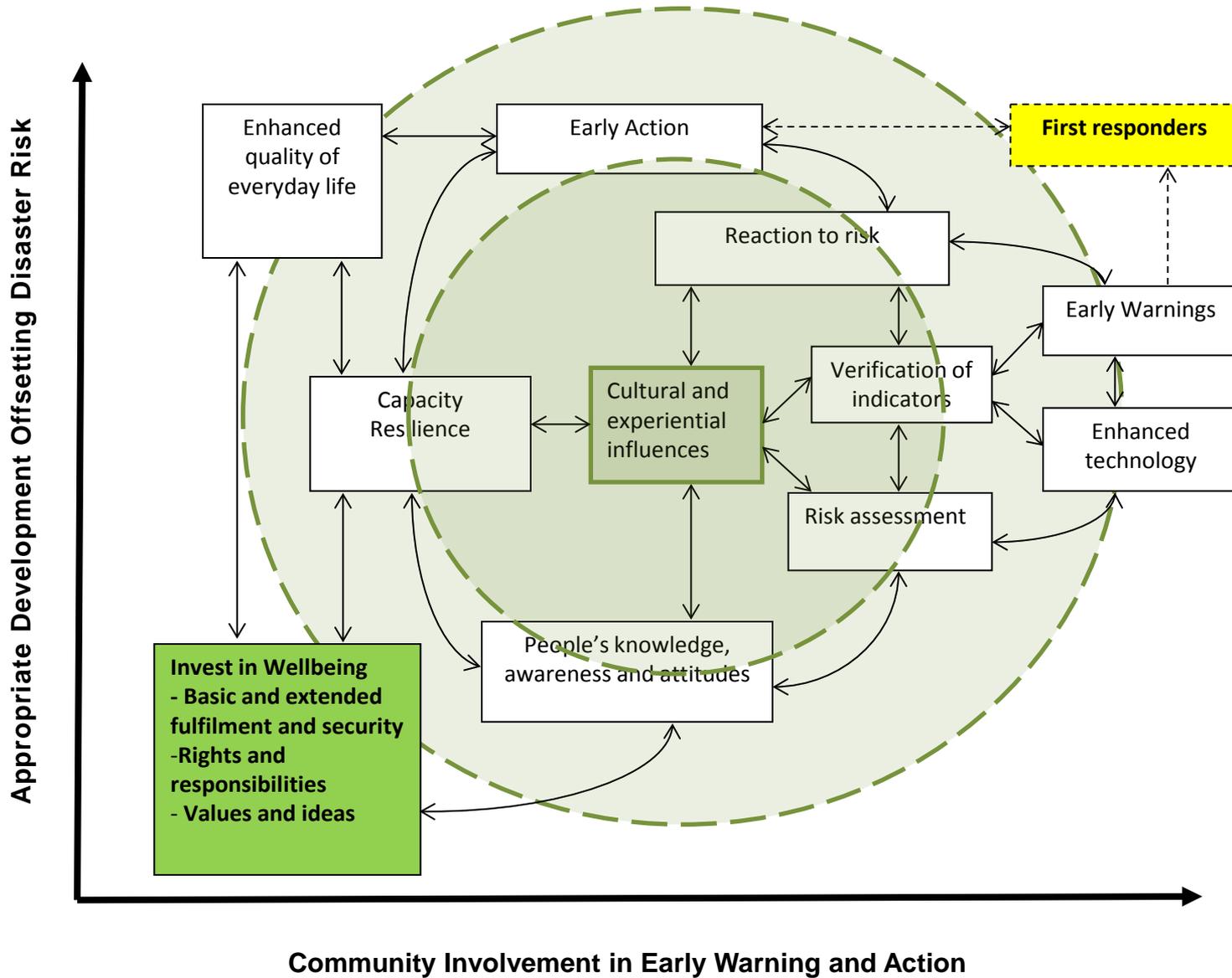
## b) Community Involvement in Early Warning and Development – potentially more effective

*The total of the inherited ideas, beliefs, values and knowledge, which constitute the shared basis of social action (i.e. cultural change)*



Based on: Collins A.E. (2009) *World Disasters Report*, International Federation of the Red Cross and Red Crescent Societies (IFRC) Chapter 2, p.43.

# c) Involvement in developmental risk reduction – Complex



## 2. Examples of social organisation operational in disaster risk reduction and development, can be variously:

- People centred approaches
- Health centred approaches
- Stakeholder approaches
- Resilience approaches
- Rights based approaches
- Communications systems based (social media)
- Humanitarian systems based
- ...

# Disaster and Development Centre (DDC)

- Northumbria University launched the DDC in 2004 in association with postgraduate programme in disaster management and sustainable development. 250 postgraduate students to date
- Work has included activities across 25 countries for multiple national, international and local organisations, including voluntarily



## DDC research and development activities have included the following:

- *Disaster Resilience and Human Security*: This includes Community Based Disaster Reduction, Disaster Education and Communication, Sustainable Livelihoods, Natural Resources Management and Rights Based Approaches.
- *Health Centred Disaster Risk Reduction*: This includes Health Security, Infectious Disease Risk Management, and Integrated Food and Livelihood Security.
- *Wellbeing in Disaster and Development*: This includes Community Mental Health and Wellbeing, Social Care in Disaster and Development, Gender and Disaster, Migration and Displacement.
- *Disaster Response and Adaptation*: This includes Integrated Emergency Management, Energy Security, Relief and Restoration and Climate Change Adaptation.

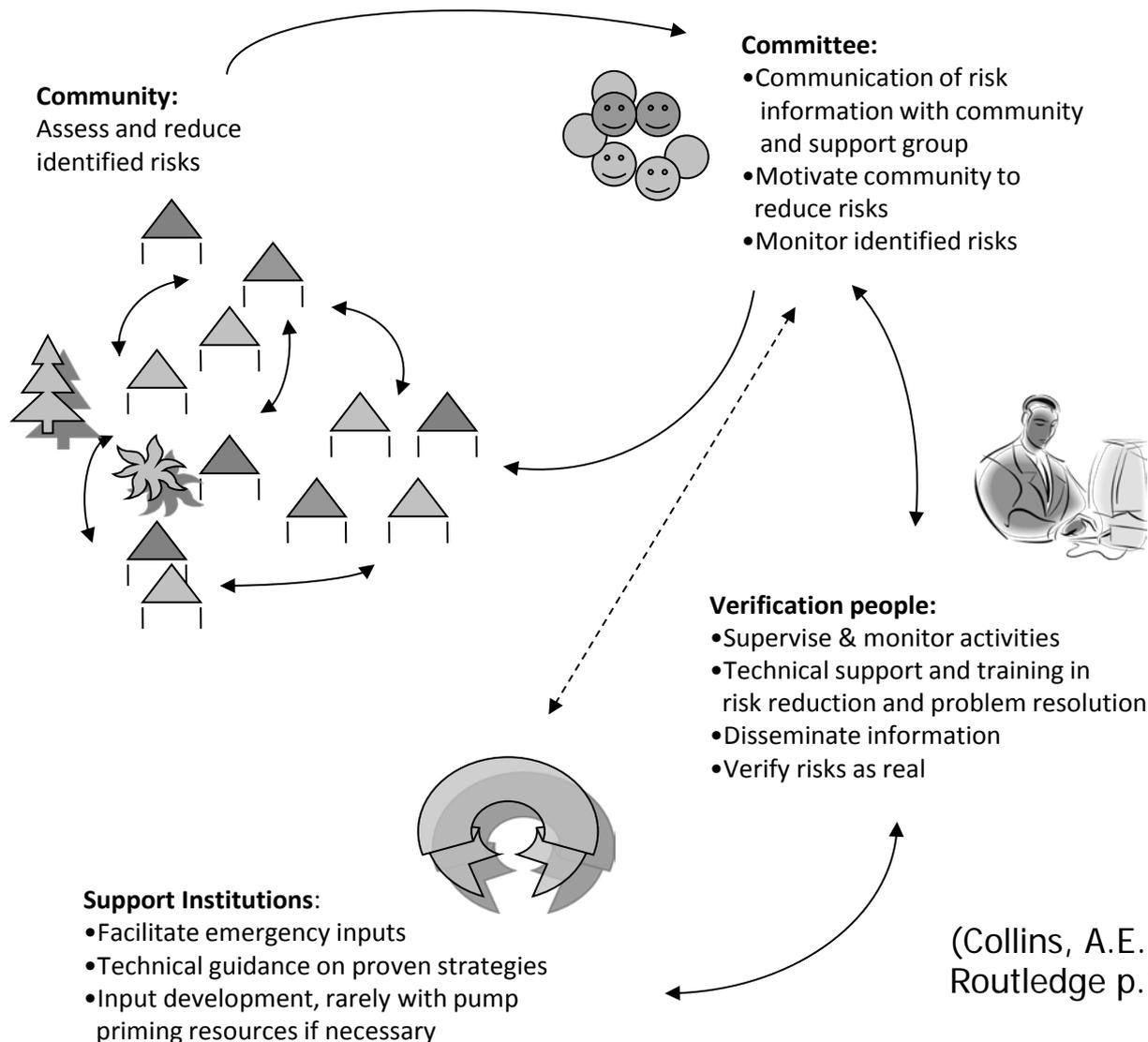
# Intended contribution of the DDC approach to date

- Theoretical, Technical and Policy Development
  - Applied and Integrated Research
  - MSc level and PhD Research
  - Evaluation and Review
  - Capacity Building
  - Volunteering
  - Partnership
  - Events
- [www.northumbria.ac.uk/ddc](http://www.northumbria.ac.uk/ddc)
- New DDC Online  
- launch May, 2013



# e.g. a) Research on Community Risk Engagement Processes

**Additionality:** i) helps build system that can be adapted to multiple risks, ii) improve overall household wellbeing rather than just control risks.



(Collins, A.E. 2009 *Disaster and Development*, Routledge p.151)

# The Community Risk and Resilience Approach

- Community based risk and resilience assessment is the beginning of a process whereby local people take the lead in building their capacity to manage their own disaster risk reduction processes.
- It can produce a high level of acceptance at community level.
- Political context within which it operates has a crucial influence – however these gates open and close.
- Broad concept of community involvement in risk reduction is not new but is hugely under-utilised, awaiting wider sets of experiences.
- Links rights, representation, knowledge, capacity and disaster risk reduction.

Further Example: Jones, S., Aryal, K. and Collins, A.E. (2013) 'Local-level Governance of Risk and Resilience in Nepal: A comparison of community-based and local authority disaster risk reduction capacity', *Disasters*, 37:3.

# Wider i.e.: Community Disaster Management Committee at the Rio Licungo, Mozambique – UNDP, GoM (current)



# Warning and informing the community about flood risks



# Resettlement to safe areas



# Building resilience: cyclone shelter and infants school



# Building Resilience: resistance to drought



# Food processing and livelihoods



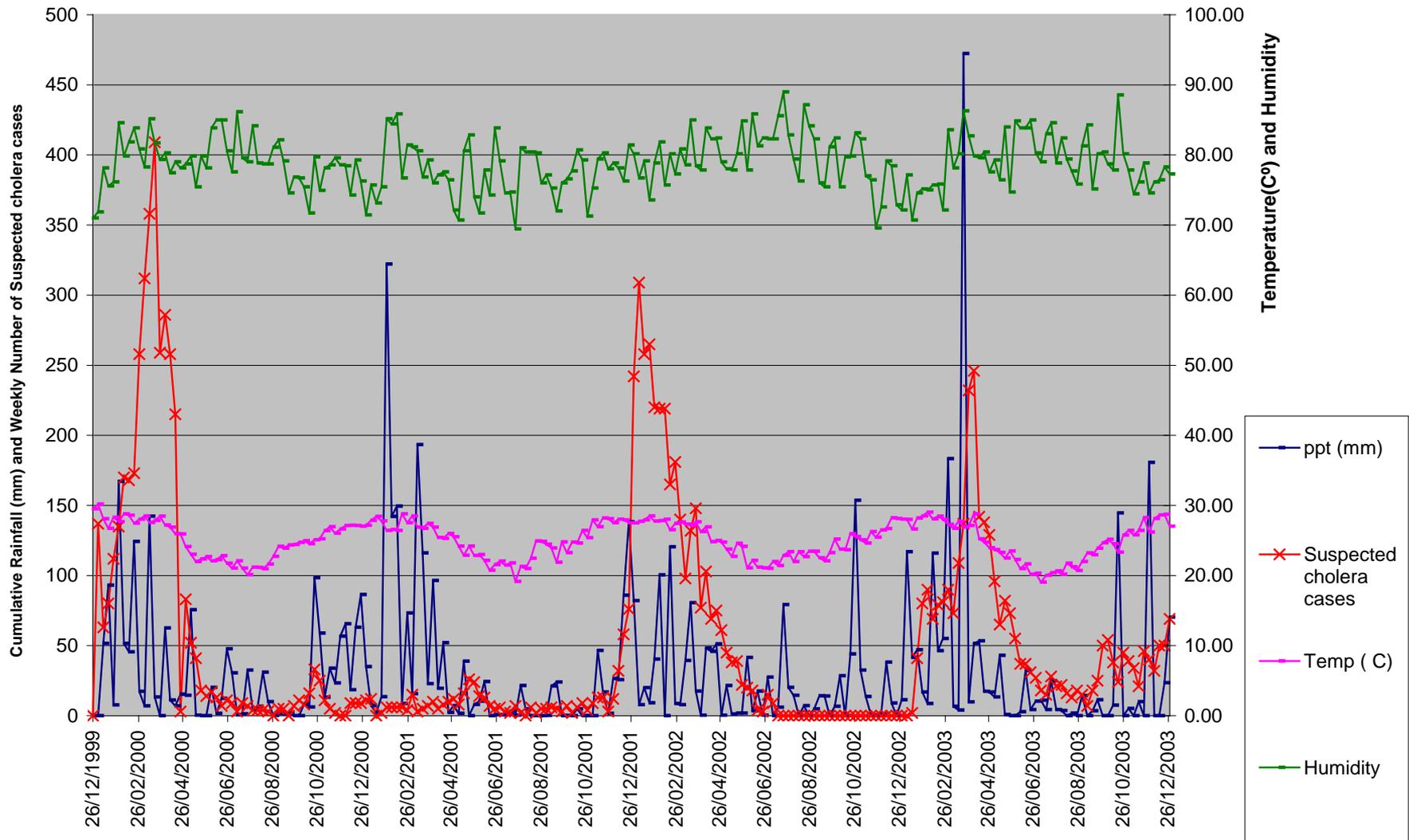
# Trading resilience



## **b) Infectious Disease Risk Reduction (IDRR), Early Warning and Control (since 90's)**

- Potential use of a predictive model approach
- But uneasy about feasibility due to its complexity
- However, reduce uncertainty, early warn, use of precautionary principle and risk reduction all possible
- Understand pathogenic, people centric and place based risk to progress multifaceted intervention strategies
- Monitoring as key:
  - Biogeochemical variables, including any additional indicators as they would become known, i.e. blue-green algae, phyto- and zooplankton
  - Spatial epidemiology
  - Clinical cases, mapping
  - Socio-economic and behavioural perspective of the 'at risk'

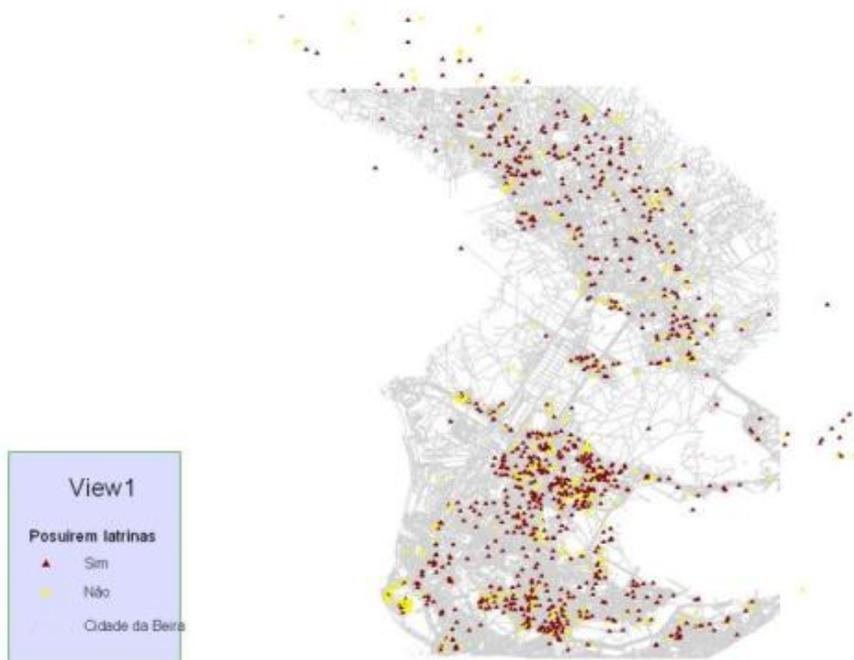
# Variation of cholera cases in Beira Mozambique compared to rainfall, temperature and humidity from December 1999 to December 2003



Collins, A.E., Lucas, M.E., Islam, M.S., and Williams, L.E. (2006) Socio-economic and environmental origins of cholera epidemics in Mozambique: guidelines for tackling uncertainty in infectious disease prevention and control, *International Journal of Environmental Studies* , 63:5, pp. 537-549.

# IDRR Locally owned action research and monitoring systems development (Mozambique)

- Identification of indicators for risk assessment and early warning.
- Integrated risk management and impact assessment ...
- Spatial epidemiological database



# (Action) Capacity Building:

i.e.

- Transfer or consolidate appropriate technology.
- Enable community based disease risk assessment.
- Household surveys based on participatory designs
- Socio-economic and behavioural studies – focus groups, individual narratives, photo diaries
- Environmental and microbiological monitoring



# Motivated Risk and Resilience Groups (RRC) and wider influences



**What starts with the desire of individuals to achieve better health and wellbeing, can progress to communities and beyond.**

### 3. Limitations and opportunities in contributing disaster risk reduction (DRR or D&D) to society

- Limited notions of vulnerability and vulnerable groups
- People desire more than to be resilient
- Raising expectations without sufficient results
- Lessons unlearnt
- Limits of experiential learning
- Small investment in uncertainty science – working with unknown
- Missed opportunities for early action
- A tendency to accept well known risks and injustices
- Weak cross-thematic conceptualisation – i.e. DRR and CCA
- Tendency for game playing – competitive behaviour with demise of communalism or cooperation and shared vision
- Limited cross-cultural interpretations of disaster and development in society

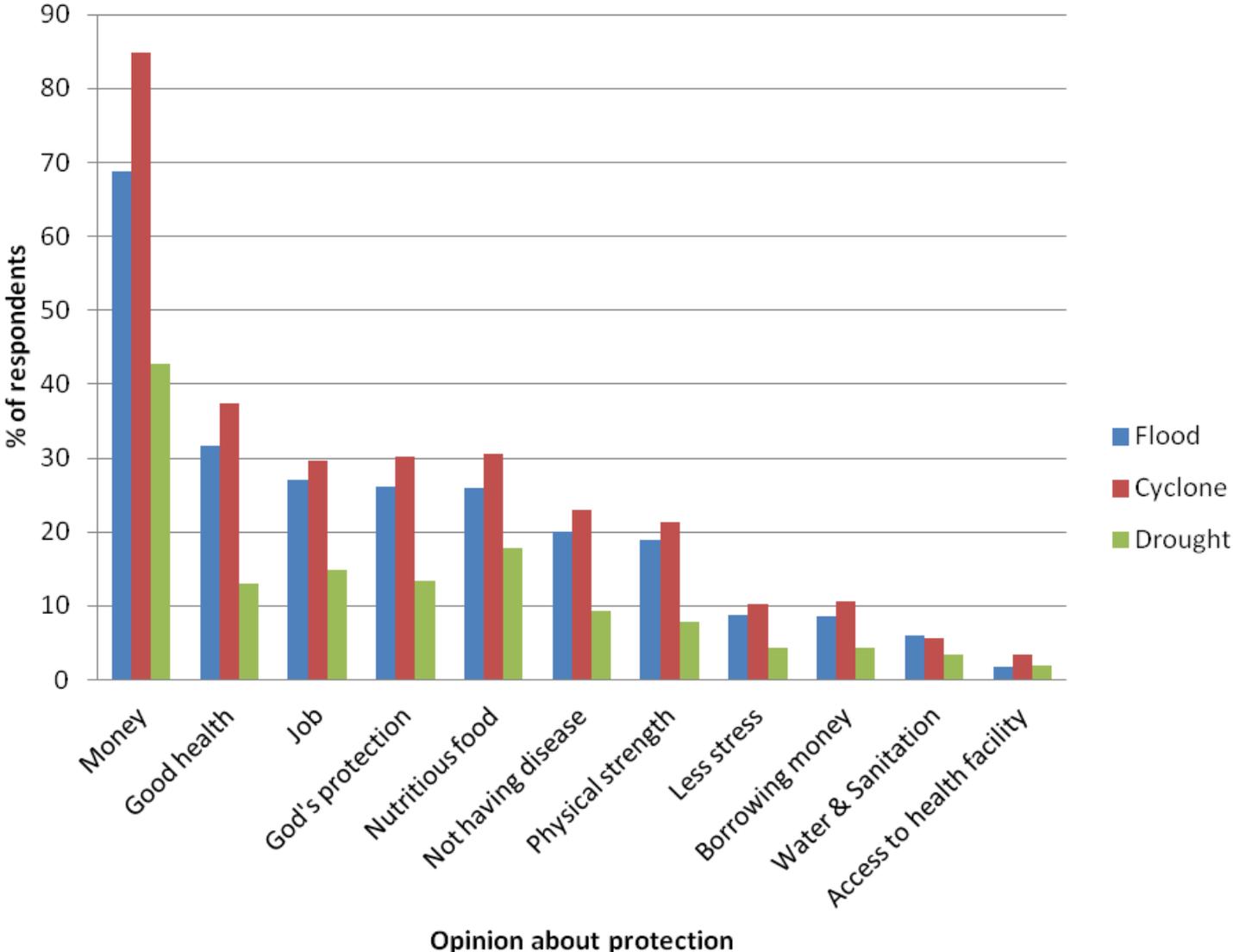
# a) 'Beyond resilience'

Women of Nohata Village, a Char in the Jamuna River, Bangladesh said:

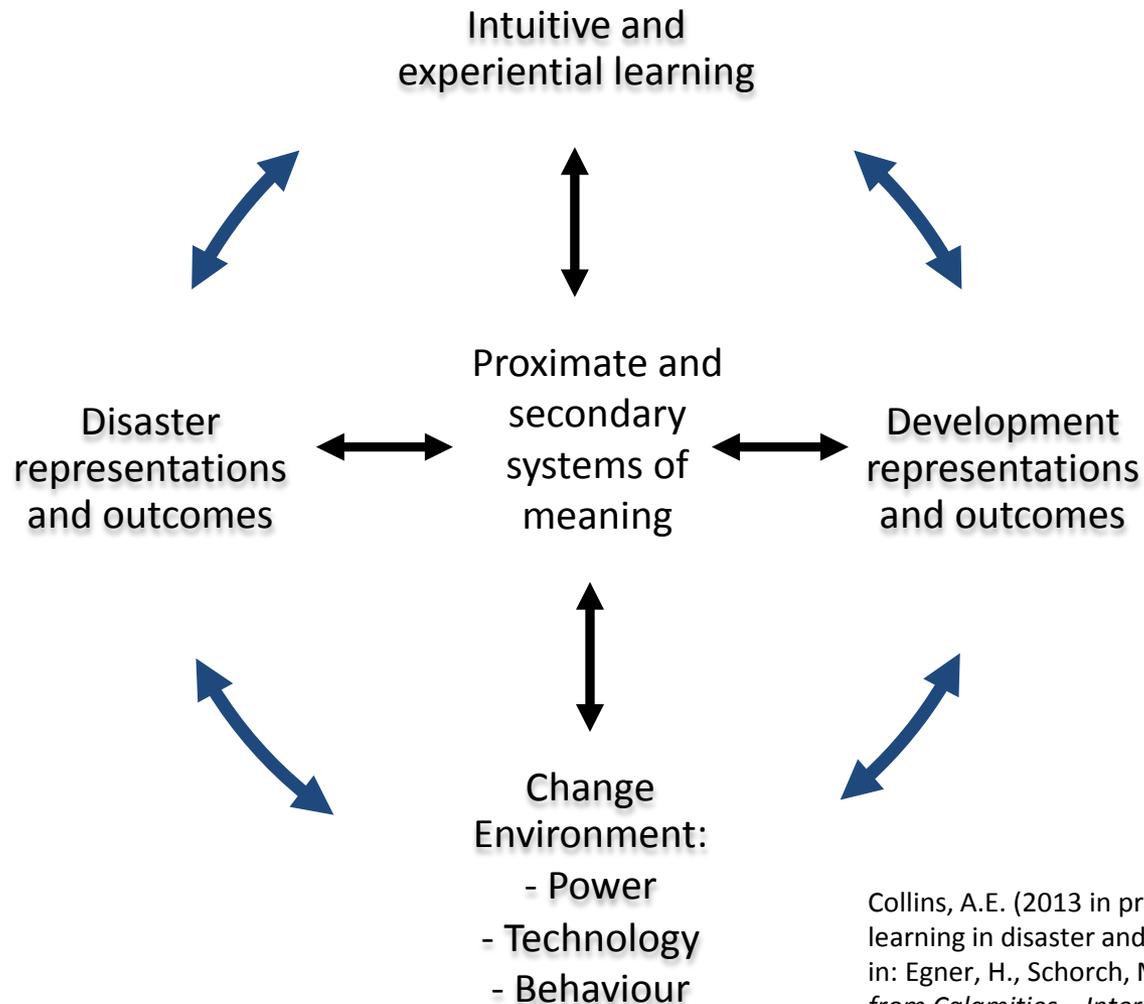
*'We are grateful to the project for helping us to be able to live in this place – now we want a health post and a school.'*



# Protection from flood, cyclone and drought based on 631 households at Chakoria, Matlab and Domar, Bangladesh



## b) Challenge of learning and action in a disaster and development nexus



Collins, A.E. (2013 in press) 'Beyond experiential learning in disaster and development communication' in: Egner, H., Schorch, M. and Voss, M. (Eds.) *Learning from Calamities – Interpretative Patterns and Practices* .. Routledge.

## 4. Concluding Comments

- DRR can impact favourably on society, but usually when lay people (as well as specialists) are in control of it's design
- Social organisation for D&D (DRR) involves the emergence of people centred strategies that are unique in 'place and time'
- It is time to address the limitations and opportunities of informal and institutional DRR and associated concepts such as CCA
- Contributing development can be to enable safety to society, offsetting disaster.

# Onwards and ...



Thanks!

