Community Recovery

Submitted by: Chinese Taipei
Community Recovery

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Outlines

• Story one
  – Long-term recovery after Chi-Chi Earthquake, 1999

• Story two
  – Developing recovery after Typhoon Morakot, 2009

• Story three
  – A community-based resilience-building in Ku Nga Da Vane (village name in indigenous language), 2010

• Observations, suggestions
The importance and complexity of recovery

- **Importance**: Recovery after the large-scale disaster is very important, because disasters never stop.

- **Complicated aspects related to**:
  - Physical and unphysical domains;
  - Public and Private dimensions

- **The recovery of community**, which is impacted directly by disaster, is necessary and important.
  - A turning point

Two cases of community recovery in Chinese Taipei

- Within 10 years, Chinese Taipei was seriously affected by two major disasters
  - 1999, Chi-Chi Earthquake
  - 2009, Typhoon Morakot

- After two large-scale disasters, process of community recovery identified needs of public-private partnership
The 1999 Chi-Chi EQ

• General Description (1)
  – Time & Date: 1:47 am, Sep. 21, 1999
  – Epicenter: Chi Chi
  – Magnitude: ML 7.3

Chelunpu Fault released significant energy and caused the strongest earthquake in the last hundred years period.

The devastation by Chi-Chi EQ

• General Description (2)
  – Death: 2,455
  – Missing: 50
  – Injured: 11,305
  – Direct loss: US$11.1 billion
  – Housing Totally Collapsed:
    • 50,644 households
    • 38,935 buildings
  – Housing Partially Collapsed:
    • 53,317 households
    • 45,320 buildings
Hard-hit Areas and Accumulated Rainfall

- Maximum rainfall to 3,060 mm recorded in Alishan
- Wind gust reached 144km/hr

- 695 died or missing
- 1,626 houses collapsed
- 200 bridges damaged
- Direct loss over $3 billion

Distribution of Damaged Areas: Compound Disaster

- Floods
- Landslides
- Urban Flooding
- Isolated Areas
Siaolin Village
the hardest-hit area

• In Jiasian Township of Kaohsiung County
• 400 died and 53 missing
• Landslide, barrier lake (dammed lake) and mudslide

Major participants and work of private sectors

• Private Sectors include
  1. Organized groups: religious or charity organization, professional community
  2. Individual (Volunteer): the general public, people with professional expertise
  3. Business sectors: Small and medium enterprise or international enterprises
  4. Academia
  5. Organizations initiated by the affected people

• Contribution during and after disasters
  1. Direct assistance: rescue, clean debris, sanitation and recovery
  2. Indirect assistance: donation of money or materials
Involvement by private sectors: Emergency Response

- **Emergency Relief:**
  - Search and rescue teams
  - Experts, human resource and machinery
  - Donation and delivery of emergency materials
  - Distribution of condolence allowance
  - Mental Intervention

Involvement by private sectors: Quick Recovery

- **Transitional relocation**
  - Organizing and coordinating NGOs to jointly provide services like meals, education and mental intervention
  - Setting up operation centers in the affected areas
  - Constructing temporary housing for family-unit shelters and schools
  - Participating in rehabilitation of livelihood
**Involvement: Long-term Recovery**

- **Recovery:**
  - Collaboration between NGOs, business sectors and government for school, house and community reconstruction
  - Organizing centers for livelihood rehabilitation
  - Monitoring the allocation of charity donation

**Accomplishments by NOPs after the Chi-Chi Earthquake 1/2**

- **Documentaries:**
  - community bulletin, films and oral interviews

- **Vocational training:**
  - photography, woodworking, computer skills and herbal medicine

- **Community empowerment:**
  - ecology and history preservation, native language and local history
Accomplishments by NOPs after the Chi-Chi Earthquake 2/2

- **Social service:**
  - meal delivery to alone elders, day care for elders and children, after-school assistance to students and home service
- **Economy revitalization:**
  - handicrafts, package design, organic agriculture and lodging

Successful Example of PPP: Taomi Village after Chi-Chi Earthquake 1/2

- **Community-centric training courses:**
  - cooking, painting and construction skill
- **Local Organization**
  - Establishment of Association of Community Development and Tour Association of Natural Conservation and Ecological Protection.
- **Promotion of Taomi eco-community:**
  - reservation of wetland, maintaining of eco-pounds
  - protection of original species, frogs [23(79%)] and dragonflies [49(34%)]

Successful Example of PPP: Taomi Village after Chi-Chi Earthquake 2/2

- Development of eco-tour
- Relocation and reassembly of Kobe’s Paper Dome
- Establishment of Learning Center and Natural Farm.
- Reconstruction of most damaged dwellings
- Rehabilitation of life and recovery of business to restore their self-confidence

2008 Typhoon Morakot

- More NGOs actively participated in emergency relief and recovery
  - Well-organized ones complementary assisted government to provide quick response
  - Poorly-organized ones questioned the fairness of resources distribution
  - Collaboration needed to reduce duplication even competition
  - Overwhelming operations provides by NGOs that sometimes failed in meeting demands
  - Information miss-link found between NGOs and government, which slowed efficient operation by NGOs
Example: who to have ideal designs for the affected indigenous tribes

Observations of PPP after Typhoon Morakot

• For Disaster Preparedness
  – Legislation: to define role of NOG; and legalize NGO’s participation
  – Organization: to define capability and capacity; and build up operation system
  – Training: to revaluate and upgrade professional skill; build up protocol with government
Observations of PPP after Typhoon Morakot

• **During Disaster Recovery**
  – Sharing of information and resources
  – Coordination: between NGOs and government to avoid competition and conflicts
  – Beyond capacity: to endanger both NGOs and the affected people
  – Politics: disasters are by their nature political events - they trigger intense discussions over “who gets what” from government

Key elements to build up disaster-resilient community

- Risk and vulnerability assessment
- Monitoring and early warning
- Mature and reliable knowledge
- Preparedness plan
Mapping community vulnerability

Operational Model partnership with NGOs
Community-level hazard map for an indigenous tribe after Typhoon Morakot

Risk Identification
Dialogues, Assessment, Training and Scenario-based drill

Evaluation
Way for improvement: Incident Command & Situation Awareness Overview

• Suggestions
  1. Invest in a common incident management system that allows individual agencies to still retain their proprietary system, but share data through open/interopeable services
  2. Invest in a platform for inter-agency and NGO collaboration
  3. Invest in information management training and solutions
  4. Invest in geospatial situational awareness solutions
  5. Consider setting up a fusion center

Conclusions

• With advantage of IT technology, the future partnership will be based on transparent information flow.

• Roles of NGOs extend far beyond than ever, management system and defined scopes of jurisdiction will be required in advance.

• Capacity and Capability of central and local governments to manage the influx of NGOs.

• Effective and efficient coordination between public and private sectors will be the guarantee to a success in quick recovery.
Thank for your attention