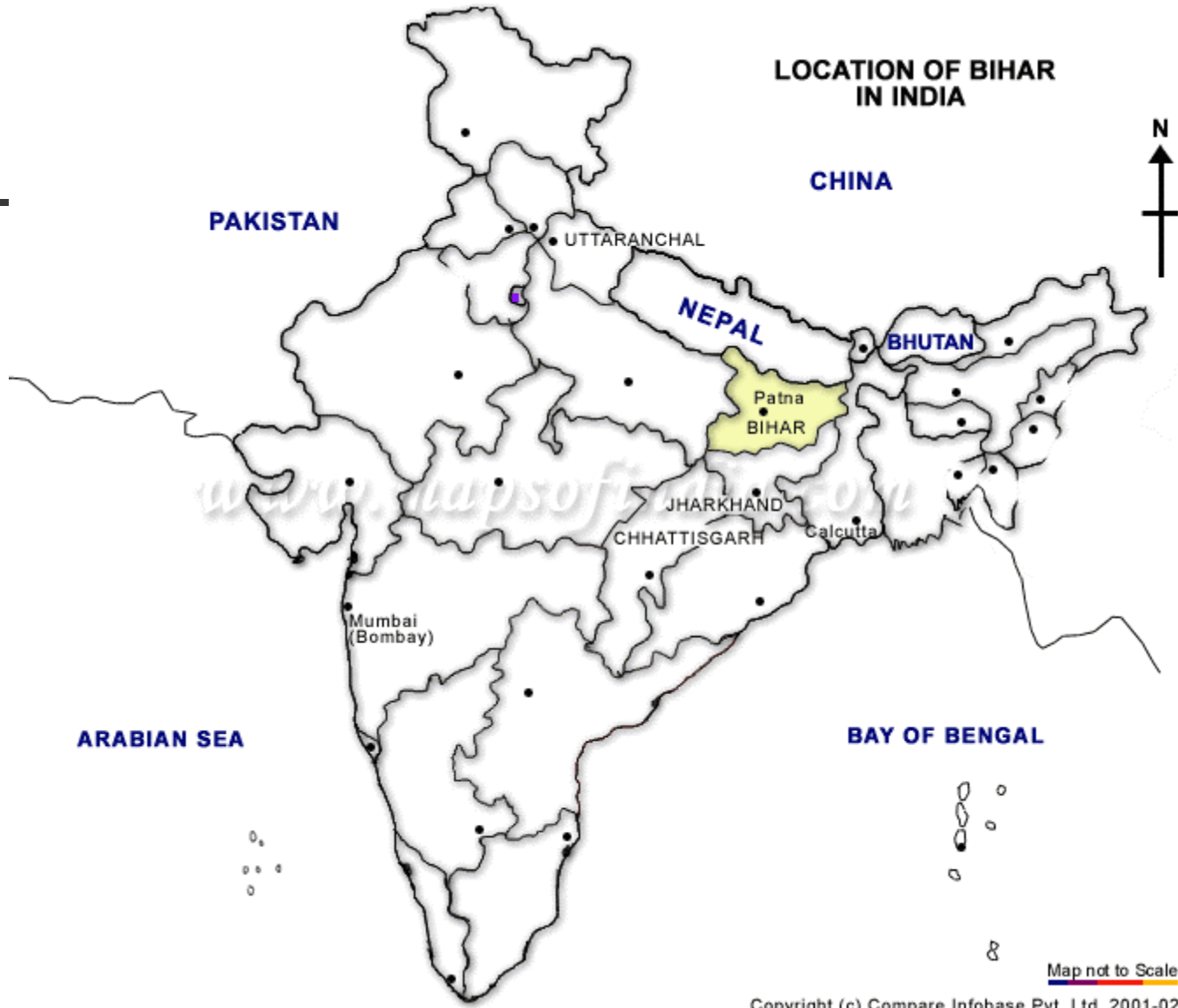
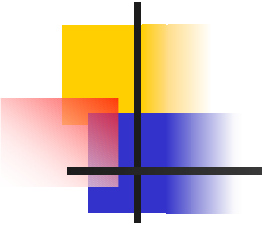


THE EFFECTIVENESS OF COMMUNITY-BASED DISASTER PREPAREDNESS

Alex Joseph, Discipleship Centre





Bihar State

Population 86m.; 50% below poverty line

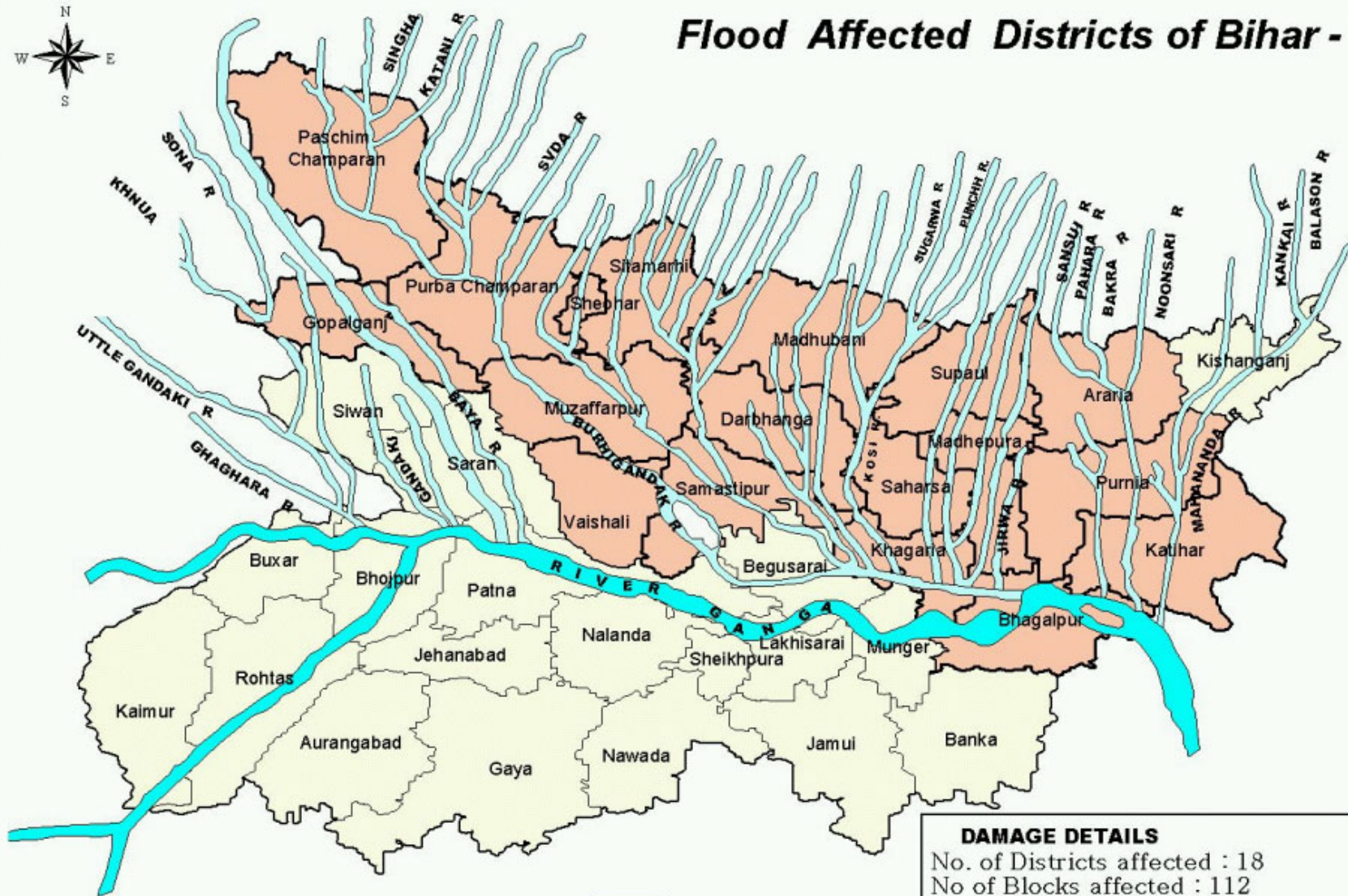
More than 50% of India's flood affected people are in Bihar

8 major river basins

Poor governance; low literacy rates



Flood Affected Districts of Bihar - 2003



LEGEND

- Flood Affected Districts
- Rivers
- River Ganga

DAMAGE DETAILS

No. of Districts affected : 18
 No of Blocks affected : 112
 No. of GPs affected : 845
 No. of villages affected : 2712
 Population affected : 3.79 million
 Total area affected : 8.34 lac hectare
 [Both Agr and Non Agr]
 House damaged : 12703
 Estimated Crop damaged : 358.3 (Million Rs)
 Loss of Lives : 83

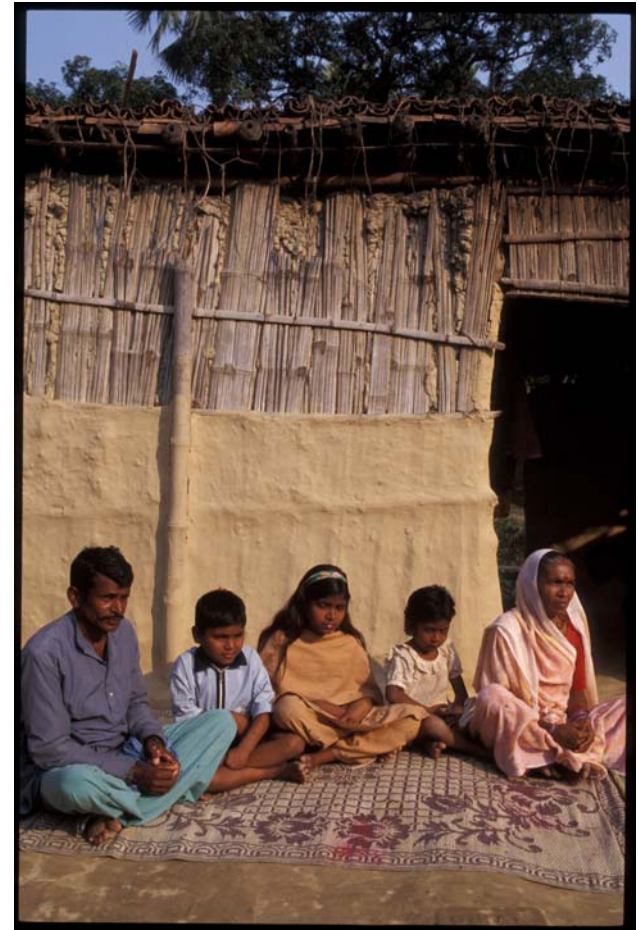


Sources : Relief & Rehabilitation Department, GOB., Central Water Commission Bihar, Media Reports ,Daily Reports from the Districts.

Crunch Model in Bihar

- Hazard
- Impact of Hazard
- Vulnerability/Capacity
- Dynamic Pressure
- Underlying causes

Also project impact and
Cost Benefit Analysis





Hazard

Flooding

- Annual occurrence
- Lasts several weeks
- Flash-flooding - water released from dams in Nepal

July 2004

- Affected 21 million people
- 1.5 million hectares of agricultural land flooded
- 674,000 houses destroyed with many more damaged
- 585 people lost their lives



Impact of Flood

- **Economic:** Livelihoods lost
- **Natural:** Drinking water contaminated or hand-pumps submerged
- **Human:** Loss of life, water-borne diseases
- **Social:** Lower caste suffers the most
- **Physical:** “Kutchha” houses destroyed or damaged



Vulnerabilities

- **Economic** - Lack of work opportunities
- **Natural** – hand-pumps on low land
- **Human** – lack of knowledge/skills
- **Social** – disunity, lack of leadership
- **Physical** - lack of boats or escape routes



Capacities

Developed by the project:

- **Economic** – income generating activities and savings schemes
- **Natural** – raised hand-pumps (safe water)
- **Human** – clear plan, trained volunteers
- **Social** – trust, unity, discipline
- **Physical** - escape roads & boats



Causes

Dynamic pressures

- Why is there a lack of escape routes?
- Access to high land is denied by higher caste land owners

Underlying causes

- Existing caste system

Approach

- Entered into negotiations with 45 land owners

Response to 2004 Flood

- Village Development Committee members take up their roles
- Pre-determined evacuation procedures followed, using safe escape routes
- Vulnerable prioritised for transportation by boat to safety
- Remainder of the villagers evacuate with livestock



Response to 2004 Flood

- People take shelter - materials assembled ahead of time
- Camp on embankment in planned areas
- VDC coordinates food for 3,450 households
- Flood response teams help other villages





Comparison with other villages

- Lack of preparedness
- Lack of resources for evacuation
- Disorganisation
- The particularly vulnerable were not systematically assisted by the community
- Delayed and ineffective response
- Heavy losses of life, livestock and household belongings

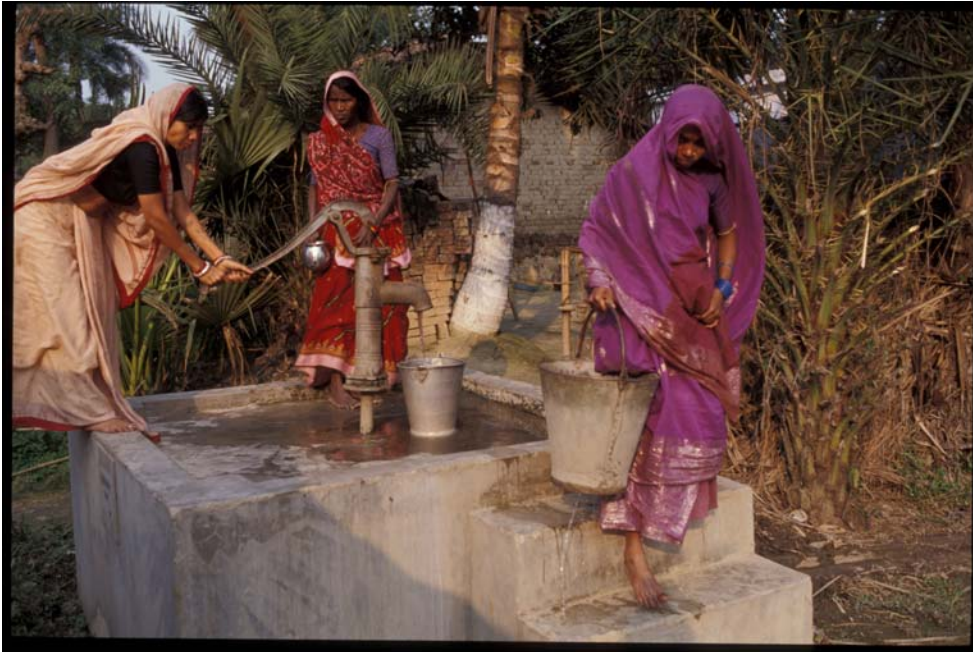
The Effectiveness of Community Based Disaster Preparedness

The moral argument...

- Lives, livelihoods and belongings were saved by integrating disaster preparedness with development activities



The economic argument



- For every 1 rupee spent, 3.8 rupees in quantifiable benefits
- Avoided repair costs of blocked hand-pumps
- Reduced loss of household possessions, tools and livestock
- Avoided boat rental costs

The Economic Argument

- Reduction in loss of life and injury
- Non-quantifiable benefits:
- increased community confidence
- improved women's status
- reduced stress





CBA Publication

Overseas Development Institute

HPN Network Paper 49

“Disaster Preparedness programmes in
India: a Cost Benefit Analysis”

November 2004



The Challenge

- Turning Practice into Policy
- Scaling up localised work to assist larger areas with DC staff
- Formation of Panchayat working group (village reps, *Mukhiyas*, Block Dev'tment Officer and NGO staff)
- Advocacy with Nepal over water release
- Engagement with Govt/UNDP