Evolution of Disaster Management System

- 1958 - Calamity Act
- 1971 - Emergency Relief Cell (ERC)
- 2005 - Federal Relief Commission & ERRA
- 2007 - Raising of NDMA and Establishment of NDMC
- 2007 - NDM Ordinance
- 2010 - NDM Act
- 2015 - Merger of ERC in NDMA
- 2010 - Federal Relief Commission & ERRA
- 2005 - NDMA Act
- 2010 - Merger of ERC in NDMA
Emergency Operations Centres

• Disaster Management Authorities in Pakistan have established a number of Emergency Operations Centre.

• At Federal Level, there is the National Emergency Operations Centre (NEOC), Provincially, all the Provinces / Regions have established Provincial Emergency Operations Centres (PEOC) and at District level, there are District Emergency Operations Centres (DEOC)
**Functioning of NEOC**

- Analyse situation based upon **severity of the disaster**, initial damages / losses in coordination with concerned PDMA and activate NEOC on 24/7 basis
- Liaison for **information management** with:-

<table>
<thead>
<tr>
<th>Federal Government</th>
<th>Provincial Government</th>
<th>Non Government</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prime Minister's Office (PMO)</td>
<td>Chief Secretaries</td>
<td>United Nations Agencies</td>
</tr>
<tr>
<td>Ministry of Climate Change (MoCC)</td>
<td>Provincial Disaster Management Authorities (PDMAs)</td>
<td>International Committee of the Red Cross (ICRC)</td>
</tr>
<tr>
<td>Ministry of Interior (MoI)</td>
<td>District Disaster Management Authorities (DDMAs)</td>
<td>Pakistan Red Crescent Society (PRCS)</td>
</tr>
<tr>
<td>Pakistan Meteorological Department (PMD)</td>
<td>Commissioners / Deputy Commissioners</td>
<td>Foreign Missions</td>
</tr>
<tr>
<td>Federal Flood Commission (FFC)</td>
<td>Rescue Services</td>
<td>Donor Agencies</td>
</tr>
<tr>
<td>Space and Upper Atmosphere Commission (SUPARCO)</td>
<td>Civil Defence</td>
<td></td>
</tr>
<tr>
<td>Indus River System Authority (IRSA)</td>
<td>Irrigation Departments</td>
<td></td>
</tr>
<tr>
<td>Pakistan Armed Forces</td>
<td>Police Services</td>
<td></td>
</tr>
</tbody>
</table>
• Constant watch over Media
• Regular monitoring of PMD Website for any advisories / alerts
• Advisory / Alert issued to relevant stakeholders
• In case any damages / disaster are reported, concerned PDMAs is asked to initiate Occurrence Report followed by SITREP on given timelines as per SITREP SOPs
• After compilation of initial reports from PDMAs, NDMA issues SITREP to relevant stakeholders for information
• Compilation of data & log book
Functioning of NEOC

• Putting relevant stakeholders on alert especially Armed Forces & USAR Teams

• SMS Alerts (Roman Urdu) are generated in affected areas in coordination with concerned PDMA, PMD and PTA

• Before initiating any response, the lead taken from electronic / social media is referred to concerned PDMA / DDMA for validation

• Preparation of brief for high dignitaries
Flow of Information

- Fax / Phone Lines / UAN No.
- Virtual Call Centre
- Media Watch
- Internet
- Social Media
- Other Stakeholders
- DMAs

- Initial Incident Reports
- Daily Situation Reports
- Weekly Reports
- Post Disaster Reports
Sharing of Information

- Weather Forecasting
- Flood Forecasting
- Seismology

- River Flow Data
- Canal Flow Data
- Dams Data

- Satellite Imagery
- Imagery Analysis

- Losses / Damages Data
- Rescue / Relief Data
- R&R Efforts

- Transboundary Water Flow Data

- Relief Activities Data

NDMA / NEOC

PMD / FFD

Federal / Provincial Depts

PDMAs / DDMAs

Armed Forces

UN / NGOs

PCIW

FFC

SUPARCO

NDMA / NEOC

Sharing of Information

- Losses / Damages Data
- Rescue & Relief Activities

Federal / Provincial Depts

PDMAs / DDMAs

Armed Forces

UN / NGOs

PCIW

FFC

SUPARCO

NDMA / NEOC
## Disasters Handled by NDMA

<table>
<thead>
<tr>
<th>Disasters</th>
<th>Deaths</th>
<th>Injuries</th>
<th>Houses Damaged</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyclone Yemyin (2007)</td>
<td>443</td>
<td>-</td>
<td>71,486</td>
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<tr>
<td>Floods (2008)</td>
<td>80</td>
<td>21</td>
<td>17,172</td>
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<tr>
<td>Ziarat Earthquake (2008)</td>
<td>164</td>
<td>173</td>
<td>9,761</td>
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<tr>
<td>Super Floods (2010)</td>
<td>1,985</td>
<td>2,946</td>
<td>1,602,765</td>
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<tr>
<td>Floods (2011)</td>
<td>520</td>
<td>1,180</td>
<td>1,604,406</td>
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<tr>
<td>Floods (2012)</td>
<td>571</td>
<td>2,902</td>
<td>636,438</td>
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<tr>
<td>Mashkel Earthquake (2013)</td>
<td>14</td>
<td>52</td>
<td>2,000</td>
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<tr>
<td>Floods (2013)</td>
<td>333</td>
<td>173</td>
<td>79,943</td>
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<tr>
<td>Awaran Earthquake (2013)</td>
<td>386</td>
<td>816</td>
<td>46,756</td>
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<tr>
<td>Floods (2014)</td>
<td>367</td>
<td>673</td>
<td>107,102</td>
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<tr>
<td>KP Tornado (2014)</td>
<td>49</td>
<td>267</td>
<td>-</td>
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<tr>
<td>Floods (2015)</td>
<td>238</td>
<td>232</td>
<td>10,716</td>
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<td>KP Earthquake (2015)</td>
<td>272</td>
<td>856</td>
<td>96,152</td>
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<tr>
<td>Pre-Monsoon Heavy Rains (2016)</td>
<td>271</td>
<td>279</td>
<td>2,929</td>
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<tr>
<td>Floods (2016)</td>
<td>153</td>
<td>113</td>
<td>1,452</td>
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<tr>
<td>Floods (2017)</td>
<td>271</td>
<td>359</td>
<td>996</td>
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## Disasters Handled by NDMA

<table>
<thead>
<tr>
<th>Disasters</th>
<th>Tents</th>
<th>Blankets</th>
<th>Mosquito Nets</th>
<th>Plastic Mats</th>
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</thead>
<tbody>
<tr>
<td>Cyclone Yemyin (2007)</td>
<td>94,466</td>
<td>60,600</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Floods (2008)</td>
<td>11,200</td>
<td>10,000</td>
<td>-</td>
<td>49,000</td>
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<tr>
<td>Super Floods (2010)</td>
<td>488,782</td>
<td>1,915,058</td>
<td>290,262</td>
<td>128,892</td>
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<tr>
<td>Floods (2011)</td>
<td>315,240</td>
<td>41,950</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Floods (2012)</td>
<td>132,892</td>
<td>130,154</td>
<td>-</td>
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<tr>
<td>Mashkel Earthquake (2013)</td>
<td>4,492</td>
<td>800</td>
<td>2,000</td>
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<tr>
<td>Floods (2013)</td>
<td>57,884</td>
<td>17,187</td>
<td>31,250</td>
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<td>Awaran Earthquake (2013)</td>
<td>48,272</td>
<td>92,849</td>
<td>23,200</td>
<td>50,736</td>
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<tr>
<td>Floods (2014)</td>
<td>95,395</td>
<td>27,290</td>
<td>23,900</td>
<td>12,640</td>
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<td>KP Tornado (2014)</td>
<td>8</td>
<td>100</td>
<td>630</td>
<td>354</td>
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<tr>
<td>Floods (2015)</td>
<td>133,421</td>
<td>10,197</td>
<td>-</td>
<td>29,907</td>
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<tr>
<td>KP Earthquake (2015)</td>
<td>47,054</td>
<td>80,088</td>
<td>-</td>
<td>12,094</td>
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<tr>
<td>Pre-Monsoon Heavy Rains (2016)</td>
<td>3,927</td>
<td>8,160</td>
<td>-</td>
<td>2,188</td>
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<tr>
<td>Floods (2016)</td>
<td>2,596</td>
<td>2,232</td>
<td>650</td>
<td>2,010</td>
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<tr>
<td>Floods (2017)</td>
<td>15,633</td>
<td>3,948</td>
<td>7,391</td>
<td>10,440</td>
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</tbody>
</table>
Foreign Relief Provided

- Bosnia - 2014
- Afghanistan – 2014, 15
- Nepal - 2015
- Tajikistan - 2016
- Srilanka - 2010 & 2016
- Iran - 2017
- Bangladesh - 2007
- China - 2008
- Myanmar - 2008
- Kyrgyzstan - 2010
- Japan - 2011
- Turkey - 2011

Global Outreach for Relief
Oversea Relief Assistance by NDMA

- **Nepal Earthquake - 2015**
- **Afghanistan Avalanche - 2015**
- **Afghanistan (Kunduz Insurgency) - 2015**
- **Sri Lanka Floods - 2016**
- **Tajikistan Earthquake - 2016**
- **Iran Earthquake - 2017**
MIRA Mobile Application
MIRA ODK App

- Easy to install and User friendly (Updating version)
- Better approach then paper based
  - Picture capture
  - Audio record
- Less Margin of error
- Compete form check
  - Percentage calculation check
MIRA ODK App

- Works under limited data connectivity
  - Data uploading even with no network
- Auto transfer of data to the server
- Data filtered by ATT (Assessment Technical Team)
- Compete form check
  - Percentage calculation check
- Send to AWG (Assessment Working Group)
- All 8 sectors installed
Developed for Android so far only

Live demo