

A Future of Polycentric Hazard, Risk and Disaster Reduction in Society

Second Global Summit of Research institutes for Disaster Risk Reduction
Development of a Research Road Map for the Next Decade
Current Progress and Future Challenges in Natural Disaster Research
19th-20th March, Kyoto University

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elrha

enhancing learning & research
for humanitarian assistance

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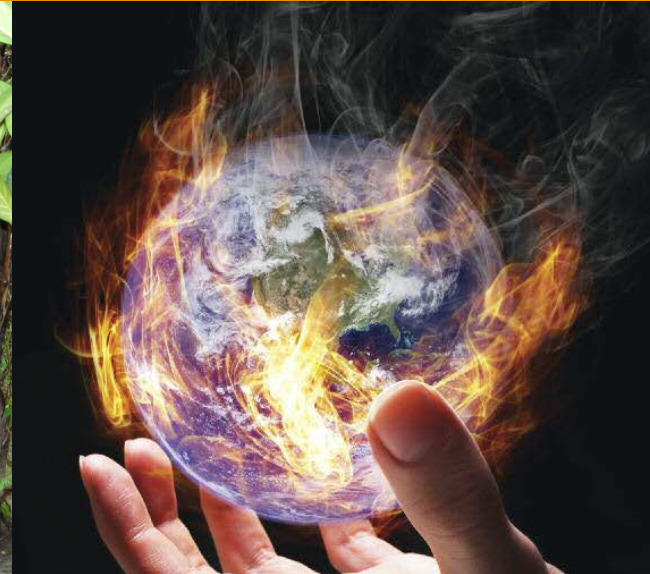


Overview

1. Rationale to Polycentricism in DRR
2. Polycentric Epistemology / Methodology
3. Example - Health and Education Centred Disaster Risk Reduction (HCDRR)
4. What learnt: policy implications
5. The Future



Disaster and Development Network (DDN)





HAZARDS AND DISASTERS SERIES

HAZARDS, RISKS, AND DISASTERS IN SOCIETY



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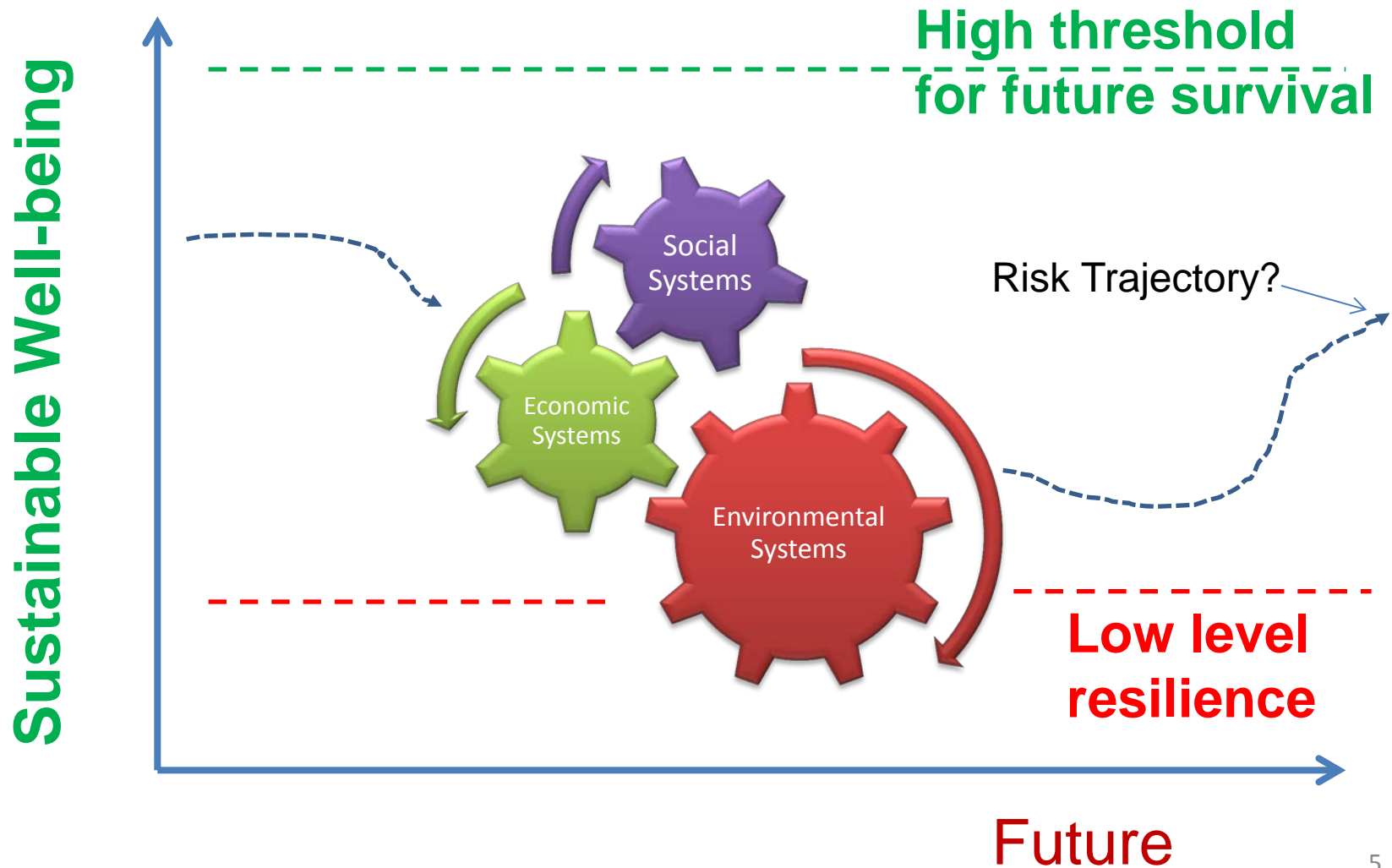
Disaster and Development

Andrew E. Collins



Routledge Perspectives on Development

Uncertain Trajectory of Interdependent Disaster Risk Systems



De Facto Status of Understanding Disaster Risk

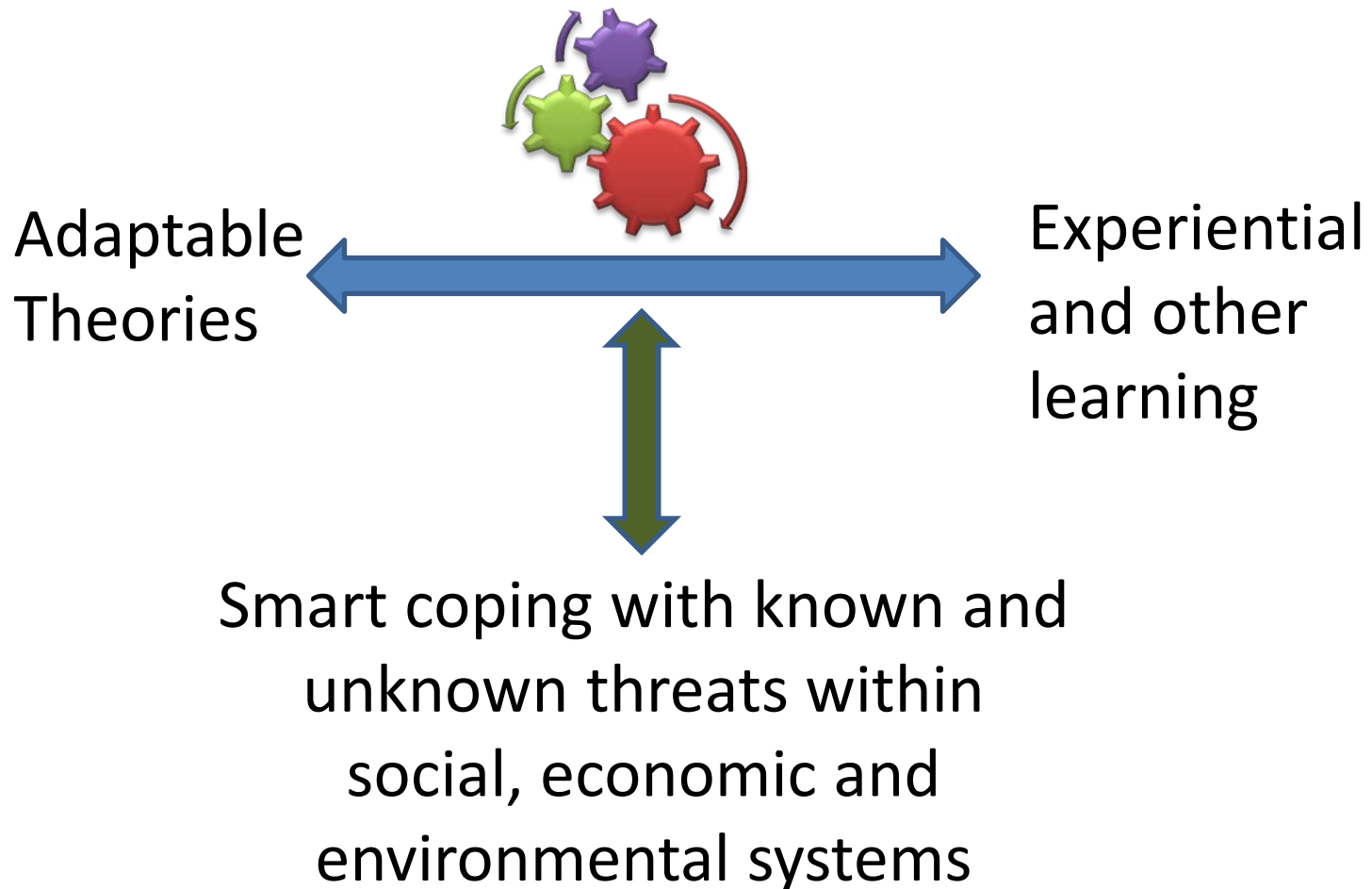
Theory ←————→ Experience



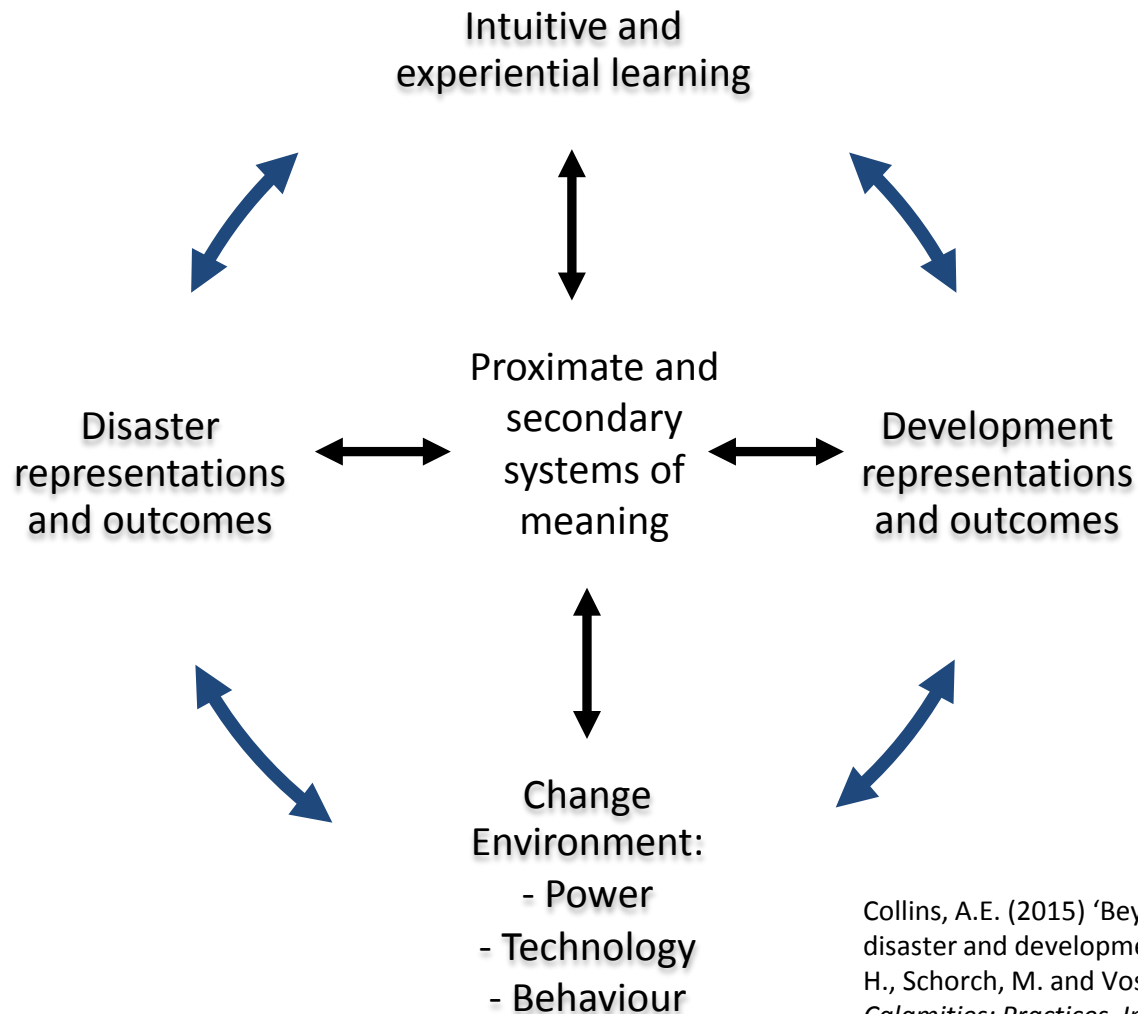
Coping with known and unknown threats within social, economic and environmental systems



Smart Disaster Risk Learning



Learning Outcome in Disaster and Development



Collins, A.E. (2015) 'Beyond experiential learning in disaster and development communication' in: Egner, H., Schorch, M. and Voss, M. (Eds.) *Learning and Calamities: Practices, Interpretations, Patterns*, London: Routledge, pp.56-76.

Challenges in Polycentric Learning

- Complex origins of risk in society
- Low financial investment into polycentric research
- Low stakeholder engagement
- ... changes in barriers and transitions within these processes?

Nature of some boundaries, transitions and outcomes related to resilience

Boundaries	Transitions (Flows)	Outcomes
<ul style="list-style-type: none"> Risk qualifiers / quantifiers Risk perceptions Security systems Communication Culture Social economy Market forces Knowledge Trust Habitat Places Values 	<ul style="list-style-type: none"> Risky Finite Transformational Self-regulating equilibrium Accelerating Slowing or Entropic Migratory Mobility related Learning Commodity Diffusive Creative 	<ul style="list-style-type: none"> Stay the same Move 'forward', 'backward', 'sideways', fade / harden Security Vulnerability Complexity Homogeneity / heterogeneity Capacity Sustainability Sensitivity Sense of place Ethics

Research project progression towards the polycentric

1. Environmental Influences on the Distribution of Incidence of Cholera – *spatio-temporal environmental analysis*
2. Environment, Health and Population Displacement - *hazard, vulnerability and context or health ecology*
3. Infectious Disease Risk Management (IDRM) – *ecological and social indicators to guide intervention strategies*
4. Infectious Disease Risk Reduction – as for 3, *concept and capacity*
5. Health Security for Disaster Resilience – *grounded research*
6. Resilience to Wellbeing through Integrated Health Risk Reduction – *concept/policy impact*



UNICEF



British Council



DEVELOPMENT PARTNERSHIPS
IN HIGHER EDUCATION



Specifically ...

Healthy societies impact on disaster risk. These societies comprise people who are able to:

- get out of the way of disaster - being mobile socially, economically and physically, whilst willing to help those who are not
- offset risks with resilience to resurgent and emergent health hazards
- maintain aspirations and decision making capacity
- motivate towards greater survivability, sustainability and well-being

... by dealing with the barriers and transitions within these processes?

Current Application

- Health Centred Disaster Risk Reduction
 - United Nations World Conference for Disaster Reduction, March 2015
 - Working Session: Reducing Risks of Epidemics and Pandemics
 - Working Session: Disaster Risk Management for Health Society
 - Public Forum Event: Protecting People's Health from Disaster Risk

Some Examples

- Ecology of *Vibrio cholerae* and environmental change in Bangladesh
- Behavioural monitoring of HIV/AIDs in Mozambique
- ‘Infectious Disease Risk on UK Trains’

Grounded Examples

Health Security



Well-being



Risk Reduction

- Health security through food, livelihood, environmental and social security
- Can be embedded with community and in education systems.
- What starts with the desire of individuals to achieve better health and wellbeing, can progress to communities and beyond.



When at the centre of change people prevent disasters

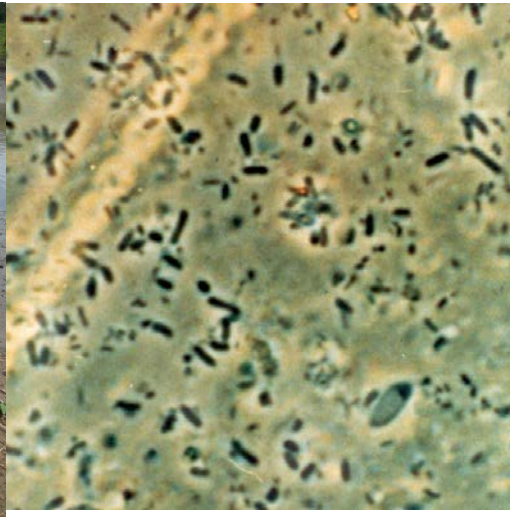
i.e. People interact with and adapt to hazards, manage risks, demand rights, develop resilience and secure livelihood niches.

Supporting governance contexts are those that harness capacity to manage risks and threats, regenerate societies and enhance community wellbeing.

‘Offset disaster risk with
investment in wellbeing.’

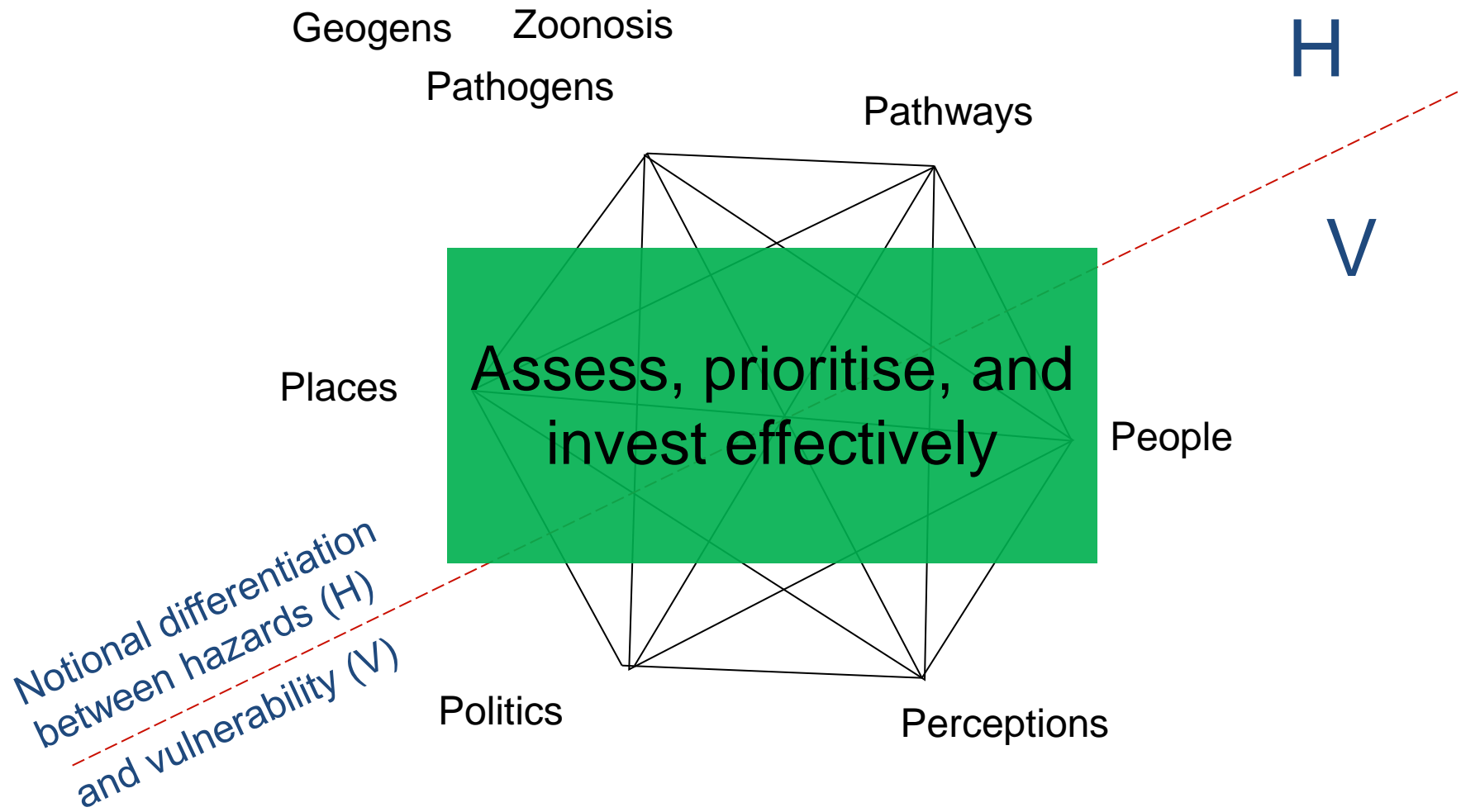


Infectious Disease Risk Management in HCDRR – case study



Cholera!





Integrated Assessments of Health Ecology for Health Security

Polycentric and integrative health risk assessment for improvement of infectious disease risk management

- ◆ Pathogenic Clinical-epidemiological
- ◆ Temporal-climatic
- ◆ Spatio-environmental
- ◆ Socio-economic
- ◆ Behavioural
- ◆ Perceptual
- ◆ Multivariate and integrative



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* Special Issue on Africa, 63:5, pp. 537-549.

1. Infectious Disease Risk Management in HCDRR – case study

Cholera:

old disease - well-researched – not prevented

- **Opportunity** – prevention and control through monitoring and evaluation, capacity and systems adjustment - infectious disease risk management (IDRM)
- *Possible to implement the right intervention in the right place, at the right time for the right people*

2. Infectious Disease Risk Management in HCDRR

HIV / AIDS:

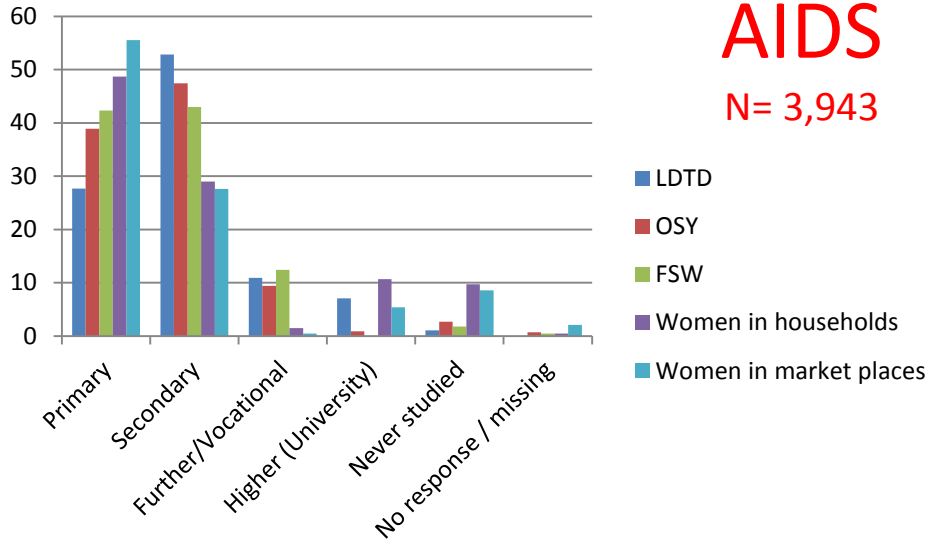
persistent pandemic - undergone substantive investment – interpretation and reinterpretation of societal causes and risk factors - knowledge and behaviour contradictions – complex

- **Opportunity** – address the underlying risk factors – awareness – address uneven development – rights and responsibilities – health centred risk reduction – restore hope – address **constructivist influences**
- *Review the right intervention at the right place, at the right time and with the right people*

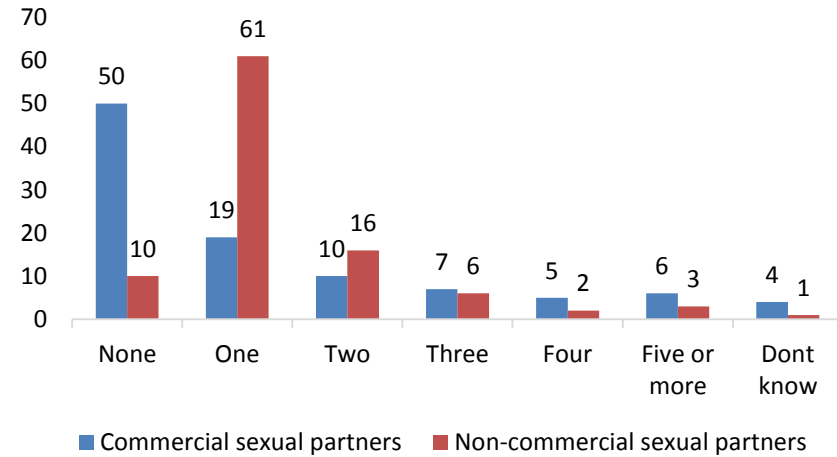


HIV AIDS N= 3,943

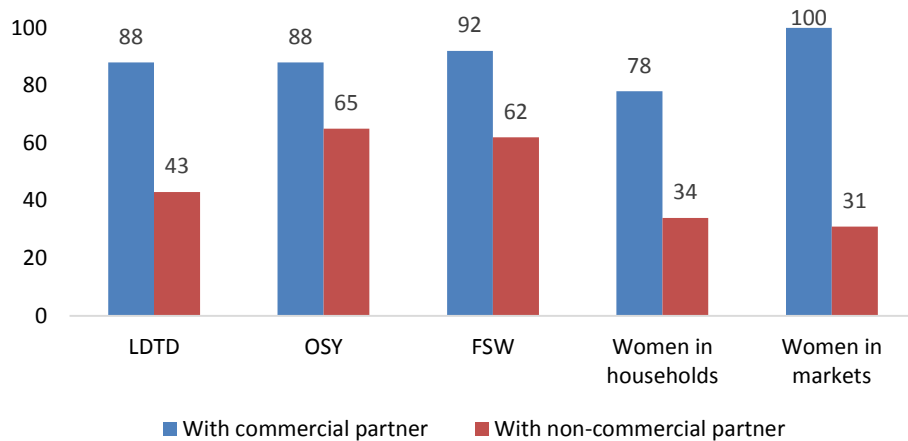
i) Education levels by target group



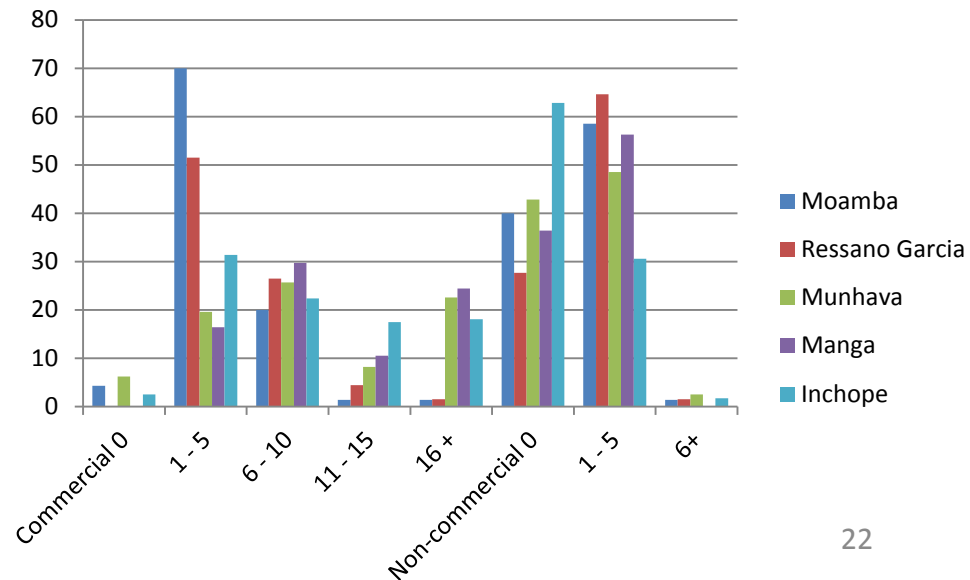
ii) Percentage of LDTD who had sex with commercial and non-commercial partners during the previous three months



iii) Percentage of respondents who used a condom at last sex by group and type of partner

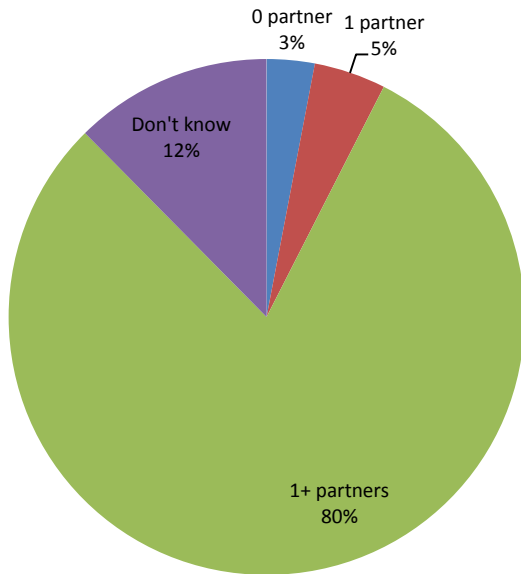


iv) Percentage of FSW by area and number of commercial and non-commercial partners

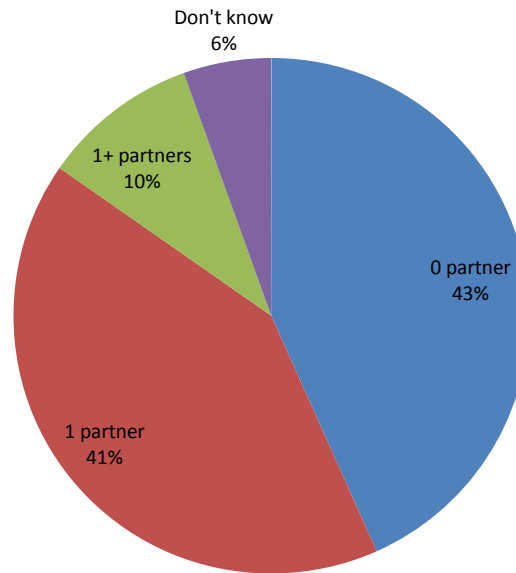


Percentage of Female Sex Workers with zero, one or more partners – all areas

Commercial Sex Partners



Non-commercial Sex Partners



n

Target populations	Total
OSY:	
Male	1,318*
Female	456
Women at Risk:	
Household	622
Markets	665
LDTD:	
Male	272
FSW	610
Total	3,943

3. Infectious Disease Risk Management in HCDRR

Ebola:

Challenged prevention and response – pressures in socio-ecological systems – no precautionary principle – inability to plan for uncertainty - lack of infectious disease risk reduction – reactive approaches

- **Opportunity** – stimulate development – rapid onset learning and sensitisation – infectious disease risk reduction / health centred risk reduction
- *Discover the right intervention at the right place, at the right time with the right people*



Reflection, Policy Implications and Drivers for Systemic Change in Disaster Risk (i)

- Research that contributes to understanding boundaries and transitions in polycentric (e.g. health and education ... centred) disaster risk reduction
- Practice that further develops the evidence base
- Sensitisation for capacity and good decision making
- Cross disciplinary boundaries to address influences on persistent, emergent and resurgent risk
- Link practice to theory change – practitioners alongside analysts, survivors, politicians and scientists
- Speak truth to power ... driven by evidence

Reflection, Policy Implications and Drivers for Systemic Change in Disaster Risk (ii)

- Work from the 'bottom' – through community level, particularly young people and those more exposed to hazards and risks
- Action research whereby learning is by doing, and in relation to exploration of values
- Working with the 'top' – i.e. the gatekeepers to address boundaries
- HCDRR approach could drive a cultural shift required to address hazard, risk and resilience in society – get from vulnerability to wellbeing, and ...
- Move beyond resilience, including to address the non-experiential informed by values, practice and disaster and development studies more widely – as science and as an art emphasising all of society.
- In a nutshell – science and learning that heightens awareness, brings behavioural change, enhances capacity building, communication, regulation, innovation and much better financing.

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