The AAA Humanitarian Operations: Learnings from MA Math's Experience

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Motivation

- Natural disasters are rampant
- Humanitarian operations are incredibly challenging
- It is important to understand how to manage these operations effectively
- Organizational approaches to Humanitarian operations have not been adequately studied
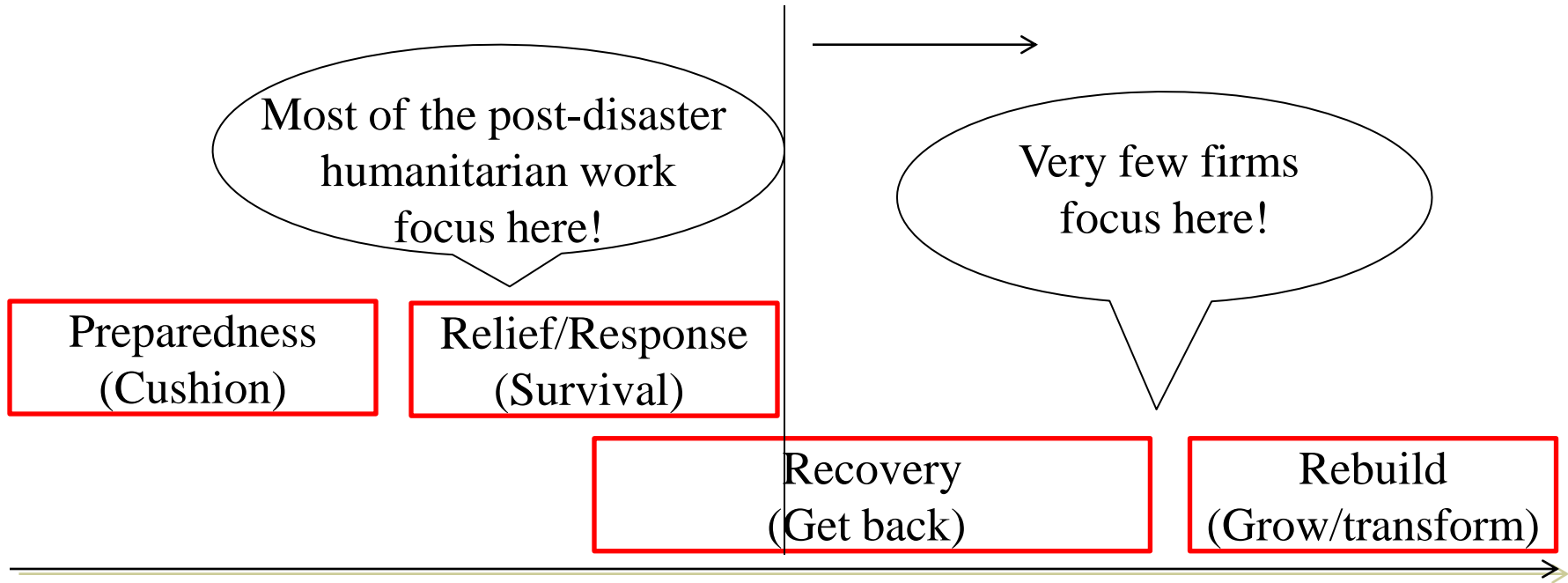
Agenda

- Why 'Humanitarian Operations' an important problem
- The AAA framework
- Case studies based on M.A. Math's experience
- Evaluation of humanitarian operations
- Conclusion

Why Humanitarian Operations is important to study?

- Uncertainty regarding the occurrence and severity of the consequences
  - Examples: Nepal earthquake, Asian Tsunami, Uttarkhand landslides
- 9/10 disasters occur in highly populous developing countries
- Each disaster presents unique challenges
- Disasters might be natural but consequences are man-made
- Disaster management is dynamic: preparedness, response, recovery, rebuild
- Multiple organizations serving the same people
  - Coordination challenges

Disaster Management Activities

Most of the post-disaster humanitarian work focus here!

Very few firms focus here!

Preparedness (Cushion)

Relief/Response (Survival)

Recovery (Get back)

Rebuild (Grow/transform)

The AAA (Lee, 2004) Supply Chain

- Agility
  - Ability to address the short-term demand-supply mismatch without time and cost penalty
    - Trust and technology based sense making and quick response
    - Centralized command with decentralized control/implementation

- Adaptability
  - Ability to adjust to contextual dynamics
    - Timely integration and de-integration in the (flexible) network

- Alignment
  - Ability to cater to the varied needs of different stakeholders
    - Engage, encourage, empower (trust based sharing of reward, risk, and responsibility)

A Brief Review of MA Math's Activities and Organization Structure

- Led by world renowned humanitarian and spiritual leader, Mata Amritananadamayi Devi (Amma)
- Humanitarian activities are conducted by the NGO 'Embracing the World®': has a global network of local and regional centers across 40 countries
- The Amrita University has engineering medicine programs with 18,000 students across 5 campuses
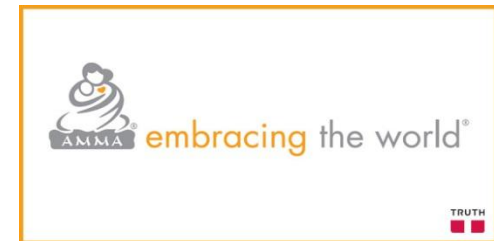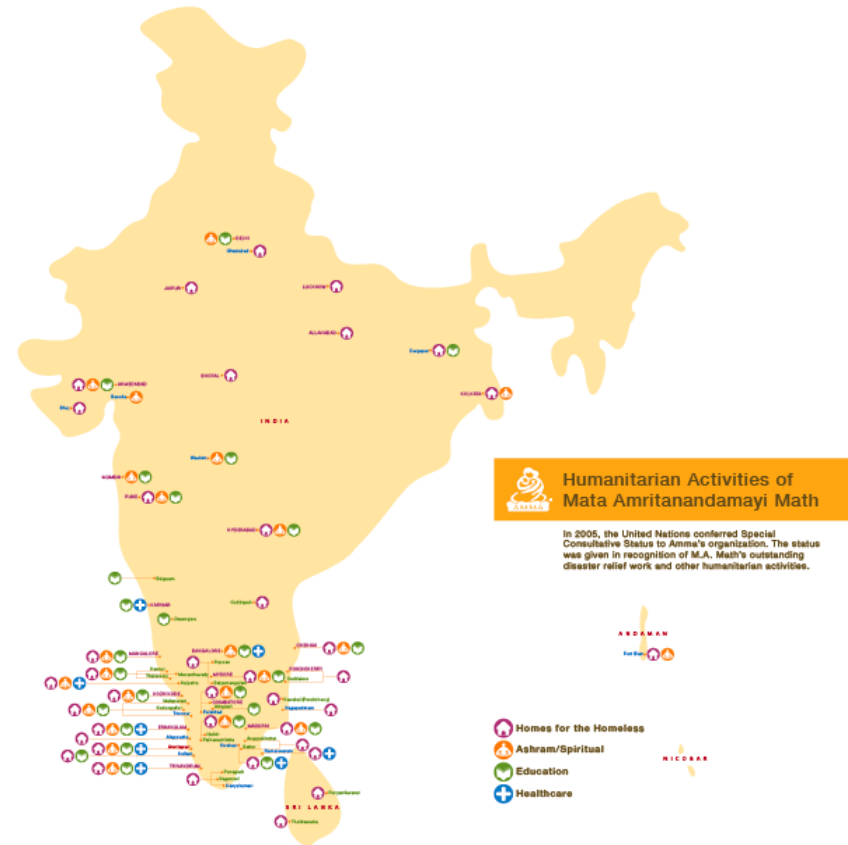
Humanitarian Initiatives and Recognitions

- Example initiatives are:
  - Disaster relief
  - Fighting hunger
  - Care homes for children
  - Research for better world
  - Empowering women
  - **Many more…**
- http://amma.org/global-charities
- UN has conferred the 'Special Consultative Status' on MA Math
- Pope Francis invited Her (Amma) to join in the joint declaration to fight human trafficking by World Religious and Spiritual leaders
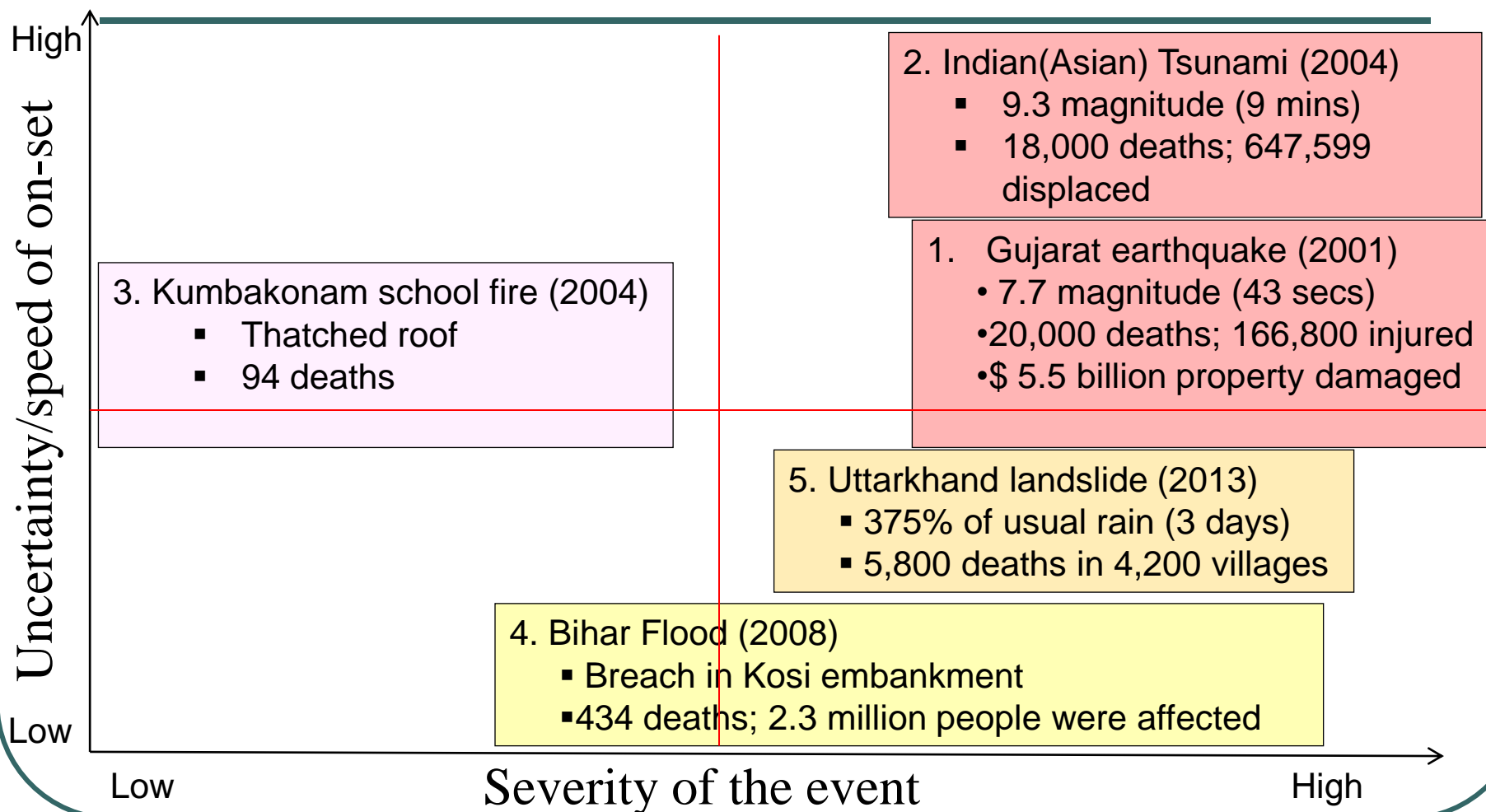
MA Math's Humanitarian Activities in India

- There are 27 centers (ashrams or spiritual growth centers) in India which also serve as local centers for relief and humanitarian aids

- Schools, medical centers, housing projects are now widely distributed in India

Humanitarian Activities of Mata Amritanandamayi Math

In 2005, the United Nations conferred Special Consultative Status to Amma's organization. The status was given in recognition of M.A. Math's outstanding disaster relief work and other humanitarian activities.

Homes for the Homeless
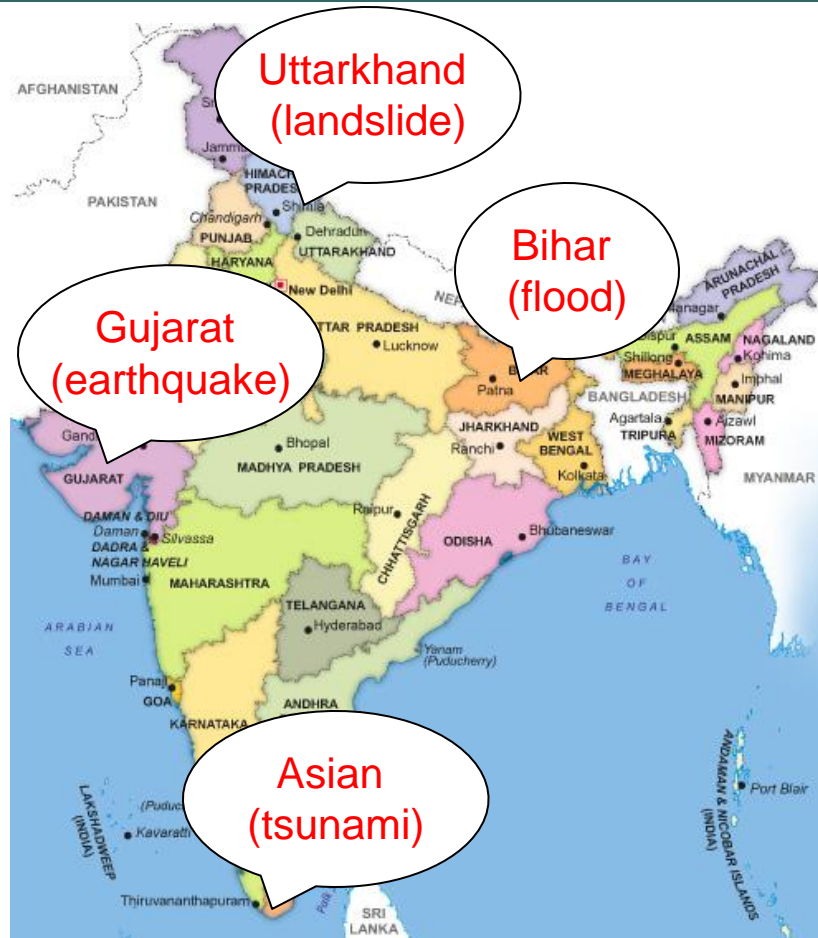Ashram/Spiritual
Education
Healthcare

Methodology

- Exploratory case study research (Eisenhardt 1989)
  - 5 different types natural disasters in India were studied
  - Why India?
    - Significant geograhical, social, and political diversity; occurence of all types of disatsters; populous country with highly vulnerable groups of people
  - Why MA Math?
    - Has been involved at all stages of disaster management cycle; people from all over the world participate
- Data collection
  - Several rounds of interviews with multiple pesonnel who were involved in managing and conducting humanitarian opeartions: coordinator, doctor and relief/construction worker
  - Information on response, recovery and rebuilding activities were collected

Research Design Framework

2. Indian(Asian) Tsunami (2004)
- 9.3 magnitude (9 mins)
- 18,000 deaths; 647,599 displaced

1. Gujarat earthquake (2001)
- 7.7 magnitude (43 secs)
- 20,000 deaths; 166,800 injured
- $ 5.5 billion property damaged

3. Kumbakonam school fire (2004)
- Thatched roof
- 94 deaths

5. Uttarkhand landslide (2013)
- 375% of usual rain (3 days)
- 5,800 deaths in 4,200 villages

4. Bihar Flood (2008)
- Breach in Kosi embankment
- 434 deaths; 2.3 million people were affected

Uncertainty/speed of on-set — High / Low

Severity of the event — Low / High

Research Design Framework

Case Analysis (Gujarat Earthquake)

H

Uncertainty/speed of on-set

- One of the most socially and economically advanced states
- Progressive political climate
- Yet, high economic and infrastructural disparity
- Many international and national agencies were active (e.g., IFRC, WHO, UN volunteers, SEWA etc.)
- First disaster management experience for MA Math

1. Gujarat earthquake (2001)
   - 7.7 magnitude (43 secs)
   - 20,000 deaths
   - 166,800 injured
   (First major experience for MA Math)

L

L   Severity of the event   H

Case Analysis (Gujarat Earthquake)

Uncertainty/speed of on-set (vertical axis, H at top, L at bottom)

Severity of the event (horizontal axis, L to H)

Immediate (Relief, first few weeks)
- Reached within 72 hours (joined others)
- Started from scratch with < 20 people
- First hand assessment; reliance on govt. info to act
- In small scale by own supplies/donations

1. Gujarat earthquake (2001)
   - 7.7 magnitude (43 secs)
   - 20,000 deaths
   - 166,800 injured
   (First major experience)

Intermediate (Recovery, 1- 6 months)
- Create shelters, clean-up, medical help/surgery
- Many humanitarian agencies left after about a month or two
- Use of local human resources (admirers)
- Goodwill: access to info, funds and freedom to act
- Inter-NGO reciprocation and collaboration
- HR process: volunteers with humanitarian attitude, at work training, job rotation

- Limited → wide scope
- Informal → formalization of procurement
- Local/general → Specialized (medical)

Long-term (Rebuild)
- Construction of medical centers, schools, adoption of village
- Earthquake resistant design (1200 houses, school, roads, community hall, medical centers)
- Capitalized on the strong well-knit, social infrastructure and political support

Case Analysis (Indian Tsunami)

H

Uncertainty/speed of on-set

- Two very populous states were affected
- Socially and culturally advanced regions
- Politically less progressive
- Many international and national agencies (i.e., Indian Army, ADB, UNDP, USAID etc.) were active at different stages
- MA Math was involved at all stages of disaster management

2. Indian(Asian) Tsunami (2004)
  - 9.3 magnitude (9 mins)
  - 18,000 deaths; 647,599 displaced

L

L

Severity of the event

L

H

Case Analysis (Indian Tusnami)

- 6200 houses were built
- Provided financial/medical aid
- Delivered vocational training to 2500
- Fed 15000 people for months

Sterilized mothers gave birth after undergoing fallopian tube recanalization and in-vitro fertilization at the M A Math hospital

Case Analysis (Indian Tusnami)

Uncertainty/speed of on-set

H

Immediate (Relief, first few weeks)
- Responded immediately (0 - 72 hours) with <50 people
- Direct material/emotional support
- Massive operations using own/donated supplies
- Food, shelter, cremation – govt. failed
- Coordinated with other agencies including Govt.

Intermediate (Recovery, 1- 6 months)
- Construction, health care was emphasized
- Use of local human resources (>1600); people across political affiliations joined
- Telemedicine, super specialty hospital access
- Worked in coordination with govt. admin and other associations
- Focused on recreational/vocational activities

Long-term (Rebuild)
- Tsunami resistant house and school construction (house construction is 'culturally sensitive')
- Diverse needs – customized solutions
- Capitalized on the strong social infrastructure

2. Indian Tsunami (2004)
- 9.3 magnitude (9 mins)
- 18,000 deaths; 647,599 displaced
- The NGO's HQ was hit

- Centralized coordination with decentralized operations for consistency and flexibility
- Quick response with consistency led to efficiency
- Long-term involvement of coordinators (>2 yrs)

L

L

H

Case Analysis (Bihar Flood)

Uncertainty/speed of on-set (vertical axis, H at top, L at bottom)

Severity of the event (horizontal axis, L at left, H at right)

- Very populous districts with highly vulnerable people
- Social and economically backward
- Politically one of the least progressive
- Very few international and national agencies were involved (?)
- Very inaccessible; workers could reach after 5-7 days
- Built 17 temporary shelters for 1500 victims
- A team of 30 doctors and nurses from M A Math provided health care (i.e., 100 medical camps treated 50,000 people)
- Govt. wanted to take the responsibility of rebuilding activities

4. Bihar Flood (2008)
   - Breach in Kosi embankment
   - 434 deaths; 2.3 million people were affected

Case Analysis (Bihar Flood)

M A Math was involved for three months in the 'recovery stage' in terms of building shelters, providing education and delivering expert medical care utilizing its advanced tele-medicine and super-specialty ambulances.

Case Analysis (Uttarkhand)

H

Uncertainty/speed of on-set

- **Thinly populated** state
- **Socially and culturally advanced regions**
- **Political/admin system is slow**
- Relatively few international and national agencies were/are active
- **Inaccessible**, took 7-15 days to reach
- **Government policy** regarding disaster management was **unclear**
- Conducted **medical camps** at the early stage
- M A Math is **mainly involved in rebuilding** activities
- **Transportation is a challenge** – each house requires 1500 man load materials

5. Uttarkhand landslide (2013)
- 375% more rain (3 days)
- 5,800 deaths in 4,200 villages

L

Severity of the event

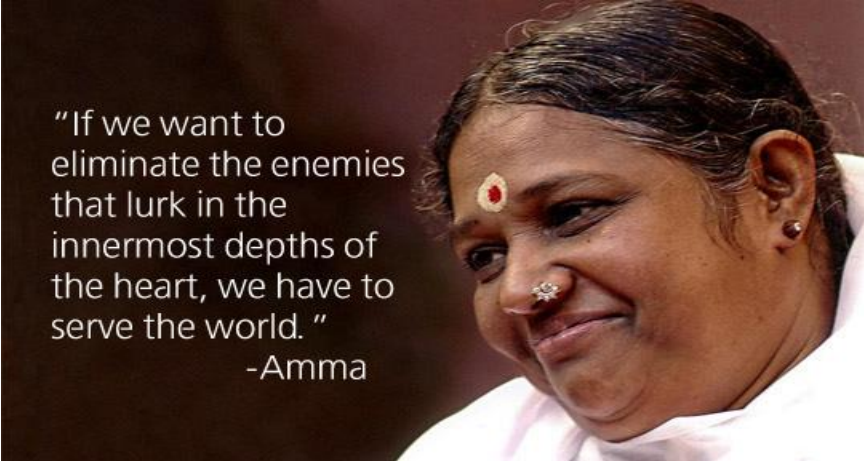L   H

Case Analysis (Uttarkhand)

After the initial relief work, M A Math is involved in building earthquake resistant houses, schools and women development activities in 42 villages that have been assigned by the government.

Evaluation and Assessment

Contributing Factors	Hi Severity - Hi Unc (Earth	Hi Severity -	Hi Severity -	Hi Severity - Low Uncer oods)
Agility (Decentralized reserve of manpower, financial and material resources)				
Adaptability	Absenc		nteer workers, job rotation, deep commitment to humanitarian/organizational values and not to specific functions/roles	
Alignment	Inter-organizational trust and respect			

"If we want to eliminate the enemies that lurk in the innermost depths of the heart, we have to serve the world." -Amma

Transformational Leadership of 'Amma'

Main Findings: Key Capabilities

- The university with strong engineering and medicine programs provides quick acess to crucial resources
- Operations put victims first and process/structure next
- Local involvement and access to resources from the local network provides the benefit of last mile supply chain
- Goverment's support and confidence is maintained/developed
- Charismatic leadership, highly motivated network of volunteers help develop agility and adaptability
- Accounts for different social and political contingencies

The Same Model: Nepal Earthquake April 25th, 2015

M A Math has begun response activities in Nepal on April 27th.

Future Research

- Develop some specific reseach questions, deriving from the present findings
  - What is the right humnitraian supply chain structure?
    - integration and/or deintegration – how much?
    - chain, network or cluster?
  - How to manage information and financial flows?
  - What are the right control and coordination principles?
    - cooperative, relational, hiarerchical or network?
- Develop an organization theoretic understanding of effective humanitarian operations
  - Chaos theory (Lorenz 1963), Network theory (Burt 1997), Complexity theory (Butler 1990)

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Thank You!

Questions or Comments?