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 = Hazard probability x Expected Loss
   
   Loss Mitigation
   
   or

2. Disaster Risk = Hazard x Vulnerability
   
   Capacity
   
   or

3. Disaster Risk = Unsustainable Development
   
   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

Social relations and systems of meaning in disaster and development

<table>
<thead>
<tr>
<th>Social Relations</th>
<th>Systems of Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Support networks – social capital</td>
<td>Intrinsic value of natural systems</td>
</tr>
<tr>
<td>Communication</td>
<td>Intrinsic value of human life</td>
</tr>
<tr>
<td>Accountabilities</td>
<td>Mediation and cooperation</td>
</tr>
<tr>
<td>Responsibilities</td>
<td>Hope and expectation</td>
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<tr>
<td>Dependencies</td>
<td>Trust – Mistrust</td>
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<tr>
<td>Emotional ties</td>
<td>Consciousness</td>
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<tr>
<td>Kinship ties</td>
<td>Rationality</td>
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<tr>
<td>Symbioses</td>
<td>Justice</td>
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<tr>
<td>Empathy</td>
<td>Rights</td>
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Systems of meaning and social relations in the sociology of disaster and development

- Cosmology – Religious Belief – Existential Discourse – Aesthetic Goals
- Systems of Meaning and Social Relations
- Disaster and Development Outcomes mediated by:
  - power and structure
  - technology and education
  - human behaviour

Why engaging people in disaster risk reduction can be complicated

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

* 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

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)

- Improve Wellbeing
- Motivate People
- Build Knowledge
- Capacity and Resilience
- Verify Indicators
- Improve Approach
- Early Warning, Action and Response

c) Involvement in developmental risk reduction – Complex

Invest in Wellbeing
- Basic and extended fulfilment and security
- Rights and responsibilities
- Values and ideas

Capacity Resilience

Early Action

Reaction to risk

Verification of indicators

Risk assessment

Enhanced technology

Early Warnings

First responders

people's knowledge, awareness and attitudes

Enhanced quality of everyday life

Enhanced technology

Community Involvement in Early Warning and Action

Appropriate Development Offsetting Disaster Risk
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
- New DDC Online
  - launch May, 2013
e.g. a) Research on Community Risk Engagement Processes

**Community:**
Assess and reduce identified risks

**Committee:**
- Communication of risk information with community and support group
- Motivate community to reduce risks
- Monitor identified risks

**Verification people:**
- Supervise & monitor activities
- Technical support and training in risk reduction and problem resolution
- Disseminate information
- Verify risks as real

**Support Institutions:**
- Facilitate emergency inputs
- Technical guidance on proven strategies
- Input development, rarely with pump priming resources if necessary

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.

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’
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

Nahar P. and Collins, A.E. et al. (2013) Environmental Hazards 12:1, p.41
b) Challenge of learning and action in a disaster and development nexus

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!