The New National Emergency Management Systems in China, its Focus, Experience and Future Plans

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1. Achievements of Emergency Management in China
2. Main Focus and Experience on Comprehensive Capacity Buildings and Resiliency
4. Cooperation of Belt and Road Initiatives
1. Achievements of Emergency Management in China
China has experienced many catastrophes. The history of China is the history of fighting natural disasters, for example, floods, earthquakes, typhoons, geological disasters, forest fires, and others.

**1949-2003**: There were many ministries concerned with natural disasters, work safety disasters, public health and social security, but no comprehensive organization to respond to disasters at the level of the State Council of China.
2003-2018:
After the SARS epidemic in 2003, the Chinese government set up the Emergency Management Agency of the State Council to respond to and coordinate big disaster issues. In addition, during 2003-2007 Emergency Management Agencies (EMAs)were established at four levels of government: nation, province, region, and county. These agencies were upgraded at all levels after the Wenchuan earthquake in 2008, to improve contingency plans and preparedness for four types of disasters (natural disasters, work safety, public health and social security).

Since 2003, emergency management platforms for different levels of the EMAs have been established, and these were upgraded after the Wenchuan earthquake in 2008 in central and provincial governments and in some of the regional governments.

Most provincial EMAs have on-site communication and command systems, and also some field units for data collection and transmission.
Classification of Disasters in China

1. Natural Disaster
   - A. Metarological
   - B. Oceanic
   - C. Flooding
   - D. Geological
   - E. Earthquake
   - F. Agriculture
   - G. Forest Fires

2. Incidents Disaster
   - A. Mining and Business Incident
   - B. Transportation
   - C. Public Infrastructures Incident
   - D. Nuclear Issues
   - E. Environment and Pollution
   - F. Ecology Destroy

3. Security and Safety
   - A. Terrorism
   - B. Religions
   - C. Economic Crisis
   - D. Foreign Affairs
   - E. Grouping and Mass Issues
   - F. Others

4. Public Health
   - A. SAS
   - B. Mass Public
   - C. Food Safety
   - D. Occupation
   - E. Animal
   - F. Public Issues
Emergency Management Cycle

Mitigation → Preparedness → Response → Recovery
Response to Catastrophe

1. Risk Assessment
2. Emergency Preparedness
3. Emergency Plan
4. Emergency Response
5. Disaster Information Collection
6. Rescue Arrangement
7. Onsite Coordination
8. Rescue Resources
9. Allocation of Homeless People
10. Reconstruction

1. Preparedness
2. E-Response
3. E-SAR
4. Allocation
5. Recovery and Reconstruction
Capacity Buildings

National Level

Province Level

Regional Level

County Level

Town Level

Community /Village Level

Heavy USAR

Medium USAR

Light USAR

CERT/UFRs

CERT/UFRs/FRs

CERT/FRs

USAR
USAR have the SOP for Heavy, Medium, and Light team and have INSARAG External Certification (IEC)

CISAR pass the INSARAG External Classification (IEC) of Heavy SAR Team in 14, Nov. 2009. China is 12th in the world, second in Asia.

SOP of CISAR was established since 2009
It is possible to transfer Chinese experience of capacity buildings of international and national level USARs to whole of the world to response the catastrophes.
Earthquake disasters occurred in recent years in China and adjacent countries.
International Response Procedures for Strong Earthquake and Severe disaster of MEM of P. R. China

Task of National Earthquake Response Support Service (NERSS)

Since 2007
Since 2018

1-0.5h
2-2.3h
3-6-10h
4—CISAR/CSAR Mission

Quick estimate and report on global strong earthquake
By NERSS

Commanding Office of MEM

Department of E&GR

Department of ICR

Leaders of State Council and Central Military Commission

Ministry of Foreign Affairs

Government of the country affected by the disaster

Magnitude over 6.0 in continents, 6.5 in ocean area

No response: No disaster caused by strong earthquake
Condole and financial support: Small disaster by strong earthquake
Rescue operation: Huge disaster by strong earthquake

Quick Response, quick decision-making, rescue starting up, and on-site operation

60-70 times response/year
1-2 years/rescue in large disaster

1 October 2015
INTERNATIONAL USAR RESPONSE
ENTITIES and INSARAG

- UN OCHA (Office of Coordination for Humanitarian Affairs)
- LEMA (Local Emergency Management Authority)
- UNDAC (United Nations Disaster Assessment and Coordination)
- USAR (Urban Search and Rescue)
- OSOCC (On-Site Operations Coordination Centre)
- RDC (Reception Departure Centre)
- Virtual OSOCC
Models of Multi-Sub and Decentralized OSOCC for USAR

National Level OSOCC
USAR Ops Cell

Provincial OSOCC
USAR Ops Cell

Sector Coordination
Heavy IEC Team A

USAR Team 1
USAR Team 2
USAR Team 3
USAR Team 4
USAR Team 5

Sector Coordination
Heavy IEC Team B

USAR Team 1
USAR Team 2
USAR Team 3
USAR Team 4
USAR Team 5

Sector Coordination
Heavy IEC Team C

USAR Team 1
USAR Team 2
USAR Team 3
USAR Team 4

Provincial OSOCC
USAR Ops Cell

地级 A

地级 B

地级 C

镇级

USAR Team 2
USAR Team 3

USAR Team 1
USAR Team 2
USAR Team 3
USAR Team 4
USAR Team 5
USAR Team 6
USAR Team 7
USAR Team 8
USAR Team 9
USAR Team 10

USAR Ops Cell

USAR Team 1
USAR Team 2
USAR Team 3
USAR Team 4
USAR Team 5
USAR Team 6
USAR Team 7
2. Main Focus and Experience on Comprehensive Capacity Buildings and Resiliency
2018-Present:
The Ministry of Emergency Management (MEM) was founded in China in March 2018 and since then, China has had a comprehensive organization to respond to natural disasters and work safety disasters. Thirteen ministries, administrations and organizations were combined to create the Ministry of Emergency Management (MEM).

After a year of hard work, the MEM has assembled 200,000 fire fighters across China. Two international heavy USAR teams have been established, one called CISAR (China International Search and Rescue Team) and another called CSAR (China Search and Rescue Team).

A Firefight Bureau, Forest Firefight Bureau, Work Safety Emergency Command Center and National Earthquake Response Support Service (NERSS) will be created as national level emergency response organizations and teams.

In 2019, provincial, regional, and county level bureaus founded to manage emergency issues related to natural disasters and work safety disasters.
In 23, Oct. 2019, China have two heavy USARs teams passed IERR (China International Search and Rescue Team (CISAR)) and IEC (China Search and Rescue Team (CSAR)), and also there were two national level heavy USARs were passed NER by CEA in 2016 and 2017.
There are more than 20 Bureaus and Departments involved in the Ministry of Emergency Management (MEM) to respond to, manage and deal with natural disasters and work safety emergency issues.

- Rescue Coordination and Planning Bureau,
- Earthquake and Geological Disaster Rescue Department,
- Flood and Drought Prevention Department,
- Risk Monitoring and Comprehensive Disaster Reduction Departments,
- Command Center for National Level Disasters,
- International Cooperation and Rescue Department,
- Science and Technology and Information Department,
- Disaster Recovery and Relief Department,
- Firefight Bureau,
- Forest Firefight Bureau,
- Work Safety Emergency Command Center,
- National Earthquake Response Support Service (NERSS)
- National Disaster Reduction Center.
After the foundation of new ministry, a lot of changes and achievements were built up: more focus on:

➢ The emergency preparedness,
➢ Capacity buildings of international heavy USAR,
➢ Capacity buildings of 7 kinds of international rescue teams,
➢ 4 kinds of domestic rescue teams (water, mountains, USARs and aviation search and rescue),
➢ Some important S&T plan on emergency management (preparedness, response, rescue and recovery),
➢ Assessment of disaster risks,
➢ Rescue coordination and NGO’s rescue teams in China,
➢ Disaster risk monitoring and early warning,
➢ Urban and forest (wild) fire fighter strengthen program,
➢ National Accreditation Process (NAP) and USARs certification,
➢ Opened cooperation for international scale.
<table>
<thead>
<tr>
<th>Type of disaster</th>
<th>MEM</th>
<th>Function</th>
<th>Responsible Organisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structure Fire</td>
<td>✓</td>
<td>Firefighting, Treatment of injured/affected</td>
<td>Fire Rescue Bureau, MEM</td>
</tr>
<tr>
<td>Wildfire</td>
<td>✓</td>
<td>Firefighting, Preparedness</td>
<td>Forest Fire Rescue Bureau, MEM, Forestry Commission</td>
</tr>
<tr>
<td>Emergency Medical</td>
<td>✓</td>
<td>Treatment of injured/affected</td>
<td>Ministry of Public Health</td>
</tr>
<tr>
<td>Drought</td>
<td>✓</td>
<td>Improving supplies/Rationing</td>
<td>Ministry of Emergency Management, Ministry of Water Resources</td>
</tr>
<tr>
<td>Earthquake and Volcanoes</td>
<td>✓</td>
<td>Assessment of losses, Life SAR, Life lines recovery, Infrastructure protection, Recovery and Relief</td>
<td>USAR teams of MEM, Fire Rescue Bureau of MEM, Forest Fire Rescue Bureau of MEM, Local governments, China Earthquake Administration under MEM</td>
</tr>
<tr>
<td>Storms and Hurricanes</td>
<td>✓</td>
<td>Scene safety, Rescue of trapped, Treatment of injured/affected, Infrastructure protection, Infrastructure repair &amp; recovery</td>
<td>Ministry of Emergency Management, Fire Rescue Bureau of MEM, Forest Fire Rescue Bureau of MEM, Local governments, China Meteorological Bureau</td>
</tr>
<tr>
<td>Epidemics</td>
<td>✓</td>
<td>Inoculation/vaccination, Treatment of affected population</td>
<td>Ministry of Public Health, Local Governments</td>
</tr>
<tr>
<td>Locust invasion</td>
<td>✓</td>
<td>Monitoring</td>
<td>Ministry of Natural Resources, Ministry of Emergency Management</td>
</tr>
<tr>
<td>Tsunamis</td>
<td>✓</td>
<td>Monitoring, Response</td>
<td>Ministry of Natural Resources, Ministry of Emergency Management</td>
</tr>
<tr>
<td>Function</td>
<td>Technical coordination</td>
<td>Co-responsible</td>
<td></td>
</tr>
<tr>
<td>---------------------------</td>
<td>-------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Warning</td>
<td>Each ministry of natural disaster monitoring and MEM</td>
<td>Other institutions including MEM, private sector and Chinese Red Cross</td>
<td></td>
</tr>
<tr>
<td>Emergency plans</td>
<td>MEM</td>
<td>Other institutions including ministries of natural disaster, private sector and Chinese Red Cross</td>
<td></td>
</tr>
<tr>
<td>Coordination</td>
<td>MEM</td>
<td>Other institutions including ministries of natural disaster, private sector and Chinese Red Cross</td>
<td></td>
</tr>
<tr>
<td>Damage assessment</td>
<td>MEM</td>
<td>Other institutions including ministries of natural disaster, private sector and Chinese Red Cross</td>
<td></td>
</tr>
<tr>
<td>Security</td>
<td>Secretary of Government; MEM</td>
<td>Other institutions including ministries of natural disaster, private sector and Chinese Red Cross</td>
<td></td>
</tr>
<tr>
<td>Search and rescue</td>
<td>MEM</td>
<td>Military and Chinese Red Cross</td>
<td></td>
</tr>
<tr>
<td>Strategic services</td>
<td>MEM</td>
<td>Other institutions including ministries of natural disaster, private sector and Chinese Red Cross</td>
<td></td>
</tr>
<tr>
<td>Health services</td>
<td>Ministry of Public Health</td>
<td>Other institutions including private sector and Chinese Red Cross</td>
<td></td>
</tr>
<tr>
<td>Supply</td>
<td>MEM</td>
<td>Other institutions including ministries of natural disaster, private sector and Chinese Red Cross</td>
<td></td>
</tr>
<tr>
<td>Social communication</td>
<td>MEM</td>
<td>Other institutions including private sector and mass media.</td>
<td></td>
</tr>
</tbody>
</table>
The MEM in China is the main ministry that operates civil protection, and responders come from a number of organisations, as illustrated in the following table.

<table>
<thead>
<tr>
<th>Staff</th>
<th>Total</th>
<th>Paid</th>
<th>Volunteer</th>
<th>Role Definition in China</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency Managers</td>
<td>huge</td>
<td>huge</td>
<td>More teams</td>
<td>Main roles</td>
<td></td>
</tr>
<tr>
<td>Despatchers – Control Staff</td>
<td>huge</td>
<td>huge</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senior Officers - FRS</td>
<td>huge</td>
<td>huge</td>
<td>huge</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firefighters - Structural</td>
<td>huge</td>
<td>huge</td>
<td>more</td>
<td>All firefighters 2019</td>
<td></td>
</tr>
<tr>
<td>Firefighters - Wildland</td>
<td>huge</td>
<td>huge</td>
<td>more</td>
<td>All firefighters 2019</td>
<td></td>
</tr>
<tr>
<td>Emergency Medical</td>
<td>huge</td>
<td>huge</td>
<td>huge</td>
<td>Ministry of Public Health Red Cross, 999/120, CDC of China</td>
<td></td>
</tr>
<tr>
<td>Administrative Personnel</td>
<td>huge</td>
<td>huge</td>
<td>huge</td>
<td>MEM</td>
<td></td>
</tr>
<tr>
<td>Maritime Rescue - Frontline</td>
<td>huge</td>
<td>huge</td>
<td>huge</td>
<td>Ministry of Transportation</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Effective emergency response in China rests on guiding principles that determine the coordination and supervision arrangements for all phases of Civil Protection, specifically **Preparedness, Response, Emergency Operation Activities, Relocation and Recovery.**

**Preparedness Coordination**
A key part of the structure of civil protection preparedness within China is the establishment of Local Resilience and CERT (Community Emergency Response Teams). The purpose of Local Resilience is to ensure responders:

• Develop a Community Risk Register that lists significant risk sites for the area.
• Undertake a systematic, planned and coordinated approach in relation to:
  • Risk
  • Planning for emergencies
  • Planning for business continuity management
  • Publishing information about risk assessments and plans
  • Arrangements to warn and inform the public
• Support the preparation of multi-agency plans and other documents, including protocols and agreements and the co-ordination of multi-agency exercises and other training events.

Different levels of government in China have also made a strong contribution to local resilience and community preparedness to improve the capacity of local resilience.
Response, Operation, Relocation and Recovery Coordination

There are four broad types (or levels) of emergency, which are likely to require direct central government engagement to provide resources beyond those needed by emergencies that are can be managed locally. These are:

**Level 1–National Response (Catastrophic Emergency):** this is an emergency that has an exceptionally high and potentially widespread impact and requires immediate central government direction and support. Normally, when disaster issues cross more than two provinces, and the death toll is over 300 (natural disasters), or over 30 (work safety disasters), national level response will be engaged by the MEM.

**Level 2 –Regional/Provincial Response (Serious Emergency):** this is an emergency, which has, or threatens, a wide and/or prolonged impact requiring sustained provincial government coordination and support. Normally, cross more than two regions, and the death toll is between 50-299 (natural disasters), or less than 30 but larger than 10 (work safety disasters) by the Bureau of Emergency Management of the province. BEM

**Level 3–City/Regional Response (Significant Emergency):** this is an emergency, which has, or threatens, requiring sustained regional government coordination and support. Normally, across more than two counties, and death toll is between 20-49 (natural disasters), or less than 10 but larger than 3 (work safety disasters by the BEM.

**Level 4–County Response (Significant Emergency):** is an emergency, which has, or threatens, requiring sustained county government coordination and support. Normally, cross more than two counties, and the death toll is between 0-19 (natural disasters), or less than 3 (work safety disasters) by the Office of Emergency Management of the county.
Normally, the State Council of China will respond to Level 1 emergencies:

◆ Ministry of Emergency Management will operate in the Level1 emergencies for natural and work safety disasters.

◆ The Ministry of Public Health will operate in the Level1 emergencies for public health issues, such as SARS in 2003.

◆ The Ministry of Security will operate in the Level1 emergencies for social security issues in China.

Local governments will respond to different levels of disasters depending on their responsibilities and the response level (Level 2, Level 3, or Level 4).

■ The Ministry of Emergency Management will provide guidance for Level 2 operations for natural and work safety disasters.

■ The Ministry of Public Health will provide guidance for Level 2 operations for public health issues.

■ The Ministry of Security will provide guidance for Level 2 operations for social security issues of China. This approach is followed in all county level responses.
## Classification of Earthquake Disaster Grades

<table>
<thead>
<tr>
<th>Grades of disaster</th>
<th>Critical Level</th>
<th>Early decision</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Death Toll</td>
<td>GDP /Economic Losses</td>
</tr>
<tr>
<td><strong>Catastrophe</strong></td>
<td>Over 300</td>
<td>Over 1%</td>
</tr>
<tr>
<td><strong>Serious Disaster</strong></td>
<td>50 – 299</td>
<td></td>
</tr>
<tr>
<td><strong>Moderate disaster</strong></td>
<td>20 – 49</td>
<td></td>
</tr>
<tr>
<td><strong>Light disaster</strong></td>
<td>Less 20</td>
<td></td>
</tr>
</tbody>
</table>
After Wenchuan and Yushu earthquakes, task groups of commanding centers of different levels of government have been defined as follows.

<table>
<thead>
<tr>
<th>Task Groups of Commanding Centers After Catastrophe in China</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAR</td>
</tr>
</tbody>
</table>

- SAR: Search and Rescue
- Logistic: Logistics
- Medical Care: Medical Care
- Society Safety: Society Safety
- Management of donation and international reception: Management of donation and international reception
- Disaster survey and losses assessment: Disaster survey and losses assessment
- Media and News: Media and News
Wenchua Earthquake, China, 2007
Total death is over 80,000
The whole process of new cases changes of COVID-19 in China

Diagram shown the changes of whole process of new cases of COVID-19 in China from Jan. to Feb.

Diagram shown the changes of whole process of new cases of COVID-19 in Wuhan from Jan. to March.
Preparedness for Improving Resilience of Large Cities

1. Risk Assessment
2. Monitoring and Early Warning
3. Commanding and Coordination
4. Search and Rescue
5. Emergency Transportation Support
6. Dealing With Secondary Disaster
7. Medical Care and Management
8. Reallocation of Homeless People
9. Safety and Security of Society
10. Emergency Plan, Law and Regulation
11. Emergency Logistic and Resources Support
12. Education, Training, Exercise and Drills
• National Level Capacity Building Projects in 5 Years

I Disaster Risk Survey and Main Hazard Investigation

II Reparation Projects for Ecological Capacity Buildings in Weakness Area

III Preservation and Reparation Project Along the Coast Area

VI Buildings and Infrastructures Reinforced Project in High Seismic Risk Area

V Improving Capacity for Flooding and Drought Infrastructures

VI Comprehensive Recovery of Geological Disaster and Evacuation and Migration Project from Geological Disasters

VII Project of Construction of Regional Emergency Response and Rescue Commanding Centers

VIII Project on Natural Disaster Monitoring and Early Warning Networks and Systems

IX Modernization of Natural Disaster Prevention High Tech.
INSARAG Recognition of NAP (IRNAP) along Road and Belt Initiatives

THE CREATION OF A NATIONAL USAR ACCREDITATION SYSTEM
In Dec. 2016, Working Guideline for IEC in domestic of China have been issued to provincial earthquake administrations. We called CESARAG Guideline.

Capacity Standards of USAR Classification in China

Criteria and Check-lists for USAR Certification in China

National Accreditation Process (NAP) by UNOCHA INSARAG Secretariat
A pilot project of UNOCHA for National level USARs
IRNAP Certification in China

The time length of certification is about 30 hours with a scenario earthquake over Ms 7.5.

Simulating whole of the operational process:

- Emergency response, on-time decision-making, preparedness, mobilization, operation, demobilization.
- Management, Search, Rescue, Medical Care, Logistic Supports
- 5-8 SAR scenario debris objective to check the capacity in 2 different sites: RDC and OSOCC under LEMA Commanding and Controlling Center of China

Follow IEC of UNOCHA Secretariat of MEM

<table>
<thead>
<tr>
<th>USAR Component</th>
<th>Role</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management</td>
<td>Team Leader</td>
<td>Command</td>
</tr>
<tr>
<td></td>
<td>Deputy Team Leader/Operations</td>
<td>Coordination/Operational Control</td>
</tr>
<tr>
<td></td>
<td>Officer</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Planning Officer</td>
<td>Planning</td>
</tr>
<tr>
<td></td>
<td>Liaison Officer/Deputy Liaison</td>
<td>Liaison/Media/Reporting/RDC/OSOCC/UCC</td>
</tr>
<tr>
<td></td>
<td>Officer</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Structural Engineer</td>
<td>Structural Assessment/Analysis</td>
</tr>
<tr>
<td></td>
<td>Safety Officer</td>
<td>Safety/Security</td>
</tr>
<tr>
<td>Search</td>
<td>Technical Search Specialist</td>
<td>Technical Search</td>
</tr>
<tr>
<td></td>
<td>Search Dog Handler</td>
<td>Dog Search</td>
</tr>
<tr>
<td></td>
<td>Hazmat (hazardous materials)</td>
<td>Hazmat Assessment</td>
</tr>
<tr>
<td>Rescue</td>
<td>Rescue Team Officer</td>
<td>Breaking/breaching/cutting/shoring/tactical</td>
</tr>
<tr>
<td></td>
<td>Rescuer</td>
<td>rope</td>
</tr>
<tr>
<td></td>
<td>Heavy Rigging Specialist</td>
<td>Lifting/Moving</td>
</tr>
<tr>
<td>Medical</td>
<td>Medical Team Manager (medical</td>
<td>Team Care (personnel/search dogs)</td>
</tr>
<tr>
<td></td>
<td>doctor)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Paramedic/Nurse</td>
<td>Patient Care</td>
</tr>
<tr>
<td>Logistics</td>
<td>Logistics Team Manager</td>
<td>BoQ Management</td>
</tr>
<tr>
<td></td>
<td>Logistics Specialist</td>
<td>Food and water supply/base camp operations/transport capacity/fuel supply</td>
</tr>
<tr>
<td></td>
<td>Communications Specialist</td>
<td>Communications</td>
</tr>
</tbody>
</table>

Table 3: Seventeen identified roles based on the five components of USAR teams.
In the end of 2015, expert of USARs from China Earthquake Administration (CEA) supposed that national level USARs of China need to certificate under the INSARAG, and then experts of USARs of China Earthquake Administration guided the provincial USARs to passed heavy USARs certification and issued national level standard of USARs in 2016.

In 2017, the INSARAG Steering Group approved the INSARAG External Support and Recognition proposal (PAREI) for national accreditation processes, and encouraged Regional Groups to put it into practice and report on its implementation at the annual meetings of the Steering Group.
Role of the CERTs/USARs During Disaster

- CERT/FRs
- Prepared-Mobilizing Period of USARs
- Local USARs
- CERT

- SAR Operation

Time (小时)

0 0.5 1 2 10 24
Up to 2016, there are totally about 3700 CERT programs in the World. About 400 CERT programs in USA each year. About 850 instructors participate CERT training, about 1000 times CERT basic training in the local communities, 25000 peoples have got the CERT basic training each year.

In China, We have pilot projects and training for CERT members about 6000 in Chengdu and Shanxi.
CERT Training Program

Basic Training
- Instructor G
- Students
- PPT
- SOP

Instructor Training
- Instructor G
- Students
- PPT
- Support materials

Manager Training
- Instructor
- Students
- PPT
- Support materials
Future Vision of CERT in China

EM Office

CERT Basic Training

Communities

Training Organization

CERT Manager Training

CERT Instructor Training

Technic Support

Select and assess

Assessment

Cooperation

Research Center of Digital Disaster Mitigation and Emergency Management, IDC, Peking University, Asia Foundation
1. One well-done established emergency organizing system
2. Making one Perfect emergency management mechanism
3. Setting up one CERT
4. Making one suite of useful emergency contingency plan
5. Setting up one necessary emergency logistic support system
6. Forming one daily used emergency education and training mechanism
7. Setting-up one integrated and high efficient emergency information management platform/system
8. Establishing one emergency shelter
9. Establishing one clearly identified emergency identification/marketing system
4. Cooperation of Belt and Road Initiatives
Global Seismic Risk Map
USAR Classification Based on INSARAG

International

Heavy
Medium

National USAR Teams

Heavy
Medium
Light

First Responders
Civil Defense/Protection
Local Emergency Services
Community Responders

International USARs
No. USARs
FRs/CERTs

Figure 4: The INSARAG response framework
It is possible to transfer Chinese experience of capacity buildings of international and national level USARs to whole of the world to response the catastrophes.
1. To make integrated risk assessment and risk mapping in urban and rural area
2. To make disaster prevention and resistance based on the risk levels
3. To make the emergency preparedness based on the scenario disasters
4. To make contingency plan for the response of disasters
5. To compile the coordination mechanisms, regulation and laws on the emergency issues and emergency management,
6. To improve the capacity buildings of EMAs, EOCs and USARs in developing countries

7. To establish global and regional disasters quick responses networks, having the capacity on public service and mass casualty managements during disasters

8. Training and excising for different levels of government officials, professional USAR teams and volunteers

9. Training and improving capacity of disaster prevention in communes and towns levels in developing countries.
1) Training for CISAR or CNSAR annually
2) Training for Provincial Teams
3) Training for Emergency Managers
4) Training for First Responders
5) Training for residents volunteer
6) Exchange for International Scale

Thanks a lot!