



National Disaster Management Authority
Prime Minister's Office
Government of Pakistan



ANNUAL REPORT 2017

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www.ndma.gov.pk



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NDMA Annual Report 2017

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This report has been produced under the overall guidance of

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Rescue & Relief

Recovery

Rehabilitation & Reconstruction

National Disaster Management Authority

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Foreword by Chairman NDMA



**Lieutenant General
Omar Mahmood Hayat, HI (M)
Chairman NDMA**

NDMA is privileged to share Annual Report for the Year 2017 with Stakeholders and followers. In retrospect, a number of significant events outlined the Year ranging from Floods, Urban Flooding, Land Slides and Winter Snowfall at its terminal stage.

Year 2017 saw Winter Snowfall, Avalanches, Landslides and heavy Winter Rains, below normal rains in 1st half of Monsoon and above normal rainfall in 2nd half, Urban Flooding in Karachi, Hyderabad, Lahore, Rawalpindi & Islamabad, Flash Flooding in Chitral, GB & Lasbela, Flooding in District Sialkot (Deg Nadi, Aik Nullah), Landslides and house collapsed incidents in KP and GB due to heavy rains. A well-integrated National effort in the shape of timely weather forecast by PMD, apt analysis by NDMA and configuring correct and timely response by all relevant stakeholders led to a corresponding response at the National level.

During the year, focus of NDMA remained on Disaster Risk Reduction, Preparedness for Disaster and Disaster Resilience. In this regard, NDMA formulated National Multi-Sector Initial Rapid Assessment Guidelines, Guidelines for Minimum Standards of Relief in Camps, Guidelines for Minimum Ex-Gratia Assistance to the Persons Affected by Natural and Human Induced Disasters, Integrated Context Analysis vulnerability to food insecurity and natural hazards in Pakistan, National Multi Hazard Vulnerability Risk Assessment Guidelines, Policy on Life & Fire Safety Provisions in Pakistan Building Codes, Integrating Gender Based Violence Prevention Intervention in Pakistan School Safety Framework, GBV Guidelines and SOPs to Prevent, Mitigate and Response in Humanitarian Settings.

Besides this notwithstanding the resource constraints and challenges, a concerted and well-coordinated proactive response is much warranted to thwart the effects of all types of disasters. I commend all stakeholders and partners for their support to NDMA towards realization of our shared vision of “Resilient Pakistan”.

Acronyms

| | | | |
|-------------------|--|----------------|--|
| ADB | Asian Development Bank | C&W | Communication & Works |
| ADPC | Asian Disaster Preparedness Centre | DC | Deputy Commissioner |
| A&F | Administration and Finance | DDMA | District Disaster Management Authority |
| AFAD | Asian Federation against Involuntary Disappearances | DEOC | District Emergency Operation Centre |
| AJ&K | Azad Jammu & Kashmir | DFID | Department for International Development |
| AKDN | Agha Khan Disaster Network | DM | Disaster Management |
| AMCDRR | Asian Ministerial Conference on Disaster Risk Reduction | DO | Direct Observation |
| ANDMA | Afghan National Disaster Management Authority | DRM | Disaster Risk Management |
| ANF | Anti Narcotic Force | DRR | Disaster Risk Reduction |
| ATR | Avions de Transport Regional | DSS | Decision Support System |
| AWS | Automated Weather Stations | EAD | Economic Affairs Division |
| BDRP | Building Disaster Resilient Programme | ECMWF | European Centre for the Medium Range Weather Forecasting |
| BHU | Basic Health Unit | ECNEC | Executive Committee of National Economic Council |
| BSS | Beacon House School System | ECO | Economic Cooperation Organisation |
| CAA | Civil Aviation Authority | ERC | Emergency Relief Cell |
| CAF | Charities Aid Foundation | ERT | Emergency Response Team |
| CADD | Capital Administration & Development Division | ERRA | Earthquake Reconstruction and Rehabilitation Authority |
| CADRE | Community Action for Disaster Response | EWS | Early Warning System |
| CBDRM | Community Based Disaster Risk Management | FAB | Frequency Allocation Board |
| CBM | College of Business Management | FAO | Food and Agricultural Organization |
| CBRNE | Chemical, Biological, Radiological, Nuclear and Explosive | FATA | Federally Administered Tribal Areas |
| CBS | Capacity Building Specialist | FC | Frontier Corps |
| CBT | Community Base Training / Capacity Building Training | FEWS | Flood Early Warning System |
| CDA | Capital Development Authority | FFC | Federal Flood Commission |
| CDKN | Climate and Development Knowledge Network | FGD | Focused Group Discussion |
| CESDRR | Centre for Epidemiologic Studies Depression Scale Revised | FWO | Frontier Works Organisation |
| CHASHNUPP | Chashma Nuclear Power Plant | GB | Gilgit Baltistan |
| COAS | Chief of Army Staff | GBV | Gender Based Violence |
| COD | Central Ordinance Depot | GCC | Gender & Child Cell |
| COP | Conference of the Parties | GCISC | Global Change Impact Studies Centre |
| CM | Chief Minister | GDP | Gross Domestic Product |
| CMT&SD | Central Mechanical Transport and Store Depot | GIS | Geographic Information System |
| CPM | Country Planning Meeting | GHTF | Gender Humanitarian Task Force |
| CSSR | Collapsed Structure Search & Rescue | GLOF | Glacial Lake Outburst Flood |
| CTHMRCF | Custodian of Two Holy Mosques Relief Campaign for Pakistan | GOERE | Government Officers Emergency Response Exercise |
| | | GOP | Government of Pakistan |
| | | GSP | Geological Survey of Pakistan |
| | | GBDMA | Gilgit Baltistan Disaster Management Authority |
| | | HEC | Higher Education Commission |
| | | HFA | Hyogo Framework for Action |

Acronyms

| | | | |
|----------------|--|-----------------|---|
| HoA | Heart of Asia | NDMA | National Disaster Management Authority |
| HFI | Housing Foundation of Iran | NDMC | National Disaster Management Commission |
| HR | Human Resource | NDMF | National Disaster Management Fund |
| HRF | Humanitarian Response Facility | NDMP | National Disaster Management Plan |
| HOPE | Hospital Preparedness for Emergencies | NDRIS | National Disaster Risk Information System |
| ICT | Islamabad Capital Territory / Information & Communication Technology | NDSDI | National Disaster Spatial Data Infrastructure |
| IDI | In-depth Interview | NEMA | National Emergency Management Agency |
| IEC | Information, Education and Communication | NEOC | National Emergency Operations Centre |
| IFAS | Integrated Flood Alert System | NESPAK | National Engineering Services Pakistan |
| Imp | Implementation | NFI | Non Food Item |
| INGO | International Non-Governmental Organisation | NFPP | National Flood Protection Plan |
| INSARAG | International Search and Rescue Advisory Group | NHA | National Highway Authority |
| IOWave | Indian Ocean Wave | NHEPRN | National Health Emergency Preparedness & Response Network |
| JICA | Japan International Cooperation Agency | NHN | National Humanitarian Network |
| KANUPP | Karachi Nuclear Power Project | NIDM | National Institute of Disaster Management |
| KARCPP | King Abdullah Relief Campaign for Pakistani People | NIDMIS | National Integrated Disaster Management Information System |
| KI | Key Informant | NFPP | National Flood Protection Plan |
| KKH | Karakoram Highway | NGO | Non-Governmental Organisation |
| KP | Khyber Pakhtunkhwa | NOC | No Objection Certificate |
| KRL | Khan Research Laboratory | NoK | Next of Kin |
| LED | Light Emitting Diode | NSET | National Society of Earthquake Technology |
| LEAD | Leadership for Environment and Development | NSMC | National Seismic Monitoring & Early Warning Centre |
| LoA | Letter of Agreement | OBMs | Out Board Motors |
| LoC | Line of Control | PAEC | Pakistan Atomic Energy Commission |
| MCII | Munich Climate Insurance Initiative | PAF | Pakistan Air Force |
| MERLIN | Medical Emergency Relief International | PC | Project Cost |
| MFR | Medical First Responder | PDMA | Provincial Disaster Management Authority |
| MHVRA | Multi Hazard Vulnerability and Risk Assessment | PEC | Pakistan Engineering Council |
| MIRA | Multi Sectoral Initial Rapid Assessment | PEOC | Provincial Emergency Operations Centre |
| Mol | Ministry of Interior | PEER | Programme for Enhancement of Emergency Response |
| MoU | Memorandum of Understanding | PHF | Pakistan Humanitarian Forum |
| MoFA | Ministry of Foreign Affairs | P&IC | Policy and International Cooperation |
| MSF | Medicine Sans Frontier | PID | Pakistan Irrigation Department / Press Information Department |
| MOVERE | Mobilization of Volunteers Emergency Response Exercise | PIMS | Pakistan Institute of Medical Sciences |
| NADRA | National Database Registration Authority | PM | Prime Minister |
| | | PMD | Pakistan Meteorological Department |

Acronyms

| | | | |
|----------------|--|---------------|--|
| PPE | Personal Protection Equipment | UNISDR | United Nations International Strategy for Disaster Reduction |
| PRCS | Pakistan Red Crescent Society | UNICEF | United Nations International Children's Emergency Fund |
| PSC | Provincial Steering Committee | UNOCHA | United Nations Office for the Coordination of Humanitarian Affairs |
| PSDP | Public Sector Development Programme | USAR | Urban Search and Rescue |
| PSSF | Pakistan School Safety Framework | VCC | Virtual Call Centre |
| PTA | Pakistan Telecommunication Authority | VG | Vulnerable Group |
| PTV | Pakistan Television | WAPDA | Water and Power Development Authority |
| PWDs | Persons with Disabilities | WHS | World Humanitarian Summit |
| RCC | Regional Consultative Committee | WFP | World Food Programme |
| RGDO | Relief Goods Dispatch Organisation | | |
| RNA | Recovery Needs Assessment | | |
| R&R | Recovery and Rehabilitation | | |
| RRI | River Flow Inundation Model | | |
| RTG | Regional Technical Group | | |
| SAARC | South Asian Association for Regional Cooperation | | |
| SAADMX | South Asian Annual Disaster Management Exercise | | |
| SCO | Shanghai Cooperation Organisation | | |
| SDC | Swiss Development Cooperation Agency | | |
| SDMA | State Disaster Management Authority | | |
| SDMC | SAARC Disaster Management Centre | | |
| SEEC | SAARC Environment & Energy Centre | | |
| SFDRR | Sendai Framework for Disaster Risk Reduction | | |
| SHO | Station House Officer | | |
| SIMEX | Simulation Exercise | | |
| SITREP | Situation Report | | |
| SMRFC | Specialised Medium Range Weather Forecasting Centre | | |
| SMS | Short Message Service | | |
| SOPs | Standard Operating Procedures | | |
| STI | Secretariat Training Institute | | |
| SUPARCO | Space and Upper Atmosphere Research Commission | | |
| TOTs | Training of Trainers | | |
| TVCs | Television Commercials | | |
| UN | United Nations | | |
| UNDP | United Nations Development Programme | | |
| UNESCO | United Nations Education, Scientific and Cultural Organisation | | |
| UNFCCC | United Nations Framework Convention on Climate Change | | |

Section - I

General



Section – I

General

1. Outlook of National Disaster Management System

- a. NDMA's Mandate as per NDM Act 2010. National Disaster Management Authority (NDMA), the executive arm of National Disaster Management Commission (NDMC) is assigned following roles and responsibilities as per Article 9 of NDM Act 2010:-
- (1) Act as the implementing, coordinating and monitoring body for disaster management.
 - (2) Prepare the National Plan to be approved by the National Commission.
 - (3) Implement, co-ordinate and monitor the implementation of the National Policy.
 - (4) Lay down guidelines for preparing disaster management plans by different Ministries or Departments and the Provincial Authorities.
 - (5) Provide necessary technical assistance to the Provincial Governments and the Provincial Authorities for preparing their disaster management plans in accordance with the guidelines laid down by the National Commission.
 - (6) Co-ordinate response in the event of any threatening disaster situation or disaster.
 - (7) Lay down guidelines for or give directions to the concerned Ministries or Provincial Governments and the Provincial Authorities regarding measures to be taken by them in response to any threatening disaster situation or disaster.
 - (8) For any specific purpose or for general assistance requisition the services of any person and such person shall be a co-opted member and exercise such power as conferred upon him by the Authority in writing.
 - (9) Promote general education and awareness in relation to disaster management.
 - (10) Perform such other functions as the National Commission may require to perform.

2. NDMA's Organisation. NDMA was established in 2007 as a lead Agency at Federal level to implement, coordinate and monitor the whole spectrum of disaster management including prevention, preparedness, mitigation, response, reconstruction and rehabilitation programmes. As per the NDM Act 2010, the Authority is headed by Chairman while it has three members heading Three Wings. The Chairman also acts as an ex-officio Secretary of the National Disaster Management Commission (NDMC) which is chaired by Prime Minister of Pakistan and NDMA serves as a Secretariat of NDMC. NDMA's Organisation is given at **Annex A**.

- a. Functions of Various Wings. In order to carry out the assigned tasks / functions, NDMA is organised into three wings each headed by a Member with following tasks:-
- (1) Operations (Ops) Wing
 - (a) Contingency and response planning for both natural and manmade hazards.
 - (b) Development of National Policies / Guidelines on rescue, relief, early recovery and rehabilitation.

- (c) Operations of National Emergency Operations Centre (NEOC).
 - (d) Rescue, Relief, Recovery, Rehabilitation and Reconstruction operations for all disasters (inland and foreign).
 - (e) Coordination of humanitarian assistance and rescue, relief, recovery and rehabilitation efforts with Federal / Provincial authorities & Organisations as well as all stakeholders including UN agencies, INGOs & NGOs.
 - (f) All issues related to training and deployment of Urban Search and Rescue Teams, Country wide.
 - (g) Briefs / presentations for PM and other dignitaries.
 - (h) Conduct of Emergency Simulation exercises for natural and man-made disasters.
- (2) **Disaster Risk Reduction (DRR) Wing**
- (a) Handles all matters related to DRR Policies concerning all types of disasters, Risk Insurance and disaster awareness.
 - (b) National Disaster Management Plan (NDMP) including implementation and progress.
 - (c) Planning, coordination, execution, management and monitoring of all projects executed by NDMA with donor (s) / development partner'(s) assistance.
 - (d) Monitoring and evaluation of plans, strategies at National, Provincial, District level as well as civil sector.
 - (e) Mainstreaming of DRR especially into development sector as well as all other sectors.
 - (f) Management of international cooperation, global frameworks, regional Organisations and all conferences / meetings in this regard.
 - (g) Coordination with UN Agencies, Bilateral / Multilateral Organisations and INGOs / NGOs with respect to all matters in given domain.
 - (h) Preparation of all PC-II related to NDMA, concerning any Wing.
 - (i) Coordination with all stakeholders in given domain.
- (3) **Administration and Finance (A&F) Wing**
- (a) Provides all admin and logistics support for NDMA Operations.
 - (b) Deals with procurement, transportation and record keeping of relief goods.
 - (c) Management of Admin, Transport and HR matters of NDMA.
 - (d) Make arrangements for external audit by AGP.
 - (e) Deal with all audit matters / issues including matters related to Public Accounts Committee.
 - (f) Financial advises on all finance matters of NDMA.
 - (g) Ensures financial propriety through implementation and observance of prescribed financial rules and NDMA rules in utilization of all financial resources at the disposal of the organization.
 - (h) All matters related to NDMC.
 - (i) All legal matters.



Section - II

Response to Disasters



Section – II

Response to Disasters

3. Policies, Plans & SOPs Formulated During the Year

| Serial | Title | Type | Wing |
|--------|---|------------|----------------|
| a. | National Monsoon Contingency Response Directive 2017. | Plan | Operations |
| b. | National Multi-Sector Initial Rapid Assessment (MIRA) Guidelines. | Guidelines | |
| c. | National Guidelines for Minimum Standards of Relief in Camps. | Guidelines | |
| d. | National Guidelines for Minimum Ex-Gratia Assistance to the Persons Affected by Natural and Man-Made Disasters. | Guidelines | |
| e. | Integrated Context Analysis (ICA) vulnerability to food insecurity and natural hazards in Pakistan. | Report | |
| f. | Post Industrial Disaster Mock Exercise Report 2017. | Report | |
| g. | National Multi Hazard Vulnerability Risk Assessment Guidelines. | Guidelines | DRR / A&F Wing |
| h. | Life & Fire Safety Provisions in Pakistan Building Codes. | Policy | |
| i. | Integrating Gender Based Violence Prevention Intervention in Pakistan School Safety Framework. | Document | |
| j. | Gender Mainstreaming and Gender Based Violence in Disaster Settings in Context of Pakistan. | Document | |
| k. | Pakistan School Safety Framework (PSSF) Guidelines. | Guidelines | |
| l. | Pakistan School Safety Framework (PSSF) Project Report | Report | |
| m. | Training documents for PSSF Scale-up. | Document | |
| n. | GBV Guidelines and SOPs to Prevent, Mitigate and Response in Humanitarian Settings. | Guidelines | |
| o. | Gender analysis of Pakistan School Safety Framework. | Report | |
| p. | Commitments on Gender Mainstreaming and GBV in Disaster Settings in Context of Pakistan | Report | |
| q. | Integrating Gender Based Violence Prevention Intervention in Pakistan | Report | |

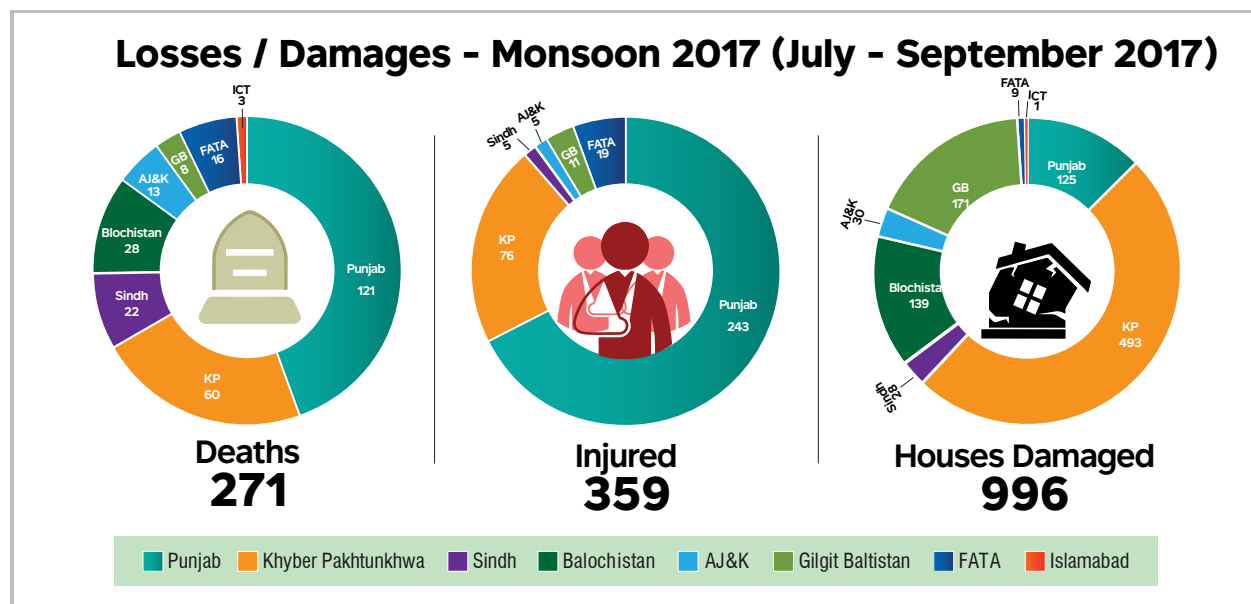
4. Disasters Managed. NDMA managed following disasters during the Year 2017:-

| Serial | Month | Type of Disaster | Provinces Affected |
|--------|-------------------------|-----------------------|---|
| a. | January – February 2017 | Heavy Rains/ Snowfall | Punjab, Balochistan, KP, GB, AJ&K and FATA |
| b. | June – September 2017 | Monsoon 2017 | Balochistan, KP, Punjab, Sindh, FATA, GB and AJ&K |

5. **National Losses / Damages Due to Disasters.** Summary of major losses/damages is as under:-

| Serial | Disasters | Damages / Losses | | | | | | | | | | |
|--------|----------------------|------------------|----|----|-----|---------|-----|----|-----|----------------|-----|-----|
| | | Disasters | | | | Injured | | | | Houses Damaged | | |
| | | M | F | C | T | M | F | C | T | P | F | T |
| a. | Heavy Rains/Snowfall | 24 | 19 | 14 | 57 | 41 | 9 | 9 | 59 | - | - | - |
| b. | Monsoon 2017 | 128 | 70 | 73 | 271 | 187 | 122 | 50 | 359 | 875 | 121 | 996 |

Key: Male (M), Female (F), Children (C), Total(T), Partially (P), Fully (F).



6. **National Relief Efforts for All Disasters.** Details at Annex B.

7. **Disaster Response Activities**

- Winter Snow Fall Season – 2017.** Pakistan Meteorological Department (PMD) issued an advisory on 11 January 2017 predicting rain with snowfall over hills in Balochistan, KP, FATA, Upper Punjab, GB & Kashmir. On 14 January 2017, due to heavy Rain / Snowfall in areas of Balochistan, some highways and link roads were blocked and accessibility to remote areas was severely impeded. Following actions were undertaken by NDMA:-
 - Based on PMD's advisory, all PDMA's and relevant stakeholders were sensitized for proactive coordination and necessary precautionary measures.
 - NHA was asked for pre-positioning of heavy earth moving machinery at identified vulnerable locations in the Country.
 - On the request of PDMA Balochistan, NDMA coordinated 5x Heli sorties from MoI for Relief & Rescue Operation in remote areas of Balochistan from 18 – 20 January 2017. Details are:-

| Serial | Date | Area |
|--------|--|--|
| (a) | 1 st Sortie (18 January 2017) | Tehsil Dasht, District Mastung |
| (b) | 2 nd Sortie (18 January 2017) | Tehsil Zarghoon Ghar, District Harnai & Toba Kakar District Killa Abdullah |
| (c) | 3 rd Sortie (19 January 2017) | Mangochar, District Kalat |
| (d) | 4 th Sortie (19 January 2017) | Muslim Bagh, District Killa Saifullah |
| (e) | 5 th Sortie (20 January 2017) | Mantanoo, Tehsil Gulistan, District Killa Abdullah |

- b. **Avalanche at Chitral**. On 5 February 2017 at 0230 hours, an Avalanche triggered at Shershal UC Karimabad, Tehsil Garam Chashma, District Chitral, KP. 22x houses were affected, 6x houses came under the avalanche claiming 9x dead and 3x injured. On the request of PDMA KP, NDMA coordinated with Local Administration, Pakistan Army and Frontier Corp KP for Search & Rescue/ Relief operation for rendering First Aid to the injured and recovery of Dead Bodies. NDMA also coordinated 5x helicopter sorties from Aviation assets of Anti-Narcotic Force for Rescue & Relief operations in inaccessible areas of Astore Pasti, Madakh Lasht, Garam Chashma, Tehsil Mastuj and surrounding remote areas of Chitral. 40 x stranded people (patients, female & children) were rescued and 7.4 Tons of Relief items including Food Items (flour, Rice etc) and Non Food Items (tents, blankets, warm clothes and medicines) were distributed in these areas.
- c. **SMS Alerts about Heat Waves**. NDMA, PMD and PDMA's closely monitored/ assessed changing weather pattern for possibility of heat waves during Pre-Monsoon period. Some of the indicators projected possibility of heat wave in Karachi and Southern Punjab. To ward off potential heat waves hazards, NDMA in close collaboration with PTA, PDMA Punjab and Cellular Mobile Companies issued SMS Alerts in Bhakkar, Layyah, Dera Ghazi Khan, Rajanpur, Rahim Yar Khan, Bahawalpur and Muzaffargarh districts. These mitigation measures timely sensitised the vulnerable population. No heat wave casualties were reported during the period.
- d. **Monsoon 2017**. Post Monsoon Season-2017 Report covering all details of relief and response activities attached at **Annex C**.
8. **Overseas Relief (Issued / Receipt)**. On 12 November 2017, an Earthquake of 7.3 Magnitude on rector scale jolted the bordering regions of Iran and Iraq. On the directive of Prime Minister of Pakistan; on 17 November 2017, NDMA in coordination with Pakistan Air Force dispatched 1x C-130 Plane carrying Humanitarian Assistance (Non Food Items) for earthquake affectees of Iran. Details of relief items are at **Annex D**.
9. **Recovery and Rehabilitation Activities**
- a. **Grant-in-Aid for Affectees of Unprovoked Indian Army Fringing along LoC in AJ&K**. An amount of Rs. 2.6 Million was paid to 3 x affectees (1x NoK of Martyred, 1 x injured and 1 x owner of fully damaged house) of unprovoked Indian Army firing at LoC in AJ&K.
- b. **NOCs Issued**. During the year 2017, 5 x NOCs for exemption of duties on the import of relief items were issued to different Government Departments, and NGOs/ INGOs for distribution amongst the affectees of disaster/ calamities.

Section - III

Disaster Preparedness



Section – III

Disaster Preparedness

Major Preparedness Activities

10. Coordination Conferences for Monsoon Season – 2017

- a. **National Post-Monsoon Review Conference 2016.** On 10 January 2017, National Post Monsoon Review Conference-2016 was organized to compile/ share valuable experience gained while handling Monsoon Season with all stakeholders for future preparations. Minutes of the Conference were shared with all stakeholders for preparation of Monsoon 2017.
- b. **DG PDMA's Periodical Coordination Conference.** On 10 January 2017, just after the National Post Monsoon Review Conference 2016; DG PDMA's Periodical Coordination Conference was organized in NDMA. Chairman NDMA and DGs of all PDMA's deliberated upon major challenges confronted to disaster management bodies and opportunities for a well-considered future strategy.
- c. **Meeting Flood Fighting Equipment Demand of Pakistan Army.** During National Post Monsoon Review Conference-2016, a need was felt to carryout stocktaking of quantity, type and capacity of Rescue Boats and other Flood Fighting equipment held with Pakistan Army, Navy, Rescue 1122 and respective Provincial Governments so that Army's demand can be rationalized leading to future procurement by the PDMA's / Provincial Governments. Furthermore, districts were to be identified where high power boat motors could be operated. In this backdrop, NDMA organized conferences at Lahore, Karachi and Islamabad for rationalization of demand for Punjab, Sindh & KP respectively. During these conferences demand of Flood Fighting equipment was rationalized and Provincial Governments were pursued for its procurement at a fast pace.
- d. **National Monsoon Preparedness Conference – 2017.** On culmination of Provincial / Regional consultative process, National Monsoon Preparedness Conference-2017 was held on 13 June 2017 in NDMA. The forum facilitated compilation of Provincial / Regional Plans and input to build a well-coordinated National Response for impending Monsoon Season.
- e. **National Monsoon Contingency Response Directive 2017.** To lay down National Response Guidelines for all stakeholders at Federal and Provincial level, ensure sound disaster management against possible Floods and configure a coherent response against visualized contingencies of Monsoon, National Monsoon Response Directive-2017 was issued to all stakeholders on 15 June 2017.
- f. **Resolution of Frequency Interference Issue of PMD's Wind Profilers.** A grant in Aid (Wind Profiler) each at Islamabad and Multan was committed by JICA to PMD. Frequency interference issue of such Wind Profilers between Pakistan Armed Forces and PMD was highlighted by PMD. To resolve the issue, NDMA organized two consecutive meetings in May & June 2017 at

Islamabad which were attended by stakeholders from Joint Staff Headquarters, Pakistan Armed Forces, PMD and FAB. The issue was resolved through consensus.

11. Enhancement of Stores / Warehousing

a. Relocation of NDMA Stores

- (1) Shifting of Relief Items from PIA Warehouse. On request of PIA, NDMA shifted relief items from PIA Warehouse to H-11 / I-11 Islamabad Stores from 19 December 2016 to 7 January 2017. Details of items shifted are as under:-

| Serial | Items | Quantity | Shifted to |
|--------|-------------------|----------------------|------------------------|
| (a) | Tents | 102 | I-11 |
| (b) | School Shelters | 1,728 (5 Parts each) | I-11(1000), H-11(728) |
| (c) | Winterized Tents | 2,940 (3 Parts each) | H-11 |
| (d) | 4x4 Tents Chinese | 3,040 (2 Parts each) | I-11(425), H-11 (2615) |
| (e) | Plastic Mats | 4,800 | H-11 |
| (f) | Jackets Warm | 22,715 | H-11 |
| (g) | Dunnage | 600 | H-11 |
| (h) | Sleeping Bags | 400 | H-11 |
| (i) | Misc Items | 40 | H-11 |

- (2) Shifting of Relief Items from CMT&SD Golra. On request of Pakistan Army, NDMA shifted relief items from CMT&SD Golra to H-11 / I-11 Islamabad Stores from 6 – 11 February 2017. Details are as under:-

| Serial | Items | Quantity (Nos) | Shifted to |
|--------|--------------------------------------|----------------|------------|
| (a) | Generator (32 KVA) | 40 | H-11 |
| (b) | Generators (50 KVA) | 14 | I-11 |
| (c) | Generator (31 KVA) | 10 | I-11 |
| (d) | Generator (5 KVA) | 20 | I-11 |
| (e) | Boats (3 x Fibre Glass & 3 x Zodiac) | 06 | H-11 |
| (f) | Water Purification Plant | 11 | H-11 |
| (g) | Dewatering Pump (Large) | 20 | I-11 |
| (h) | Dewatering Pump (Small) | 21 | I-11 |

- (3) Shifting of Relief Stores from Kashmore. Due to severe weather conditions and accessibility issues, NDMA stores (9,837 Tents) and five damaged Rub Halls were relocated from Kashmore Cantonment to Islamabad, Muzaffargarh, Sukkur and RGDO Karachi as under:-

- 4,000 x Tents shifted to HRF Sukkur.
- 2,000 x Tents shifted to HRF Muzaffargarh.
- 3,837 x Tents shifted to RGDO Karachi.
- 5 x Damaged Rub Halls shifted to Islamabad warehouse.

b. **Issue of NDMA Relief Items**

| Serial | Activity | Details |
|--------|---|---|
| (1) | Release of Relief Stores to PDMA Balochistan | NDMA has issued / released following relief stores to PDMA Balochistan for building its stock: - <ul style="list-style-type: none"> Tent - 5,000 Plastic Mats - 10,000 Generator (50 KVA) - 2 |
| (2) | Release of Generators to PDMA Punjab and PDMA Balochistan | NDMA has issued / released 1 x 50KVA Generator to PDMA Punjab and 1 x 50KVA Generator to PDMA Balochistan in October 2017. |
| (3) | Release of Food Packs to AJ&K | 200 x food packs issued to SDMA AJ&K for the Affectees due to Indian Firing on LOC. |
| (4) | Relief Items for needy people of Swabi / Gadoon | NDMA released following relief items on the request of Senator Sitara Ayaz, Member of Senate Standing Committee of Climate Change for needy people of Swabi / Gadoon on 19 December 2017:- <ul style="list-style-type: none"> Plastic Mats - 200 Tarpaulins - 200 Blankets - 200 Jerry Cane (Folding) - 200 |

c. **Enhancement of Storage Capacity**

- (1) In April 2017, 2 x Flospans were installed at I-11 Warehouse with technical assistance provided by WFP which enhanced storage capacity of the Warehouse for about 500 MT.
- (2) In October 2017, 2 x Rub Halls were installed by WFP at HRF Sukkur.

d. **Repair / Maintenance of Warehouses**

- (1) **RGDO Karachi.** Illegal encroachment at Relief Goods Despatch Organization (RGDO) Karachi was removed in coordination with Pakistan Army (Station HQ Karachi) and an iron gate was installed on 28 February 2017. It will facilitate access of heavy vehicles to RGDO during any future relief operation.
- (2) **Islamabad Warehouse I-11 / H-11.** Concrete flooring was laid for installation of 2 x Flospans at I-11 warehouse.

e. **Receipt of Relief Items from NRC Pakistan.** Norwegian Refugee Council, Pakistan Mission donated 16 x Tents and 720 x Tarpaulins to NDMA for release to affectees of any future disaster.f. **Replacement of Ration Packs.** In June/ July 2017, NDMA with the assistance/ coordination of Utility Stores Corporation turned over dry ration items due for expiry (Tea, Milk Powder & Ghee).g. **Bilateral Coordination for Enhancement of Storage Accommodation and Relief Stores.** In order to review effectiveness of Chinese aid during past disasters in Pakistan especially during

Earthquake 2015 and to explore further areas for mutual cooperation; a meeting was held with Chinese delegation in NDMA on 12 July 2017. MoFA and EAD were requested to approach Chinese Government for actualization of Chinese support in mutually agreed areas of disaster management from China.

- h. **Country Wide NDMA's Relief Stocks.** Details at **Annex E.**

12. **National Level Industrial Disaster Mock Exercise.** In order to demonstrate, evaluate and refine response mechanism against industrial accidents, National Industrial Disaster Mock Exercise was conducted on 16 March 2017 at Fauji Fertilizer Company Limited (FFCL), Goth Machhi, District Rahim Yar Khan. All relevant stakeholders including Industrial Sector, Pakistan Armed Forces, DESTO, SPD, PDMA's and local administration participated and practiced Tier One & Two Response in the event of an industrial disasters. Lessons learnt during the exercise were compiled and shared with all stakeholders.

13. **Procurement of Heavy Earth Moving Machinery for GB.** On pursuance of NDMA, Prime Minister of Pakistan very kindly consented 100% share by Federal Government for purchase of Heavy Earth Moving Machinery for Gilgit-Baltistan. Federal share of Rs 729.886 Million were released to Government of Gilgit-Baltistan for procurement of machinery. This capability will not only enable Government of Gilgit-Baltistan to ensure road communication within the Region but also along main artery of KKH linking the Region with Pakistan. NDMA Officials visited Gilgit from 1 – 3 May 2017 and witnessed operation worthy of Heavy Machinery. On behalf of Chairman NDMA, Brigadier Mukhtar Ahmed Member (Ops) NDMA, handed over following Heavy Earth Moving Machinery to GBDMA.

- a. 3 x Wheel Loaders with Bucket & Blade.
- b. 7 x Wheel Excavators with Blade.
- c. 22 x Tractors with Bucket.
- d. Blades.
- e. Hydraulic Trolley.
- f. Water Tank with Pump.
- g. 10 x Air Compressors.
- h. 20 x Drill Machines & Truck mounted Hydraulic Crane.

14. **Heatwave Management Planning.** NDMA in coordination with Lead Pakistan launched Heat Wave Management Plan for District Karachi on 8 July 2017. The detailed plan covering technical aspects of heatwave in Karachi was shared with all stakeholders including civil administration Karachi.

15. **Exercise Barracuda – VIII.** Oil spillage exercise (Barracuda – VIII) at Karachi was conducted by Pakistan Maritime Security Agency (PMSA) from 4 – 7 December 2017. The exercise was attended by various stakeholders including PDMA Sindh and Balochistan. NDMA Representatives attended the exercise as observers.

16. **Establishment of District Disaster Management Authorities (DDMA's).** NDMA sensitized Provincial/ Regional Governments for establishment of DDMA's at priority. To this end, NDMA

carried out following initiatives:-

- a. High level meetings by Chairman NDMA with Chief Ministers / Chief Secretaries followed by Demi Official letters by Chairman NDMA to Chief Ministers.
- b. NDMA developed National guidelines and Concept Note on strengthening of Disaster Management Structure of the Country and shared with Provinces/ Regions.
- c. Chairman NDMA shared Concept Note on strengthening of Disaster Management Structure with the Corps Commanders to Corps Commanders and requested them for inclusion of the point in Apex Committee meetings.

17. **Installation of Warehouse Management System (WMS)**. NDMA with the assistance of WFP planned installation of an online WMS for NDMA and PDMA's relief Warehouses across the Country. The facility will enable NDMA to scientifically keep a check on storage as well release of relief items from all warehouses. In this regards, a consultation meeting between NDMA, PDMA's and WFP was held to finalize the ToRs.

18. **Provision of Dedicated Aviation Assets for NDMA**. In order to substantially enhance outreach of disaster management bodies to inaccessible areas during any disaster, dire need of possession of dedicated aviation assets by NDMA was felt. On the pursuance by NDMA, MoCC constituted a committee comprising members from NDMA, MoCC, Cabinet Division and Pakistan Army for formulation of Concept Note, Need Assessment and undertaking due diligence exercise aimed at cost effective arrangements. The Committee held three meetings of and finalised its recommendation on the basis of which a Summary proposing purchase of 9x Helicopters (in three phases) was submitted for approval of the Honourable Prime Minister.

19. **Rationalized Demand of Flood Fighting Equipment by Pak Army**. Flood fighting equipment demand of Pakistan Army was rationalized by NDMA. Optimum demand was met, however, NDMA is pursuing concerned Provincial Governments for procurement of balance rationalized demand.

20. **National Industrial Hazard Risk Assessment (NIHRA)**. NDMA initiated industrial hazard risk assessment at macro level in August 2017. The project is under process. Mapping of all industries across Pakistan and assessment of all possible hazards related industries is being undertaken/ identified. The report is likely to be finalised by June 2018.

21. **Preparation of Host Nation Support Guidelines**. NDMA with the assistance/ collaboration of humanitarian organisations, have prepared comprehensive guidelines for foreign assistance in disaster response in Pakistan. The draft guidelines have been shared with all likely stakeholders for their valuable inputs/ observation. The guidelines are likely to be launched in June 2018.

22. Formulation of Guidelines for Cash Transfer in Disaster Management (CTiDM).

NDMA drafted guidelines for CTiDM and circulated amongst Federal Ministries / Divisions, Attached Departments, PDMA's and other relevant stakeholders for valuable input / observations. These guidelines will draw on more recent experience and expertise developed within the Country and World. The Guidelines will ensure well-targeted and timely conditional or Multi-purpose cash transfers and make vulnerable persons less likely to fall into poverty.

23. Formulation of District Disaster Management Plan (DDMP).

Formulation of DDMP is a vital requirement as per NDM Act 2010. To assist District Authorities in formulation of DDMP, NDMA developed a DDMP Format alongwith requisite guidelines for its formulation. All PDMA's have been instructed to ensure formulation of respective DDMPs and forward compiled plans of all districts to NDMA.

24. Guidelines on Minimum Ex-Gratia Assistance to the Persons Affected by Natural and Human Induced Disasters 2016.

In accordance with Section 11 and 12 of NDM Act 2010 and to bring uniformity as well as streamlining the present systems of payment of ex-gratia financial assistance to the persons affected by disasters and calamities, NDMA prepared "NDMA Guidelines for Minimum Ex-Gratia Assistance to the Persons Affected by Natural and Man-Made Disasters". The Guidelines have been shared to all relevant Federal Ministries, PDMA's/SDMA/GBDMA/FDMA, as well as District/Political Administrations of all Provinces/Regions for information and compliance.

25. Guidelines for Multi-Sector Initial Rapid Assessment (MIRA).

Multi-Sector Initial Rapid Assessment (MIRA) is the first step of Assessment and Monitoring Framework to identify strategic humanitarian priorities after the onset of natural disasters or complex emergencies. Guidelines for MIRA has been developed by NDMA with technical support of UN OCHA to provide operational guiding principles on roll-out and implementation of MIRA. The Guidelines were launched on 31 July 2017 and shared with all stakeholders for information and further necessary action.

26. Integrated Context Analysis (ICA) on Vulnerability to Food Insecurity and Natural Hazards Report 2017.

Integrated Context Analysis is a globally adopted and proven programmatic tool that guides evidence based decision making towards planning and positioning of food security and broad DRR interventions. It can therefore, right be termed as one of the essential elements of Disaster Management Cycle. NDMA in collaboration with WFP has formulated ICA on vulnerability to Food Insecurity and Natural Hazard Report 2017 and the same was officially launched on 17 October 2017 and shared with all stakeholders.

27. Guidelines for Minimum Standards of Relief in Camp.

NDMA prepared Guidelines for Minimum Standards of Relief in Camp" in consultation with P/S/GB/F DMA's, concerned Ministries and relevant stakeholders of the Federal Government. The Prime Minister of Pakistan approved the Guidelines on 4 August 2017 and in-house launching ceremony of the Guidelines was held in NDMA on 14 December 2017.

28. **Revision of School Curriculum on Disaster Management.** Disaster Management related topics in the curriculum of Schools had been revised in the light of latest trends in the field of disaster management by Ministry of Education. NDMA was closely associated in the process.

29. **Population Disaggregation Atlas.** NDMA has developed Atlas on Population Disaggregation of 25 x most vulnerable district. The activity involved data analysis, data projection, preparation of Info-graphs, charts and publication of Population Disaggregated Atlas.

30. **National Disaster Awareness Day.** In order to pay tribute to the victims of past disasters, NDMA commemorated 8 October 2017 as National Disaster Awareness Day. Following activities were organized by NDMA:-

- a. Awareness drive through City Branding of twin cities i.e Islamabad and Rawalpindi.
- b. Conduct of Cyclathan in Islamabad.
- c. Flag March by CDA USAR Team in Islamabad.
- d. Distribution of leaflets by NDMA Ushers and Pakistan Boy Scouts Association (PBSA), Islamabad.
- e. Placement of disaster awareness x-standees at important public places (Serena Hotel, Centaurus Mall and Airport etc).
- f. Following events were conducted in F-9 Parks:-
 - (1) Drawing competition among Students of various Schools.
 - (2) Speeches on disaster awareness by School children.
 - (3) Awareness Walk by Government Officials, Students, Volunteers and Local Public.
 - (4) Signing of Pledge Wall and Address by Chairman NDMA and Chief Guest Mr. Sartaj Aziz, Chairman Planning Commission.
- g. All PDMA's observed National Disaster Awareness Day in their Provinces / Regions with similar activities in all major Cities of the Country.

31. **Observance of National Resilience Day.** NDMA is proactively working to reduce risks and vulnerabilities to disasters and provide coping mechanisms / framework to climate change phenomenon. NDMA took number of initiatives including formulation of National Disaster Risk Reduction (DRR) Policy in 2013 which provides an overall guiding framework for building resilience in the Country against disasters. The Policy aims at strengthening disaster preparedness & response capabilities, improving Early Warning System, building capacities of disaster management practitioners at all levels, communities and strengthening structural and non-structural resilience of infrastructure. In this backdrop, the Prime Minister of Pakistan approved the summary of National Disaster Awareness Day to be renamed and will be observe as National Resilience Day on 8 October every year in future.

32. Advocacy and Awareness

- a. **NDMA Infotainment Game Show Tayyar Pakistan.** NDMA recorded four episodes of Infotainment Game Show in which students from all over Pakistan participated. The program was aired on every Thursday starting from 2 March 2017 followed by second and third episode on 9 and 16 March 2017. Final 4th episode was aired on 23 March 2017 on Pakistan Day and final episode was also re-telecasted on PTV News on 30 March 2017.
- b. **Preparation of Public Service Messages.** In line with Disaster Advocacy and Awareness Campaign, NDMA prepared 4 x Public Service Messages; one each on Rescue, Windstorm, School Safety and Vulnerable Groups.
- c. **Child-Inclusive Climate Change Adaptation (CCA) Tool.** CCA tools developed and designed with a focus on key priority areas of solid waste reduction, water management, energy efficiency and natural resource management. The CCA tool also aimed to strengthen capacity of children within the education sector by mainstreaming climate change adaptation and disaster risk reduction. This will include small booklets, activity books and posters to be disseminated in schools.
- d. **Media Toolkit.** Media Toolkit developed and designed to sensitize media personnel with key disaster management principles and crisis management journalism, as well as on the role of media in disaster risk management to address the needs and concerns of vulnerable groups during disasters.
- e. **NDMA Heat Wave Campaign.** In order to sensitize general public about heat wave, NDMA prepared Heat wave Campaign for print media and on-air on gratis basis through PEMRA and Ministry of Information, Broadcasting & National Heritage on leading channels.
- f. **NDMA Monsoon 2017 Campaign.** In order to sensitize general public about floods, NDMA prepared comprehensive Monsoon 2017 Campaign for print and electronic media. The PSM advertisements for print media were issued in July 2017.
- g. National School Safety Forum re-activated under the Chairmanship of NDMA to lead the work on School Safety, for a collaborative approach on School Safety and exchange of best practices and lessons learned.
- h. Documentaries on PSSF and Vulnerable Groups were prepared.
- i. Game Application (Software) Developed on School Safety.
- j. Story books on Flood and Fire were prepared.
- k. Measures through Print, Electronic & Social Media included:-
 - (1) Important events of NDMA were projected in print media through press release. 32 x press releases were prepared and issued which were published in 194 x newspaper.
 - (2) Over 150 x Media Tickers were aired during rescue / relief operations.
- l. NDMA issued 18 x advertisements during Year 2017.
- m. Regular awareness advertisement as part of pre, during and post disaster Media Campaigns were also published.



Section - IV

Disaster Risk Reduction



Section – IV

Disaster Risk Reduction

Major Projects Undertaken in Collaboration with Development Partners

33. Major Projects Undertaken

- a. **Work Plan 2018-19 between NDMA and UNICEF.** In order to enhance capacity and provide NDMA with services to reduce disaster risks for children and to ensure their well-being & protection in disaster preparedness, response and recovery; on 18 December 2017, NDMA & UNICEF Pakistan signed Federal DRM Multi-Sectoral Rolling Work Plan from January 2018 - December 2019 on DRM.
- b. **Annual Work Plan (AWP) 2017 between NDMA & WFP.** On 27 March 2017, NDMA & WFP signed AWP Agreement-2017 for the period of 12 months from 1 January 2017 to 31 December 2017. The total worth of AWP-2017 was US \$ 5,090,127.
- c. **NDMA & Swiss Development Cooperation (SDC) for Support of NIDM**
 - (1) In continuation of SDC initial agreement signed on 11 October 2016 between NDMA and Swiss Development Corporation (SDC); SDC supported NIDM training plan from 1 March to 30 May 2017.
 - (2) NDMA & Swiss Development Corporation (SDC) signed an MoU to support Institutional Capacity Building of NIDM for a period of two year from 1 November 2017 to 30 September 2019. Under this support there are 43 x DRM trainings to be carried out across the country at Provincial/Divisional Headquarters to be implemented in two years. The project has been commenced from 1 November 2017. Seven HR positions have also been kept in the project.

Major Initiatives Undertaken for DRR

34. Pakistan School Safety Framework (PSSF)

- a. The Pakistan School Safety Framework was developed after a series of National level consultative meetings with Government and Private Sector stakeholders. The final consensus was developed in the last National Consultative Meeting held on 17-18 August 2016 where it was recommended that the said Frameworks should be pretested through a Pilot project and its findings should be reviewed to refine the Framework before its scale up implementation. The Pilot Programme began in October 2016 and concluded on 28 February 2017. The findings & reports of PSSF was finally presented on 28 March 2017 in a conference held at Islamabad which was attended by all stakeholders. It was decided to contribute PSSF across the Country.

- b. NDMA decided to commence the School Safety Programme in 500 x schools (391x Govt schools, 70 x Private schools and 39x Madrassas) in Islamabad in two phases (250 x schools in each phase). National & Provincial Launches in Karachi, Lahore, Peshawar, Muzaffarabad, Quetta and Gigit are also planned in 2018.

35. Formulation of Steering Committee for DFID's Funded Project Titled "Building Disaster Resilience (BDRP)".

NDMA in consultation with United Kingdom Department for International Development (DFID) has formulated Programme Steering Committee (PSC) to provide oversight, guidance and strategic direction for effective and efficient programme delivery. The PSC guides and advises Building Disaster Resilience in Pakistan (BDRP) in order to maximize resilience impacts for Pakistan. In this regards two meetings of Steering Committee were held under the Chairmanship of Chairman NDMA, attended by DG PDMA Sindh, representative of PDMA Punjab, MoCC, Ministry of Food & Security, UNDP, WFP. Salient of BDRP Project are:-

- a. DFID has agreed with the Government of Pakistan to provide approximately £40.8 Million to strengthen resilience to disasters at community and institutional levels in line with Pakistan's National Disaster Management Plan (NDMP, 2012-2022).
- b. The BDRP Programme will run for six years from 2016 to 2021 and will be directly support implementation of Pakistan's National Disaster Risk Reduction Policy (2012) and NDMP.
- c. The BDRP Programme will contribute towards the achievement of overall goal and outcome of the Sendai Framework for Disaster Risk Reduction (SFDRR) and NDMP.
- d. The goal of BDRP is to increase Pakistan's capability to reduce Disaster Risk through better Planning, Preparedness, Response, and Resource allocation at the Governmental and Community levels. BDRP will work through two main delivery areas as:-
 - (1) Community Based Disaster Risk Management (CBDRM).
 - (2) Capacity building of disaster management bodies at the federal, Provincial and District levels.

36. Pakistan Building Codes (Life & Fire Safety Provisions - 2016)

- a. The Building Codes of Pakistan were formulated in the year 1986. These codes do not have the provisions for Life and Fire Safety i.e Fire Prevention, Life Safety in relation to fire and fire protection of building and structures. All the Buildings in Public and Private Sector are thus devoid of structured fire provisions and all arrangements made thereof are on adhoc basis not regulated by following National Code.
 - (1) Building Code of Pakistan (Seismic Provisions – 2007).
 - (2) Building Code of Pakistan (Energy Provisions-2013).
 - (3) Pakistan Electric and Telecommunication Safety Code (PETSAC-2014).
- b. NDMA took the initiatives and signed an MoU with Pakistan Engineering Council (PEC) on 15 October 2015 for development and inclusion of Fire and Life Safety Provisions in the existing Building Code of Pakistan. PEC constituted a High Level Task Force with representation from all

stakeholders and elite experts of the country. The funding was arranged from National Disaster Management Fund. After series of meetings and consultations, the document on Life and Fire Safety Provisions was approved by PEC Governing Board, Ministry of science and Technology and vetted by Ministry of Law and Justice. President of Pakistan Mr Mamnoon Hussain formally launched Building Codes of Pakistan-Fire Safety Provisions 2016 in an impressive ceremony held in President House, Islamabad on 27 February 2017.

- c. The implementation and enforcement of Building Code of Pakistan (Fire Safety Provisions-2016) shall vest with the Authority having Jurisdiction within their respective jurisdictions and circles. These Provisions will help for disaster risk reduction and disaster risk management in fire incidents and ensure saving life conditions for people of Pakistan.

37. Penalty Provision against Violation & Implementation Mechanism of Building Code.

After 26 October, 2015 Earthquake, a motion was moved in House of Senate regarding non implementation of Building Code. NDMA was tasked as Lead Agency of the Core Group, after holding consultations with all Federal & Provincial stakeholders, to formulate proposal in the form of a Bill / Implementation Framework. After series of presentations to Standing Committee by the Core Group, a Framework was recommended for the implementation on Building Code of Pakistan with particular reference to provisions regarding earthquake and for providing penal provisions, measures and mechanism regarding violation of the building code. The Framework is presently under implementation for amendment in PEC Act 1976 by inserting section 8A regarding implementation of Building Code of Pakistan and in Byelaws for implementation by Building Control Authorities and punitive provisions. The approved Legal Frameworks is as under:-

- a. Proposed amendment in PEC Act 1976.
- b. Amendment in Byelaws for implementation by Building Control Authorities and punitive provisions.
- c. Supervision by Building Control Authorities/ Executing Agencies. CDA, Ministry of Housing, NDMA, Pak PWD & Commissioner/ Mayor.
- d. Monitoring and Executing Authorities (At Federal Level). Pakistan Council of Architects and Town Planners, Ministry of Housing and Works, NDMA, ERR, PWD, Development Authorities, Commissioners.

38. Governments Officers Capacity Building Training / Exercise for Effective Response Management.

In order to educate the government officials and members of humanitarian partners; NIDM organized the trainings / exercises in collaboration with PDMA's, Swiss Agency for Development & Cooperation (SDC) and World Food Programme (WFP). Number of individuals from various districts and other humanitarian organizations attended the trainings / exercises. Detail of training conducted are as under:-

| Serial | Training | Dates | Districts |
|--------|--|----------------------|-----------|
| a. | Government Officers Capacity Building Training / Exercise - Karachi Division (Sindh) | 10 - 12 January 2017 | Karachi |
| b. | Government Officers Capacity Building Training / Exercise - Rawalpindi Division (Punjab) | 24 - 26 January 2017 | Islamabad |

| Serial | Training | Dates | Districts |
|--------|---|--------------------|-----------|
| c. | Government Officers Capacity Building Training / Exercise - Quetta Division (Balochistan) | 28 - 30 March 2017 | Quetta |
| d. | Government Officers Capacity Building Training / Exercise - Lahore Division (Punjab) | 18 - 20 April 2017 | Lahore |
| e. | Government Officers Capacity Building Training / Exercise - Poonch Division (AJ&K) | 15 - 17 May 2017 | Rawalakot |
| f. | Government Officers Capacity Building Training / Exercise Training for Sindh | 13 - 15 July 2017 | Ghotki |
| g. | Government Officers Capacity Building Training / Exercise Training for Sindh | 25 - 27 July 2017 | Kashmore |

39. Multi Hazard Vulnerability and Risk Assessment (MHVRA) Activities

- a. **MHVRA of District Ghotki and Kashmore - Sindh.** MHVRA exercise for two Districts of Sindh namely Kashmore and Ghotki, has been successfully completed by project management unit, NDMA with the financial support of World Food Program (WFP). Designing and composing of work is in progress for formal Publication. The activity covered the following modules:-
 - (1) Assessment of Earthquake, Flood and Drought Hazards.
 - (2) Exposure / Vulnerability Assessment (Physical, Social & Food Insecurity).
 - (3) Capacity & Risk Assessment.
- b. **MHVRA Decision Support System.** NDMA has successfully developed MHVRA Decision Support System (DSS) which facilitates in providing support for decision making pertaining to disaster management on multiple criteria. The DSS platform enables in Creating, Populating, Systematizing and verifying disaster related datasets. The system is developed by project management unit, NDMA by utilizing its in house capacity.
- c. **Designing and Deployment of Administrative Map of Pakistan for NEOC.** A large size administrative map of Pakistan has been designed and deployed for National Emergency Operation Centre (NEOC) containing updated Population data, infrastructure and critical facilities (Airport, Landing Strips, Helipads, Hospitals etc) which are of great assistance to disaster management practitioners during Rescue, Relief and Rehabilitation.
- d. **MHVRA and SHVRA (28 Selected Schools) in District Chitral, KP.** The PMU Project Execution Plan covering two major activities i.e. Multi Hazard Vulnerability & Risk Assessment (MHVRA) & School Hazard Vulnerability & Risk Assessment (SHVRA for 28 selected schools) was prepared for District Chitral. The Project is being funded by WFP.
- e. **Development of Historic Earthquake Catalogue.** The historical earthquake catalogue data has been collected for Punjab and Sindh from following recognized National and International sources:-
 - (1) PMD Historical Database.
 - (2) The United States Geological Survey Database.
 - (3) The International Seismological Centre Instrumental Database.
 - (4) The Harvard Instrumental Database.

- (5) The Preliminary Determination of Epicentres-National Earthquake
- (6) Information Centre.
- f. **Disaster Information System (DIS)**. A proposal for the development of “Disaster Information System (DIS)” for four Districts namely Ghotki, Kashmore, Rajanpur and Muzaffargarh was prepared. The project is under process and being funded by UNDP.

40. **UN – NDMA Quarterly Coordination Conference**. In order to enhance the coordination between Government and UN Agencies, remain abreast with the project / intervention / activities being undertaken and to address any issues during implementation of these activities; NDMA in coordination with UNOCHA started initiative of quarterly Coordination Conference. The need for establishment of a joint disaster management coordination forum was realized by both NDMA and UN for joint coordination. The last conference was held in December 2017 so far three Joint Coordination Conferences had been held. DG of all P/F/G/S DMA were invited for the first time to further strengthen the coordination. The UN Coordination Conference were renamed as Strategic Policy Coordination Forum – DM (SPCF – DM). The ToRs of forum are as following:-

- a. Strengthen coordination, collaboration, communication and partnership among the UN agencies and Disaster Management Authorities on planning and implementation of disaster management related activities and efforts through regular and formal engagement.
- b. Harmonize and align the planning and implementation of disaster management efforts in line with international frameworks, national planning and priorities.
- c. Joint, strategic and informed decision making on all aspects of disaster management.
- d. Effective coordination on emergency response preparedness, contingency planning, joint risk monitoring, timely decision making and recommend course of action.
- e. In case of a large scale disaster situation where an international humanitarian assistance is requested by the government of Pakistan, the need for a joint decision making body at strategic level would entail that the “DMCC” may be transformed into a “Coordinated Response Steering Committee”.
- f. Overall participation of the forum will be reviewed to ensure informed decision making.
- g. Any other point as deemed appropriate by Co-Chairs.

41. **Interaction with Educational Institutions (Universities) of the Country**. Awareness and advocacy about disaster is the cornerstone of NDMA’s strategy of Preparedness towards a “Disaster Resilient Pakistan”. To this end, periodical lectures by NDMA officials to the students and faculty of esteemed institution regarding “Pakistan’s Disaster Context and Preparedness Strategy” have been a regular feature to provide an insight to the fore-mentioned aspects and create much needed awareness. Chairman NDMA, Member (DRR), Member (Ops) and Director (Implementation) held series of interaction sessions and delivered lectures in different universities of the country like NUST, Karakoram International, Civil Service Academy Lahore, Riphah University and Military Colleges of Engineers.

42. Coordination with JICA for the Upcoming Project on “Capacity Building of Disaster Management Institutions in Pakistan”.

In response to the official request of the Government of Pakistan to the Government of Japan, the Japan International Cooperation Agency held a series of discussions with NDMA, NIDM and relevant organizations to develop a detailed plan of the Project for Capacity Development of organizations at Federal, Provincial and District level for 3.5 years. JICA consultant has completed gathering initial project requirement and submitted report to JICA headquarters. Based on the report, JICA has dispatched a long term consultant to initiate the project. JICA will dispatch eight expert teams in June 2018 to formally initiate the project activities.

43. Coordination with FFC for NDMA Component in National Flood Protection Plan – IV Implementation.

NDMA was allocated Rs 18.30 billion for execution of certain project in the flood prone districts in National Flood Protection Plan-IV. The Umbrella PC-I of the Plan is under submission. Upon approval of Umbrella PC-I, project proposals will be submitted to Planning Commission for approval. NDMA attended different consultative meetings in FFC for formulation of Umbrella PC-I. The following NDMA proposals have been incorporated in the Umbrella PC-I:-

- a. Raising and establishment of National Disaster Response Force (NDRF).
- b. MHVRA of flood prone Districts.
- c. Capacity Building of NIDM.
- d. Certain projects from NDMP.

44. Launching Ceremony of the “National Action Plan for the Implementation of Bangkok Principles on Health Aspects of Sendai Framework of Disaster Risk Reduction”.

National Action Plan for the Implementation of Bangkok Principles on Health Aspects of Sendai Framework of Disaster Risk Reduction” was launched on 12 December 2017 in presence of senior officers of Health Directorates, P/F/G/S/DMA's and also country representatives of UN agencies & I/NGOs. This Plan was formulated by NDMA, NHEPRN and with technical support of consultancy firm i.e., Network for Disaster Management Professionals (NDMP). This plan will be incorporated into a NDMP to prepare for, reducing the threats posed by the effects of disasters and emergencies. This National Action Plan on Health and DRR is envisioned to build the bridge between the disaster management and the health-related stakeholders present at National, Provincial and District level to work in close coordination in reducing the disaster impact to health facilities and health care system in the country. NDMA and NHEPRN will closely work to mobilize resources for the implementation of the plan through various funding sources including Annual Development Programme. Donor agencies have also been invited to be part of implementing this plan and promote concept of mainstreaming DRR into health sector.

45. Strategic Dialogue with International Donors and Development Partner in October 2017.

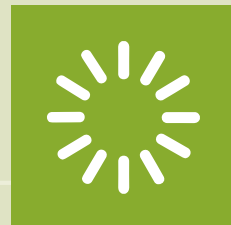
NDMA organized a “High Level Strategic Dialogue on Disaster and Climate Resilience in Pakistan” with international Donors and Development Partners with the objective to provide an opportunity

of a comprehensive discussion to concerned development partners on the needs for increasing resilience in Pakistan and for sharing progress and future agenda of Pakistan.

46. **National Insurance Mechanism for Vulnerable Communities**. NDMA has formulated National Insurance Mechanism Framework for vulnerable communities after detailed studies in communities of five districts. NDMA has planned to pilot the initiatives in few districts and are working with few donor agencies in this regard particularly the German Development Agency (GIZ). The Government is also exploring the possibility of adopting available Risk Financing tools of World Bank for Resilience of Pakistan against disaster shocks and possible negative financial impact.

Section - V

Progress on National Disaster Management Plan (NDMP)



Section – V

National Disaster Management Plan (NDMP)

47. **Background.** NDMP was formulated in February 2013 after an exhaustive effort of two years in collaboration with Japan International Cooperation Agency (JICA). The Plan has various components of execution involving multiple stakeholders. NDMA being the lead federal agency has the overarching role of monitoring the various components as well as implementation of the component concerning NDMA and PDMA.

48. **Vision.** Enhancing capacity of the Country to prepare and respond to disasters (flood, earthquake, tsunami, drought, avalanches, GLOFs, cyclone, storm surge) using a comprehensive National approach.

49. **Outline Plan.** NDMA formulated 10 years prospective NDMP which was approved by National Disaster Management Commission (NDMC) on 1 February 2013. NDMP is a comprehensive document covering all aspects of disaster management in the Country which will be implemented with approximate budget of around Rs 92 Billion (as calculated in 2012). For its effective execution, an implementation roadmap was unveiled on 19 October 2015 which will be implemented from 2016 to 2030 in a phased manner as under:-

| Serial | Phase | Timeframe | Implementation Strategy |
|--------|-----------|-------------|----------------------------|
| a. | Phase-I | 2016 – 2018 | 39 High Priority Districts |
| b. | Phase-II | 2019 – 2023 | 55 Priority Districts |
| c. | Phase-III | 2023 – 2030 | 63 Remaining Districts |

50. **Salient Features.** The salient features of NDMP are:-

- | | | | |
|----|---------------|---|----------------------|
| a. | Interventions | - | 10 |
| b. | Strategies | - | 41 |
| c. | Projects | - | 118 |
| d. | Timeframe | - | 10 Years (2013 – 22) |

51. **Financial Outlay.** Details at **Annex G**.

52. **Implementation Progress.** Details at **Annex F**.

- a. **Planned Interventions.** Target interventions of NDMP Roadmap are:-
- (1) Multi Hazard Vulnerability Risk Assessment (MHVRA).
 - (2) Community Based Disaster Risk Management (CBDRM).

- (3) Capacity Building through Government Officers Emergency Response Exercise (GOERE), Mobilisation of Volunteers Emergency Response Exercise (MOVEER).
- (4) Awareness and Advocacy.
- (5) Integrate needs & concern of vulnerable of group.
- b. **Implementation Strategy (Donors, Bilateral & Multilateral Organizations).** NDMA is in active consultation/ collaboration with UN Agencies, World Bank, DFID, Asian Development Bank & JICA etc for implementation of NDMP.



Section - VI

Regional & Bilateral Cooperation



Section – VI

Regional & Bilateral Cooperation

53. Regional and International Collaboration

- a. **MoU between Pakistan and Cuba on Disaster Management.** On 5 July 2017 at Islamabad, Chairman NDMA on behalf of Government of Pakistan signed a MoU with Cuban Government in the field of Disaster Management. This MoU will help both countries in combating disasters in a systematic and mutually learned experiences.
- b. **MoU with Pak Army Medical Corps.** A detailed MoU has been initiated with Pakistan Army Medical Corps for medical support in pre, post and during disasters. MoU signing is awaited confirmation from GHQ.
- c. **Memorandum of Cooperation (MoC) between NDMA and OXFAM GB.** On 6 October 2017, NDMA signed a Memorandum of Cooperation (MoC) with Oxfam GB to promote a culture of prevention, mitigation and better & enhanced preparedness in advance to disasters to make communities more resilient by jointly working under the umbrella of National DRR Policy & NDMP priorities. Chairman NDMA Lieutenant General Omar Mahmood Hayat and Mr. Mohammad Hassan Qazilbash, Country Director, Oxfam GB signed the MoC. The broad areas of the MoC are:-
 - (1) Support NDMA in the execution of NDMP and Implementation of roadmap.
 - (2) Civil Society & Community Engagement for mutual support.
- d. **MoUs Signed by Gender & Child Cell, NDMA**
 - (1) On 12 January 2017, NDMA signed an MoU with UNFPA to enhance National and sub-national capacity to provide integrated sexual and reproductive health services (SRH) particularly for marginalized and affected population in humanitarian settings.
 - (2) On 24 August 2017, NDMA signed an MoU with Lead Pakistan to collaborate on mainstreaming vulnerable groups in DRR by resilience and capacity building for climate change adaptation, through institutional strengthening, research, and knowledge management.
 - (3) On 18 September 2017, NDMA signed an MoU with Hashoo Foundation for Advocacy & Communication for PSSF Scale-Up in Islamabad.
 - (4) On 29 November 2017, NDMA signed an MoU with Care International Pakistan for Gender in Emergencies and Building Resilience in Pakistan.
 - (5) On 30 November 2017, NDMA signed an MoU with Federal Directorate of Education (FDE) for PSSF Scale-Up in 500 x schools in ICT falling under FDE jurisdiction.
 - (6) NDMA signed an MoU with Centre of Excellence in Gender Studies, Quaid-e-Azam University for gender mainstreaming, specifically in disaster scenarios and strengthening capacities of government officials with respect to gender based issues.
 - (7) NDMA signed an MoU with Hope 87' for Developing Education Sector Contingency Planning

Guidelines as per INEE standards (SOP guidelines for Education in Emergencies).

(8) NDMA signed an MoU with British Council to implement PSSF in 500x Schools of ICT.

54. **Existing Bilateral Linkages.** NDMA has initiated number of bilateral cooperating agreements/ MoUs to enhance disaster management in the region. NDMA is in continuous liaison with MoFA for implementation of these MoUs. Details of these MoUs are as under:-

| Serial | Country | Executing Agency | Time Period | Signing Date |
|--------|-----------------------|---|---------------------------------|------------------|
| a. | Republic of Korea | The National Emergency Management Agency (NEMA) | 5 Years | 3 September 2012 |
| b. | Republic of Turkey | Disaster and Emergency Management Presidency (AFAD), Turkey | 3 Years | 24 December 2013 |
| c. | Republic of Sri Lanka | Ministry of Disaster Management, Sri Lanka | 5 Years | 6 April 2015 |
| d. | Kyrgyz Republic | Ministry of Emergency Situation, Republic of Kyrgyz | 5 Years | 21 May 2015 |
| e. | SAARC Countries | Agreement on Rapid Response to Natural Disaster | Remains valid unless terminated | 9 September 2016 |
| f. | Republic of Cuba | General Staff of National Civil Defense | Remains valid unless terminated | 5 June 2017 |

55. **Bilateral Linkages in Process**

| Serial | Country | Executing Agency | Progress |
|--------|----------------------------|--|---|
| a. | Republic of Afghanistan | ANDMA, Afghanistan | After seeking consultation with all stakeholders, the revised draft has been shared with Afghanistan for concurrence. |
| b. | Republic of Kazakhstan | Committee for emergency situation of the Ministry of International Affairs | MoU is under negotiation between two countries. After agreement on text of MoU, it will be finalized. |
| c. | People's Republic of China | Ministry of Civil Affairs of the People's Republic of China | MoU is under negotiation between two countries. After agreement on text of MoU, it will be finalized. |
| d. | Republic of Azerbaijan | Ministry of Emergency Situations Government of Republic of Azerbaijan | MoU is under negotiation between two countries. After agreement on text of MoU, it will be finalized. |



Section - VII

**Capacity
Building**



Section – VII

Capacity Building

56. **National Institute of Disaster Management.** NIDM organized 6 x Courses during the year and trained 287 x officials. Details at **Annex H.**
57. **Foreign Training.** 24 x Officers of NDMA attended Foreign Training sessions. Details at **Annex I.**
58. **National Workshop on Disaster Risk Insurance Framework.** In order to create synergy amongst various stakeholders in the realm of disaster risk financing, NDMA organized a National Workshop on Disaster Risk Insurance Framework in collaboration with Climate & Development Knowledge Network (CDKN) and LEAD Pakistan on 8 February 2017 at Marriot Hotel, Islamabad. Disaster Risk Insurance Framework is a unique and innovative initiative by NDMA to mitigate impacts on vulnerable communities and a significant contribution towards strengthening Disaster Risk Management (DRM) in the Country. The proposed Framework on Disaster Risk insurance is based on the findings of a Demand Assessment Study in five districts (Tharparkar, Poonch, Charsadda, Rawalpindi and Ziarat) of Pakistan and feedback from key stakeholders. The findings from the project indicate a strong prospects for setting up a disaster risk insurance mechanism in the Country. The project output will provide a solid foundation for various disaster management bodies in the Country to move towards implementing such frameworks in respective vulnerable areas.
59. **Training of Evaluators for PSSF Pilot Programme.** The training of evaluators was conducted from 18 – 19 January 2017; 29 x trainers attended the training.
60. **Consultative Workshop for Implementation of School Safety.** The workshop were organised on 28 March 2017; 95 x participants attended the workshop.
61. **Training of Media Personals on Disaster Reporting.** 55 x Personnel were trained in media workshop on disaster reporting conducted in KP on 4 March 2017.
62. **Workshop on Preparedness against Gender Based Violence in Emergencies.** A workshop conducted in collaboration with UNFPA on Preparedness for Gender Based Violence in Emergencies at Ramada Hotel, Islamabad from 18 - 20 September 2017.

63. **National Teacher's Consultative Workshop on GBV and Mental Health under PSSF.** A consultative workshop on GBV and Mental Health under PSSF was organised on 20 November 2017; 38x participants attended the workshop.

64. **Enumerator's Training for Multi Sector Initial Rapid Assessment (MIRA) Guidelines.** After launching of MIRA Guidelines, Training of the Trainers (ToT) on MIRA Guidelines was held on 6-8 November 2017 at Islamabad which was attended by 41 x officers / officials from NDMA, Provincial stakeholders, regional DMAs and representatives of INGOs / NGOs etc. The master trainers will conduct further training of the Enumerators, staff of District Disaster Management Authorities, Districts line departments (i.e. Education, Health etc.) in the pre-selected most vulnerable districts across Pakistan. The first training of 40 x Enumerators was conducted in Muzaffargarh from 26 - 27 December 2017. While training of enumerators is further planned in seven more districts during January 2018.



Section - VIII

Conferences & Seminars



Section – VIII

International Conferences & Seminars

65. **ASEAN 2nd Regional Conference on School Safety in Bangkok, Thailand from 14 – 15 February 2017.** ASEAN organized the 2nd School Safety Regional Conference from 14 – 15 February 2017 in Bangkok, Thailand. Major General Asghar Nawaz, (HI) M ex-Chairman NDMA attended the conference. The conference provided the forum for participation in the form of discussion, exhibition and side events on School safety.

66. **5th UN Global Platform for Disaster Risk Reduction (22 – 26 May 2017).** GPDRR is the main forum at the global level for strategic advice, coordination, partnership development and the review of progress in the implementation of international instruments on disaster risk reduction. The same was attended by Chairman NDMA along with a team of officers and Pakistan's perspective was highlighted appropriately. Besides holding bilateral meetings, the Country statement of Pakistan was readout during the Plenary Session by the Chairman NDMA. NDMA participated in a well-attended side event on "Worldwide Initiative for Safe Schools, Promoting Disaster Resilience in the Education Sector" and shared progress and experiences in implementing Comprehensive School Safety (CSS).

67. **Shanghai Cooperation Organization (August 2017).** Pakistan became a permanent member of the Shanghai Cooperation Organization (SCO) during the last Summit held in Astana in June 2017. NDMA attended 9th meeting of Heads of Departments of Emergency Situations of SCO Member States dealing with prevention and elimination of emergency situations in August 2017 in Kyrgystan. Pakistan's membership at SCO has opened additional opportunities for development of international cooperation in the field of protecting the population from emergency situations within the framework of the SCO and will bring it qualitatively new positions in regional and global formats.

68. **Fifth Session of United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), 10-13 October 2017.** This Session was attended by NDMA in which Chairman NDMA was unanimously elected as Chair of the fifth session of the Committee. NDMA presented its work in the technical sessions as well. The UNESCAP Committee on Disaster Risk Reduction addresses issues related to policy options and strategies on multi-hazard disaster risk reduction and mitigation; Regional cooperation mechanisms on Multi-hazard assessment, preparedness, early warnings and response to disaster risks. NDMA also arranged a dedicated stall in UNESCAP DRR exhibition and showcased its DRR initiatives and Risk Knowledge tools.

69. **ECO Regional Framework for DRR (10 - 13 October 2017).** NDMA remained part of ECO Regional DRR Task Force, which was required to frame ECO Regional Framework for Disaster Risk Reduction. This has been successfully finalized and will be adopted in the upcoming Ministerial level Conference of ECO in Turkey.
70. **Asian Conference on Disaster Risk Reduction, 2 - 3 October 2017, Baku Azerbaijan.** The conference was attended by officials from NDMA. NDMA, being member of the steering committee of the Asian Disaster Reduction Centre, Japan also attended the meeting of the steering committee of the centre.
71. **Climate Change Conference (COP 23) from 6 - 17 November 2017 in Bonn, Germany.** Chairman NDMA participated in the World Climate Change Conference. Pakistan is member of Working Group on Disaster Losses. It is also participating in side events on "Climate Change and Gender".
72. **Second ISDR Asia Partnership Forum Bangkok, Thailand.** NDMA regularly attends IAP Forum which meets twice a year and serves as the main consultation forum for the Asian Ministerial Conferences on DRR (AMCDRR). Collectively, the IAP and AMCDRR form the regional platform for disaster risk reduction in the Asia-Pacific region.
73. **International Science-Policy Conference on Climate Change from 18 - 20 December 2017 in Islamabad.** NDMA supported Global Change Impact Study Centre to organize an International Conference on Climate Change in Islamabad from 18 - 20 December 2017. In this Conference Researchers presented their research papers. NDMA also showcased its progress through participation in Exhibition.



Section - IX

Financial Overview



Section – IX

Financial Overview

74. Non Developmental Budget

| Major Head of Accounts | Allocated (PKR) (FY 2016-17) | Expenditure (PKR) (FY 2016-17) | Balance (PKR) (FY 2016-17) |
|---|---------------------------------|-----------------------------------|-------------------------------|
| A01-Employee Expenses | 120,307,000 | 131,952,639 | 1,506 |
| A03-Operating Expenses | 71,258,000 | 82,751,868 | 35,960 |
| A04-Employer Retirement Benefits | 10,331,000 | 13,008,970 | - |
| A05-Grant Subsidies and Write Off Loans | 2,000 | - | 2,000 |
| A06-Transfers | 2,670,000 | 1,788,203 | - |
| A09-Physical Assets | 13,000,000 | 10,086,236 | 104,399 |
| A13-Repair & Maintenance | 33,001,000 | 9,431,348 | 1,005 |
| Total | 250,569,000 | 249,019,264 | 144,870 |

75. National Disaster Management Fund (NDMF)

| | | | |
|----|--|---|-------------------------|
| a. | Opening Balance as on 1-1-2017 | - | 1,023,870,754.47 |
| b. | Government Recoupments upto 31-12-2017 | - | 377,950,000 |
| c. | Other Receipts / Interest | - | 76,003,025.47 |
| d. | Donations upto 31-12-2017 | - | 300,000 |
| e. | Total Receipt up to 31-12-2017 | - | 454,253,025.47 |
| f. | Annual Expenditure from 1-1-2017 to 31-12-2017 | - | 20,201,085.58 |
| g. | Closing Balance as on 31-12-2017 | - | 1,457,922,694.36 |
| h. | Details of procurements from NDMF are attached as Annex J . | | |

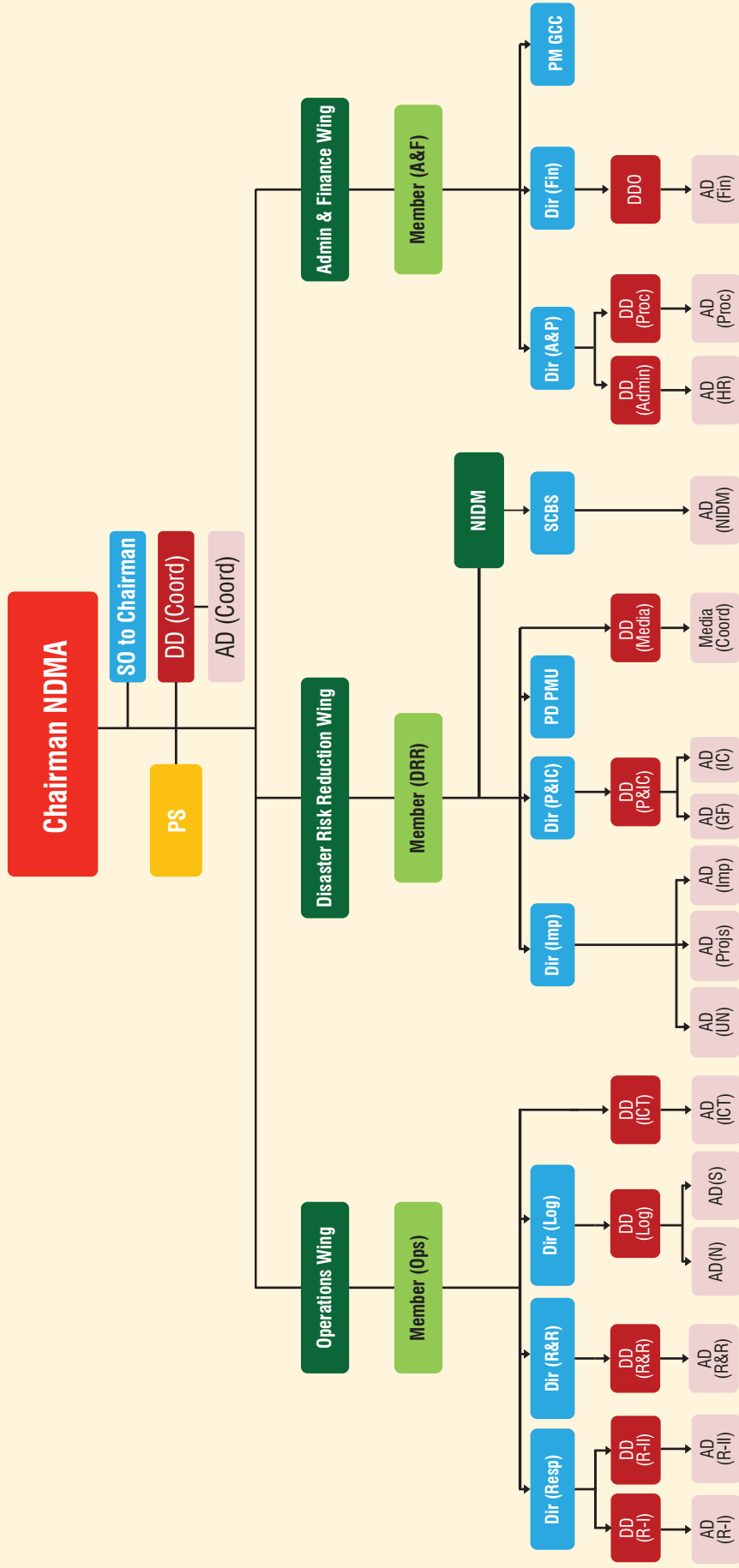
Conclusion

76. Pakistan faced unprecedented disasters in the recent past which led to a paradigm shift from reactive to proactive approach. Despite resource constraints, National efforts are now shifted to prevention, mitigation, preparedness and capacity enhancement against varying disasters. Maintaining record of past experiences with objectivity will not only protect the chronology of events as they unfolded but also serve as future reference during such recurring phenomenon.

NDMA ORGANOGRAM



National Disaster Management Authority














Annex B



To NDMA Annual Report 2017

National Relief Effort

Heavy Rains / Snowfall (January – February 2017)

| ITEMS | BALOCHISTAN | | KP | |
|--|------------------|------|--------------|------|
| | PDMA Balochistan | NDMA | PDMA KP | NDMA |
|  Tents | 12,069 | NIL | - | NIL |
|  Sleeping Bags | 7,700 | | - | |
|  Blankets | 14,645 | | 150 | |
|  Plastic Mats | 9,370 | | 10 (bundles) | |
|  Kitchen Sets | 12,110 | | - | |
|  Water Tanks | 300 | | - | |
|  Hygiene Kits | 6,860 | | - | |
|  Soap Cartons | 100 | | - | |
|  Tarpaulins | 9,095 | | - | |
|  Jerry Cans | 2,705 | | - | |
|  Rice (25kg each) | 2,270 | | - | |
|  Wheat (20kg each) | 500 | | 30 | |
|  Pulses (50kg each) | 280 | | - | |
|  Salt (1kg each) | 46,440 | | - | |
|  Food Packs | 13,417 | | - | |
|  Grams (50kg each) | 1,270 | | - | |
|  Tea Packs (1kg each) | 2400 | | - | |
|  Water | 985 | | - | |
|  Stoves | - | | 50 | |
|  Shawls | - | | 40 | |

Monsoon – 2017 (July – September 2017)

| ITEMS | PDMA's / DDMA's | | | | | Total |
|--|-----------------|-------|-------------|-------|-------|--------|
| | Punjab | KP | Balochistan | Sindh | GB | |
|  Tents | 13,997 | 750 | 400 | 300 | 186 | 15,633 |
|  Food Items (Bags) | 4,500 | - | 100 | - | 1,669 | 6,269 |
|  Wheat (Bags) | - | 600 | - | - | - | 600 |
|  Rice (Bags of 25 Kgs each) | - | - | 220 | - | - | 220 |
|  Blankets / Quilts | 2,088 | 1,860 | - | - | 20 | 3,948 |
|  Plastic Mats | 9,090 | 1,250 | 100 | - | - | 10,440 |
|  Kitchen Sets | - | 1300 | 150 | - | 1 | 1,451 |
|  Mosquito Nets | 5,991 | 300 | 1,100 | - | - | 7,391 |
|  Sleeping Bags | - | - | 250 | - | - | 250 |
|  Water Tanks | - | - | 150 | - | - | 150 |
|  Jerry Cans | - | 1300 | 1,000 | - | - | 2,300 |
|  Life Saving Jackets | 3,712 | - | 50 | 50 | - | 3,812 |
|  Gas Cylinders | - | 650 | - | - | - | 650 |
|  De-Watering Pumps | 336 | - | - | 91 | - | 427 |

Annex C

To NDMA Annual Report 2017

Post Monsoon Report - 2017

1. **Background.** Monsoon Season 2017 unfolded with five rain spells at regular intervals starting from 26 June to 15 September 2017. As per Pakistan Meteorological Department (PMD), Monsoon 2017 remained -23% Below Normal against prediction “normal rainfall in July 2017 and less than normal rainfall in August and September 2017”. During the month of July and August, rainfall was largely in excess across the Country. A well-integrated National efforts in the shape of timely forecast by PMD, appropriate analysis by NDMA and configuring correct response by disaster management bodies at Provincial / District levels led to mitigate hydro-meteorological hazards of the season.
2. **Aim.** To document major events of Monsoon 2017, analyse lessons learnt and best practices adopted during management of the Season and recommend future course of action.
3. **Significant Events of Monsoon 2017.** Significant events of Monsoon 2017 urban flooding (Karachi, Hyderabad, Lahore, Rawalpindi & Islamabad), flash flooding (Chitral, GB & Lasbela), flooding in District Sialkot (Deg Nadi, Aik Nullah), landslides (KP & GB), house collapse incidents due to heavy rains and vehicles/ persons drowned in flash flood water. Details of events during Monsoon Season 2017 are attached as Appendix-I to Annex C.
4. **Major Rainfall Record.** Summary of significant rainfall during Monsoon Season 2017 is attached as Appendix-II to Annex C. Monsoon 2017 unfolded in five major rainfall spells, details are as under:-
 - a. **1st Monsoon Spell (26 June – 30 June 2017)**
 - (1) All Rivers maintained normal flows.
 - (2) On 28 June 2017 in District Bahawalpur, Faisalabad, Jhang & Khanewal Heavy thunderstorms / rains caused 11 x Deaths.
 - (3) On 29 June 2017, Flash Flooding caused 14 x Deaths in District Lasbela.
 - (4) On 29 June 2017, Urban Flooding caused 6 x Deaths in Karachi.
 - b. **2nd Monsoon Spell (10 July – 4 August 2017)**
 - (1) River Indus & Chenab attained Medium Levels.
 - (2) Landslides along KKH at Tattapani, Jalipur & Dardang, 11 x locations on Gilgit – Skardu Road, Chilas – Naran Road at Babusar Top, Sadpara – Deosai Road, Chitral – Shandur Road at Shahidas & Kuchgol and Chitral – Arkari Road.
 - (3) On 31 July 2017, downstream flow of Nullah blocked Hunza – Shimshal Road (Hunza) at 14 x locations.
 - c. **3rd Monsoon Spell (7 – 14 August 2017)**
 - (1) Indus River attained Medium level flow.
 - (2) Maximum Conservation Level recorded in Reservoirs:-

- (a) Tarbela Dam - 1,550.00 ft (16 August 2017).
- (b) Mangla Dam - 1,234.95 ft (17 August 2017).
- (3) On 17 August 2017, a 75 ft breach in Hakra Branch of Sadqia Canal near Donga Bonga, District Bahawalnagar was reported.
- d. **4th Monsoon Spell (21 – 26 August 2017)**
 - (1) All Rivers maintained normal flow.
 - (2) On 22 & 23 August 2017, heavy rains caused Urban Flooding in Karachi.
 - (3) On 25 August 2017, water level in Lai Nullah reached up to 11.75 ft at Katarian and 13.42 ft at Gawalmandi.
- e. **5th Monsoon Spell (29 August – 15 September 2017)**
 - (1) All Rivers maintained normal flow.
 - (2) From 30 August to 1 September 2017, heavy rains in District Karachi caused severe Urban Flooding. 15 x Response Teams of Pak Army along with 50 x dewatering pumps and 5 x teams of Pak Navy were employed in various parts of Karachi.
 - (3) On 30 August 2017, heavy rains in District Jhang caused 5 x deaths.

5. Significant Peak Discharge Reported on Various Hydraulic Structures / Reservoirs

| Serial | Date | Dam / Headwork | Peak Discharge (Cusecs) | River | Flood Category |
|--------|---------------|----------------|-------------------------|--------|----------------|
| a. | 12 July 2017 | Nowshera | 87,000 | Kabul | Medium |
| b. | 19 July 2017 | Marala | 187,472 | Chenab | Medium |
| c. | 3 August 2017 | Kalabagh | 419,460 | Indus | Medium |
| d. | 5 August 2017 | Chashma | 446,361 | | Medium |
| e. | 6 August 2017 | Taunsa | 423,861 | | Medium |

6. Maximum Conservation Level of Major Hydraulic Structures / Reservoirs

| Serial | Dam / Reservoir | Design Capacity (Feet) | Maximum Level (Feet) | Date |
|--------|-----------------|------------------------|----------------------|----------------|
| a. | Tarbela Dam | 1,550.00 | 1,550.00 | 16 August 2017 |
| b. | Mangla Dam | 1,242.00 | 1,234.95 | 17 August 2017 |

7. **Affected Areas.** During the Monsoon 2017 (mainly in July & August), following areas of the Country experienced significant rains resulting into flash flooding, urban flooding, landslides, road blockage, drowning and house collapse incidents:-

| Serial | Province | Districts |
|--------|-------------|---|
| a. | Federal | Islamabad |
| b. | Punjab | Bahawalpur, Bahawalnagar, Bhakkar, Jhang, D.G. Khan, Faisalabad, Gujranwala, Gujrat, Khanewal, Lahore, Layyah, Rajanpur, Rawalpindi, R.Y. Khan & Sialkot. |
| c. | KP | Bannu, Besham, Buner, Charsadda, Chitral, Hangu, Haripur, Karak, Lakki Marwat, Malakand, Mardan, Nowshera, Shangla, Swabi & Tank. |
| d. | Sindh | Karachi. |
| e. | Balochistan | Dera Bughti, Jaffarabad, Khuzdar, Lasbela, Sibbi & Zhob. |
| f. | AJ&K | Kotli, Mirpur, Neelum & Rawalakot. |
| g. | GB | Chillas, Diamer, Ghanche, Ghizer, Gilgit, Hunza & Skardu. |
| h. | FATA | Bajour Agency, Khyber Agency, Kurram Agency & North Waziristan Agency. |

8. Monsoon Season – 2017

a. Human Losses

| Provinces | Deaths | | | | Injured | | | | Houses Damaged | | |
|-----------------|------------|-----------|-----------|------------|------------|------------|-----------|------------|----------------|------------|------------|
| | M | F | C | T | M | F | C | T | P | F | T |
| Punjab | 57 | 45 | 19 | 121 | 146 | 75 | 22 | 243 | 100 | 25 | 125 |
| KP | 23 | 10 | 27 | 60 | 22 | 37 | 17 | 76 | 438 | 55 | 493 |
| Sindh | 15 | 1 | 6 | 22 | 4 | - | 1 | 5 | 28 | - | 28 |
| Balochistan | 15 | 4 | 9 | 28 | - | - | - | - | 139 | - | 139 |
| AJ&K | 9 | 1 | 3 | 13 | 1 | 2 | 2 | 5 | 17 | 13 | 30 |
| GB | 7 | 1 | - | 8 | 11 | - | - | 11 | 145 | 26 | 171 |
| FATA | 1 | 7 | 8 | 16 | 3 | 8 | 8 | 19 | 7 | 2 | 9 |
| ICT | 1 | 1 | 1 | 3 | - | - | - | - | 1 | - | 1 |
| G. TOTAL | 128 | 70 | 73 | 271 | 187 | 122 | 50 | 359 | 875 | 121 | 996 |

- b. Relief Provided. Summary of relief effort by all sources is already attached as Annex B of this document (Page No. 57).

9. Salient Aspects

- a. Timely Initiation of Monsoon Preparations. Preparedness activities were started well in time which led to better preparation to face the challenges of Monsoon. Some of the highlights are:-
- (1) National Post-Monsoon Review Conference 2016. The Conference was organized on 10 January 2017 at Islamabad. Lessons learnt, best practices established, grey areas identified and valuable experience gained during Floods 2016 were compiled and shared with all stakeholders for better preparations.
 - (2) National Pre-Monsoon Review Conference. On culmination of Provincial/ Regional consultative process, National Monsoon Preparedness Conference 2017 was held on

13 June 2017 at Islamabad. The forum facilitated compilation of Provincial / Regional plans and input to build a well-coordinated National response against impending Monsoon Season.

- (3) **National Monsoon Contingency Response Directive 2017.** To lay down National response guidelines for all stakeholders at Federal and Provincial level, ensure sound disaster management against possible floods and configure a coherent response against visualized contingencies of Monsoon 2017, National Monsoon Response Directive 2017 was issued to all stakeholders on 15 June 2017.
- (4) **Activation of National Emergency Operation Centre (NEOC).** To ensure constant monitoring of Monsoon, swift liaison with relevant stakeholders and rapid rescue and relief operations during any emergency situation, emergency operation centres at Provincial and National Emergency Operation Centre (NEOC) at NDMA was activated from 15 June to 15 September 2017.
- b. **Heavy Earth Moving Machinery for GB.** Before onset of Monsoon, following heavy earth moving machinery was handed over by NDMA to GBDMA.
 - (1) 3 x Wheel Loaders with Bucket & Blade.
 - (2) 7 x Wheel Excavators with Blade.
 - (3) 22 x Tractors with Bucket.
 - (4) Blades.
 - (5) Hydraulic Trolley.
 - (6) Water Tank with Pump.
 - (7) 10 x Air Compressors.
 - (8) 20 x Drill Machines & Truck mounted Hydraulic Crane.
- c. **Resolution of Frequency Interference Issue of PMD's Wind Profilers.** A grant in aid Wind Profiler each at Islamabad and Multan was committed by JICA to PMD. Frequency interference issue of such Wind Profilers between Pakistan Armed Forces and PMD was highlighted by PMD. To resolve the issue, NDMA organized two consecutive meeting in May & June 2017 at Islamabad which was attended by stakeholders from Joint Staff Headquarters, Pakistan Armed Forces, PMD and FAB. The issue was resolved through consensus.
- d. **Search & Rescue Operations by Pakistan Navy.** Pakistan Navy diving teams were deployed to provide Diving / Rescue Assistance as requested by PDMAs/ DDMA's at following locations during Monsoon 2017:-
 - (1) On 25 September 2017 for recovery of bodies of 5x dead which drowned due to flash flooding/ under landslide in Sadpara Lake, Skardu on 3 August 2017.
 - (2) On 8 – 9 August 2017 for recovery of a dead body (7/8 years boy) who drowned in Indus River, Sukkur on 8 August 2017.
 - (3) On 10 July 2017 for recovery of bodies of 2 x dead which drowned in River Neelum / Jhelum near village Khundal Shah / Muzaffarabad on 7 July 2017.
 - (4) On 1 July 2017 for recovery of bodies of 5x dead out of 14 x dead which drowned due to flash flooding in District Lasbela, Balochistan on 29 June 2017.

- e. **Timely Evacuation during Flash Floods and GLOF Events**. Owing to awareness campaign through a series of preparedness activities before start of Monsoon Season 2017, local administration evacuated considerable population of following districts before devastation by flash floods and GLOF events:-
- (1) **Flash Flood Events**
 - (a) Balochistan (Zhob, Sibbi, Khuzdar & Lasbela).
 - (b) Khyber Pakhtunkhwa (Chitral, Charsadda, Bannu, Swabi & Hangu).
 - (c) FATA (Khurram Agency).
 - (d) AJ&K (Rawalakot).
 - (e) Gilgit Baltistan (Skardu & Diamer).
 - (2) **GLOF Events**
 - (a) Village Anoch, UC Yarkhoon, Tehsil Mastuj, District Chitral reported on 26 June 2017. 1,500 feet of roadway was washed away and restored by District Administration.
 - (b) Naltar Balla, District Gilgit on 13 July 2017.
 - (c) UC Safaid Arkari, District Chitral on 2 August 2017.
 - (d) Sherqillah, District Ghizer, GB on 3 August 2017.
- f. **Swift Clearance of Landslides**. Due to continuous monitoring, timely coordination and a well-integrated response by NDMA, NHA, Pak Army, FWO and concerned Provincial / District Administration, frequent landslides along following important National arteries were cleared in time:-
- (1) Karakoram Highway at Jalipur, Dardang, Tattapani, Besham and Pattan.
 - (2) 11 x different locations on Gilgit – Skardu Road.
 - (3) Chilas – Naran Road at Babusar Top.
 - (4) Sadpara – Deosai Road.
 - (5) Chitral – Shandur Road at Shahidas & Kuchgol.
 - (6) Chitral – Arkari Road at Berr Nullah.
 - (7) 14x locations on Hunza – Shimshal Road, District Hunza, GB on 31 July 2017. Efforts were undertaken by GBDMA, Local Administration and locals to clear the landslides after extensive efforts of 18 days.
- g. **Timely Plugging of Breeches**. Following breaches at different locations were reported and timely plugged by local administration during Monsoon 2017:-
- (1) Palku Nullah at Village Nawan Pind and Chitti Shekhan Wali, District Sialkot on 28 July 2017.
 - (2) Aik Nullah at Village Ismail Awan, Tehsil Daska and Village Balgan & Chak Chodo, Tehsil Sambrial, District Sialkot on 1 August 2017.
 - (3) Degi Canal at Basti Peer Wali, District R.Y. Khan on 2 August 2017.
 - (4) Deg Nadi at Village Tamoli / Sadoki, Tehsil Kamonki, District Gujranwala on 3 August 2017.
 - (5) Hakra Branch of Sadqia Canal near Donga Bonga, Tehsil & District Bahawalnagar was reported on 17 August 2017.

- (6) Canal near Duddi Head, Tehsil Darya Khan District Bhakkar, Punjab was reported on 24 August 2017.
- h. **Timely Evacuation along River Indus.** Basti Malkani Kalan, Tehsil Kot Chutta, District D.G Khan vacated by Local Administration and Rescue 1122 due to erosion in J-Head Spur at RD-194 along Indus River on 23 July 2017.
- i. **Provision of Awareness for Northern Areas.** Chilas – Naran Kaghan Road at Babusar Top was blocked at different locations due to flash flood and landslides on 2 August 2017. 30x Tourist Vehicles were stuck at Babusar Top. Commuters were shifted to safe locations by local administration. Prompt mobilization of available resources by NHA and local administration led to the clearance of landslides. Awareness regarding not to travel / to avoid unnecessary travel for local and tourists in Northern areas of the country were also launched on electronic and social media by NDMA.
- j. **Urban Flooding in Karachi.** Urban flooding was reported due to heavy rains in District Karachi, Sindh from 30 to 31 August 2017. Mayor of Karachi requisitioned services of Pakistan Army & Navy to assist in relief and rescue efforts in Karachi. A total of 15x Response Teams of Pakistan Army along with 50x dewatering pumps and 5x Teams of Pakistan Navy were employed in various parts of Karachi for evacuation, rescue and relief efforts.

10. **Strengths / Best Practices**

- a. **Constant Watch & Proactive Decision Making.** PDMA KP and GBDMA continuously monitored the seasonal activities, provided updated information to the locals and basing on the analysis/ recommendations of NDMA/ PMD timely evacuated the locals of UC Safaid Arkari, District Chitral to safer locations.
- b. **Establishment of Social Media Cell by NDMA.** In order to involve well-read youth on social media for disaster management, NDMA for the first time established dedicated Social Media Cell in NEOC and launched awareness campaigns on social media. It not only provided updated weather information, latest prevailing situation/ ground conditions (road blockages, landslide events, etc.) rather also provided useful recommendations to foreign and domestic travellers/ tourists.
- c. **NDMA's Virtual Call Centre.** To ensure round the clock availability of NDMA's Response Team and information sharing by callers (all over the Country), NDMA set up Virtual Call Centre (VCC) before onset of Monsoon Season and ensured response by NEOC officials to all calls.
- d. **NDMA Daily Situation Report.** Considering existing weather behaviour and weather forecast, NDMA included "Recommendations" in the "daily situation report" to provide valuable analysis (input/ courses of action) to the relevant stakeholders.
- e. **Analysis of Rainfall Data by PMD.** PMD regularly analysed progress of rainfall data against predicted rainfall and reflected the same on its website on daily / monthly basis. The initiative assisted to ascertain trend of Monsoon Season and initiate corresponding measures.
- f. **Monsoon Coordination Conferences.** In order to monitor weather pattern/ significant developments during Monsoon Season, coordination conferences of all relevant stakeholders

(PMD, SUPARCO etc) were regularly organized in NEOC. These meetings assisted in effective decision making and issuance of key instructions to relevant stakeholders.

11. Weaknesses/ Shortfalls

- a. **Gaps in Coordination Mechanism & Timely Reporting.** Some important events were not shared with NDMA in time by relevant stakeholders forcing direct interface with terminal response tier for monitoring of events bypassing input of intermediary response tier; for example, flood monitoring in Pulkhu Nullahs and Deg Nadi was undertaken by NDMA through direct contact with District Flood Control Centres. Moreover, daily data of damages and losses was not being shared with NDMA in timely fashion.
- b. **Inadequate Capacity for Urban Flooding.** Continuous rains during July & August 2017, led to Urban Flooding in Karachi from 30 August to 1 September 2017. PDMA Sindh in close coordination with local administration, Pakistan Army & Navy managed Urban Flooding. Shortage of high powered de-watering pumps, lack of training of operators and inefficient sewerage water disposal system were identified.
- c. **Lack of Awareness/ Complacency/ Negligence by the Locals.** Lack of awareness coupled to negligence / complacent approach of locals claimed several precious lives when locals ventured Nullah / River crossing in flash flood, bathing in flood/ rain water/ canals.
- d. **Provision of Flood Fighting Equipment to Army by PDMAs.** Incomplete provision of Flood Fighting equipment to Pakistan Army by PDMAs can have severe repercussions on future flood management.
- e. **Non-Adoption of Standardized Situation Report (SITREP) Format.** In order to compile error free data, analyse, plan and assist quick decision making NDMA issued a well deliberated and comprehensive SITREP Format. However, the effort did not yield desired results as PDMAs did not follow given format for reporting.

12. **Way Forward.** To refine response mechanism, pertinent recommendations based on the management of Monsoon 2017 are as under:-

- a. **Inter-Provincial and Department Coordination.** Since disasters/ natural calamities knows no political/ administrative boundaries therefore, disaster management demands enhanced coordination between Provinces/ Departments. The principle of “extraordinary circumstances need extraordinary steps” is the key to success in disaster management. Inter Provincial / Regional coordination especially in far flung areas can reduce sufferings of distressed population.
- b. **Rehabilitation of Shori Nullah Protection Bund**
 - (1) In order to ensure effective drainage system, Kachi Canal Authorities and PID Punjab are required to carry out joint survey for construction/ repair of existing protection work on northern side of Kachi Canal.
 - (2) PID Sindh is required to expedite completion of Bund along Kashmore Cantonment.

- c. **Enhanced Response Mechanism.** Following measures are likely to enhance refinement in response mechanism for management of Monsoon Season:-
- (1) Provision of timely information regarding incidents and response.
 - (2) Innovative use of modern technology.
 - (3) Special conferences by relevant stakeholders on occurrence of any extreme events will assist timely decision making process.
- d. **Protective Measures against Urban Flooding.** Following protective measures based on experiences of previous Monsoon Season will help mitigate such losses in future:-
- (1) Identification of low lying areas prone to ponding / inundation in congested areas of mega cities.
 - (2) Preparation of hazard maps of major cities against Urban Flooding based on recorded history or envisaged circumstances for sensitization, awareness, early warning and evacuation of vulnerable communities.
 - (3) Capacity building of Municipal Corporation with priority to Municipal Corporations of cities. Attention must be given to availability of requisite number of heavy duty de-watering pumps, generators and training of operators.
 - (4) Widening / dredging and desilting of sewerage drains.
 - (5) Removal of encroachments from sewerage drains thus reclaiming original extents of such drains.
- e. **Protective Measures against Flash Flood.** Following protective measures based on experiences of previous Monsoon Seasons will help mitigation of losses due to flash floods in future:-
- (1) Awareness drive of recorded flash flood history in known water channels.
 - (2) Signposting of waterways in local language with known flash flood history. It should clearly demarcate threat level of waterways preventing any misadventure to cross.
 - (3) Long term planning for rehabilitation of population under threat of flash floods.
 - (4) Exercise community based vigilance mechanism for settlements near or inside waterways as under:-
 - (a) Placing of round the clock lookouts especially at night during the period of intense rain.
 - (b) Use of sirens or announcements on loud speakers of mosques.
 - (c) Drum beating by the people living at higher places in an area.
- f. **Provision of Flood Fighting Equipment to Army.** PDMA's are required to provide Phase-2 equipment to Pakistan Army before commencement of Monsoon 2018.
- g. **Adoption of Standardized Situation Report (SITREP) Format.** In order to provide error free data, assist analysis & quick decision making and preparation of plans PDMA's to make use of NDMA's Standardized Situation Report (SITREP) Format & system of incident reporting has to be made more efficient.
- h. **Displacement of Earth Moving Resources.** Placement of earth moving machinery in remote

mountainous districts of KP, AJK & GB for timely clearance of roads / landslides will be of immense importance.

- i. **Resolution of Major Issues.** Following issues need to be resolved by relevant stakeholders at priority:-
 - (1) Flood mitigation measures downstream Mangla Dam.
 - (2) Protective measures against erosion from River Chenab in District Sargodha and River Indus in District Layyah.
- j. **Lessons of Flash Floods/ GLOF -2017.** Management of Flash Floods/ GLOFs has resonated the need to keep District Administration in special focus. Following measures are necessary:-
 - (1) Placement of response measures before the onset of Monsoon. This may not only be considered for Monsoon Season but also as part of preparedness activities for other disasters, as accessibility across certain areas of Country becomes questionable especially after onset of Winter Season.
 - (2) Procurement and placing of heavy earth moving machinery for Balochistan, KP (District Chitral), AJ&K and GB (Northern Areas).
 - (3) Commissioning of Rescue 1122 service where required.
 - (4) Feasibility for construction of a warehouses for forward placing of Provincial relief assets. As an interim measure, placing of a FLOSPAN each at tehsil level especially in tehsils of District Chitral may be considered.

13. **Conclusion.** After the Super Floods of 2010, it was year 2017 which saw relatively less intense Monsoon Season; however lack of awareness coupled with complacency of general public resulted into human / material losses and posed challenges for disaster management structure of the Country. Proactive approach and lessons from past experiences can help prevention, mitigation, preparedness and capacity enchantment of relevant disaster management bodies for future crisis management.

Appendix-I to Annex C

To Post Disaster Report Monsoon 2017

Chronological Events of Monsoon 2017

| Serial | Date | Event / Incident | Location |
|--------|--------------|--|---|
| 1. | 26 June 2017 | GLOF | Village Anoch, UC Yarkhoon, Tehsil Mastuj, District Chitral. |
| | | Roadway Washed Away due to Riverine Flooding | Chitral to Yarkhon Valley and Broghil towards Upper Chitral at Anoch 200 km |
| 2. | 28 June 2017 | Landslide | Lowari Top at km 231 & km 241 |
| | | Heavy thunderstorm | Districts Bahawalpur, Faisalabad, Jhang & Khanewal |
| | | Landslide | On KKH at Besham and Pattan |
| 3 | 29 June 2017 | Flash Flooding | Tehsil Hub, District Lasbela, Balochistan |
| | | Localised ponding | Manzoor Colony, District Karachi, Sindh |
| | | Flash Flooding | Sattar Sarobi, Tehsil Dossali, Sub-Division Razmak, North Waziristan Agency |
| 4. | 2 July 2017 | Flash Flooding | Sattar Sarobi, Tehsil Dossali, Sub-Division Razmak, North Waziristan Agency |
| 5. | 3 July 2017 | Breach | Moza Utra, District Bahawalpur in Sama Satha Canal branch 6-L |
| 6. | 4 July 2017 | Flash Flooding | Kot Khan Muhammad Area, Musakhel – Kingri Road (N-70) |
| | | Heavy Rainstorm | Village Wazirabad, Tehsil Dargai, District Malakand, Khyber Pakhtunkhwa |
| 7. | 6 July 2017 | Lightning | District Tank, Khyber Pakhtunkhwa |
| 8. | 7 July 2017 | Flash Flooding | Tehsil Karakh, District Khuzdar, Balochistan |
| | | Drowning Incident | River Neelum-Jhelum near village Khundal Shah / Muzaffarabad |
| 9. | 9 July 2017 | House Collapse due to Heavy Rains | District Neelum, AJ&K |
| 10. | 10 July 2017 | House Collapse due to Heavy Rains | District Neelum, AJ&K |
| 11. | 11 July 2017 | Flash Flooding | District Zhob, Balochistan |

| Serial | Date | Event / Incident | Location |
|--------|--------------|---|---|
| 12. | 12 July 2017 | Drowning Incident | Tehsil Kundi Soka Ghazi, District Haripur |
| | | Heavy Rains | Maximum water level in Lai Nullah had reached upto 19.36 ft at Katarian and 16.86 ft at Gawalmandi. |
| | | Flash Flooding | Village Dagai, Yar Hussain, Dobian, Sard Cheena and Yaqoobi, Tehsil Razar, District Swabi, Khyber Pakhtunkhwa |
| | | Heavy Rains and Flash Flooding | Tehsil Daggar, District Buner, Khyber Pakhtunkhwa |
| | | Heavy Rains | Tehsil Tangi, District Charsadda, Khyber Pakhtunkhwa |
| | | Wall Collapse due to Heavy Rains | sector H-9, Islamabad |
| | | Roof Collapse due to Heavy Rains | District Gujranwala, Punjab |
| | | Flash Flooding | District Zhob, Balochistan |
| | | Vehicle Drowned due to Flash Flooding | Tehsil Kundi Soka Ghazi, District Haripur |
| | | Road Blockage due to Landslides | 11x locations on Gigit – Skardu Road (S1). |
| | | Road Blockage | District Gujrat small portion of bridge on Gujrat to Kurrianwala road |
| 13. | 13 July 2017 | Flash Flooding | Kalpani Nullah, Village Gadar Humza Khan, District Mardan, Khyber Pakhtunkhwa |
| | | Road Blockage due to Landslide | Tattapani, District Chillas, Gilgit Baltistan |
| | | Flash Flooding | Talli River District Sibbi, Balochistan |
| | | GLOF | Naltar Bala, District Gilgit, Gilgit-Baltistan |
| 14. | 14 July 2017 | House collapse due to Heavy Rains | Village Arawali, Lower Kurram, FATA |
| 15. | 15 July 2017 | Flash Flooding and Road Blockage | N-25 Karachi – Quetta Road near Qadirabad Sunaro, District Khuzdar |
| 16. | 16 July 2017 | Wall Collapse due to Heavy Rains | Parawo Camp Tehsil Jalala Takht Bahi, District Mardan, Khyber Pakhtunkhwa |
| | | Flash Flooding | Ferozabad Town, District Khuzdar, Balochistan |
| | | Flash Flooding and Drowning Incident | Verap River Dureji, District Lasbella, Balochistan. |
| | | Drowning incident due to Heavy / Torrential Rains | District Hungu, Khyber Pakhtunkhwa. |
| 17. | 17 July 2017 | Flash Flooding | Villages Hodo & Pohli, District Dera Bughti, Balochistan. |

| Serial | Date | Event / Incident | Location |
|--------|---------------|--|--|
| 18. | 19 July 2017 | Medium Flooding | River Chenab at Marala, Khanki & Qadirabad |
| | | Wall Collapse due to Heavy Rains | Tehsil Usta Muhammad, District Jaffarabad, Balochistan |
| | | Drowning Incident due to Flash Flood Water | Tehsil Lakhra, District Lasbela, Balochistan. |
| 19. | 20 July 2017 | Road Blockage due to Landslide | Gilgit – Skardu Road (S-1) at Maloopa |
| 20. | 21 July 2017 | Road Blockage due to Landslide | Gilgit – Skardu Road (S-1) at Chamachu |
| 21. | 22 July 2017 | Flash Flooding | District Karak, Khyber Pakhtunkhwa |
| | | Water Spill Over from an Irrigation Canal | Pir Sabaqi Khush Muqam, Hamza Khan Koroona, Khawas Kaly & Hospital Koroona, District Nowshera, Khyber Pakhtunkhwa. |
| 22. | 23 July 2017 | Erosion | J-Head Spur at RD-194 along River Indus at Mauza Basti Malkani Kalan, Tehsil Kot Chutta, District D.G. Khan, Punjab. |
| 23. | 25 July 2017 | House Collapse due to Heavy Rains | Village Yar Hussain, District Swabi, Khyber Pakhtunkhwa. |
| 24. | 26 July 2017 | Inundation due to Heavy Rains | Areas of Akora Khattak & Pir Sabaq, District Nowshera, Khyber Pakhtunkhwa |
| 25. | 28 July 2017 | Breaches in Nullah | Palku Nullah between village Nawan Pind and Chiti Shekhan Wali, District Sialkot |
| 26. | 29 July 2017 | Flash Flooding due to Heavy Rains | Kalash Valley, District Chitral, Khyber Pakhtunkhwa. |
| 27. | 30 July 2017 | Breach due to increase Water flow | Village Shogo Gurum, Tehsil Mashabrum, District Ghanche, GB |
| | | Roof Collapse due to Heavy Rains | Malaguri (Tatara), Tehsil Jamrud, Khyber Agency, FATA. |
| 28. | 31 July 2017 | Road Blockage due to Downstream Flow of Nullah | District Hunza, Gilgit Baltistan |
| | | Road Blockage | Shamshal Road, District Hunza, Gilgit Baltistan |
| 29. | 1 August 2017 | Breach in Aik Nullah | Village Ismail Awan, Tehsil Daska and Village Dhirom Balgan & Chak Chodo, Tehsil Sambrial, District Sialkot, Punjab |
| | | Heavy Rains | Madrasah Khadejatul Banat Bazargai, Tehsil Razzar, District Swabi, Khyber Pakhtunkhwa |
| | | House Collapse incident | Tehsil Khudakhel, District Buner |

| Serial | Date | Event / Incident | Location |
|--------|---------------|---|---|
| 30. | 2 August 2017 | Breach in Degi Canal | Degi Canal, Basti Peer Wali, District R.Y.Khan, Punjab |
| | | House Collapse incident | Village Begonwala, District Sialkot, Punjab |
| | | Flash Flooding | Village Atkay Shabqadar, District Charsadda, Khyber Pakhtunkhwa |
| | | Flash Flooding | River Tochi at Village Sorani, Tehsil Mundan, District Bannu, Khyber Pakhtunkhwa |
| | | Flash Flooding | Tehsil Abbaspur, District Rawalakot, AJK |
| | | Road Blockage | Shandur Road at Laspur, Shahidas Nullah, District Chitral, Khyber Pakhtunkhwa |
| | | GLOF | UC Safiad Arkari, District Chitral, Khyber Pakhtunkhwa |
| | | Heavy / Torrential Rains | Village Lilowani, Tehsil Alpori, District Shangla, Khyber Pakhtunkhwa |
| | | Heavy / Torrential Rains | Village Laspur, District Chitral, Khyber Pakhtunkhwa |
| | | Roof Collapsed due to Heavy Rains | Gora Bakkakhel, District Bannu, Khyber Pakhtunkhwa |
| | | Flash Flooding | Shafqadar, District Charsadda, Khyber Pakhtunkhwa |
| | | Flash Flooding | Gonar Farm Nullah, District Diamer, Gilgit Baltistan |
| | | Road Blockage | KKH at Jalipur & Dardang |
| | | Road Blockage / Flash Flooding & Land sliding | Chillas - Naran Khagan Road at Babusar Top |
| | | Road Blockage / Flash Flooding & Land sliding | Mastuj – Shandur Road, Shahidas & Kuchgol and Yarkhoon Road at Mathing Nullah, District Chitral, KP |
| | | GLOF / Road Blockage | Chitral – Arkari Road at Berr Nullah, Tehsil Garam Chashma, District Chitral, KP |
| 31. | 3 August 2017 | Breach in Deg Nadi | Deg Nadi, Village Tamoli / Sadoki, Tehsil, Kamonki, District Gujranwala, Punjab |
| | | GLOF | Sherqillah, District Ghizer, Gilgit Baltistan |
| | | Flash Flooding / Houses Damaged | Rgayul, Geyoul, Hussainabad & Sadpara, District Skardu, Gilgit Baltistan |
| | | Flash Flooding | Thak and Niat Area, District Diamer, Gilgit Baltistan |

| Serial | Date | Event / Incident | Location |
|--------|------------------------------|---|---|
| 32. | 4 August 2017 | Road Blockage / Flash Flooding & Land sliding | Chillas – Naran Kaghan Road Babusar Top |
| | | Road Blockage due to Landslides | Deosai Road, District Skardu, GB |
| | | Downstream Flooding | Naltar River Road, GB |
| 33. | 6 August 2017 | House Collapse incident due to Heavy Rains | UC Rashakai Shabqadar, District Charsadda, KP |
| 34. | 8 August 2017 | Medium Level Flooding | Tehsil Rojhan, District Rajanpur, Punjab |
| 35. | 10 August 2017 | House Collapse incident due to Torrential Rains | Tehsil Loi Mamund, Bajour Agency, FATA |
| 36. | 13 August 2017 | Road Blockage due to Flash Flooding | Chitral – Garam Chashma Road Shahrisham, Chitral, KPK |
| | | Flash Flooding | Koughzi District Chitral, KPK |
| 37. | 14 August 2017 | House Collapse incident due to Heavy Rains | Chak no 151, Tehsil & District Layyah, Punjab |
| | | Thunderstorm / Lightning | District Chitral, KPK |
| | | Thunderstorm / Lightning , Deaths | District Shangla, KPK |
| | | Thunderstorm / Lightning | District Lakki Marwat, KPK |
| 38. | 16 August 2017 | Maximum Conservation Level | Tarbela Dam reached maximum conservation Level 1550.00 feet |
| 39. | 17 August 2017 | Breach | Hakra Branch Sadqia Canal Donga Bonga, Tehsil & District Bahawalangar, Punjab |
| 40. | 24 August 2017 | House Collapse incident | District Mirpur, AJ&K |
| 41. | 24 August 2017 | Breach | Canal near Duddi Head, Tehsil Darya Khan District Bhakkar, Punjab |
| 42. | 21-23 August 2017 | Heavy Rains | Karachi Sindh |
| 43. | 25 August 2017 | Heavy Rains / Maximum Water Level in Lai Nullah | Lai Nullah reach upto 11.75 ft at Katarian and 13.42 ft at Gawalmandi |
| 44. | 30 August 2017 | Heavy Rains | District Jhang, Punjab |
| 45. | 31 August 2017 | Urban Flooding | Due to blockage in Mali & Gujjar Nullah, Karachi |
| 46. | 30 August - 1 September 2017 | Urban Flooding | Karachi Sindh |
| 47. | 11 September 2017 | Heavy Rains | District Kotli, AJ&K |



Appendix-II to Annex C

To Post Disaster Report Monsoon 2017

Major Rainfall Record – July 2017

| Station | Date Wise Significant Rainfall in mm (40 mm and above) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------|--|---|---|---|----|---|----|---|---|----|----|-----|-----|----|----|----|----|----|----|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | | | |
| Punjab | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Islamabad AP | - | - | - | - | - | - | - | - | - | - | - | 53 | 70 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 42 | | |
| Alexandra Bridge | - | - | - | - | - | - | - | - | - | - | - | - | 58 | - | - | - | 47 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| Bokra | - | - | - | - | - | - | - | - | - | - | - | 54 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| Said Pur | - | - | - | - | - | - | - | - | - | - | 64 | 61 | 76 | - | - | - | - | - | - | - | 107 | - | - | - | - | - | - | - | - | 61 | - | - | | |
| Jhang | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 97 | - | - | - | | |
| Jhelum | - | - | - | - | - | - | - | - | - | - | - | 58 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| Faisalabad | - | - | - | - | - | - | - | - | - | - | - | - | 68 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| Golra | - | - | - | - | - | - | - | - | - | - | - | - | 52 | - | - | - | - | - | - | - | 53 | - | - | - | - | - | - | - | - | - | - | - | | |
| Jassar | - | - | - | - | - | - | - | - | - | - | - | 43 | - | - | - | - | - | - | 50 | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| Kund | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 44 | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| Shamsabad | - | - | - | - | - | - | - | - | - | - | - | 78 | 97 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 46 | - | | |
| Sahiwal | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 40 | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| Khanpur | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 46 | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| Lahore | - | - | - | - | - | - | 66 | - | - | - | - | - | - | - | 50 | - | - | - | 45 | - | - | - | - | - | - | - | - | - | 61 | 62 | - | - | - | |
| Murree | - | - | - | - | - | - | - | - | - | - | 50 | 42 | 46 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Mandibahauddin | - | - | - | - | - | - | - | - | - | - | - | - | 83 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Marala | - | - | - | - | - | - | - | - | - | - | - | 95 | - | - | - | - | 41 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Mangla | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 71 | - | - | - | - | - | - | 64 | - | - | - | - | - | - | - | - | |
| Mianwali | - | - | - | - | - | - | - | - | - | - | - | 47 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Gujranwala | - | - | - | - | 46 | - | - | - | - | - | - | 107 | 61 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Gujrat | - | - | - | - | - | - | - | - | - | - | - | 138 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Palau | - | - | - | - | - | - | - | - | - | 42 | - | 49 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Sargodha | - | - | - | - | - | - | 44 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Kot Addu | - | - | - | - | - | - | 69 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Sialkot | - | - | - | - | - | - | - | - | - | 45 | - | 113 | 47 | - | - | - | - | - | 80 | - | - | 44 | - | - | - | - | - | - | - | 46 | - | 46 | - | |
| Noorpur Thal | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 68 | - | - | - | - | | |
| Dhok Pathan | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 40 | - | - | - | - | |
| DG Khan | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 54 | - | - | - | - | |
| Chakwal | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 40 | - | - | |
| Zaro point | - | - | - | - | - | - | - | - | - | - | - | 48 | 103 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 45 | - |

74

| Station | Date Wise Significant Rainfall in mm (40 mm and above) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------|--|---|---|---|----|---|---|---|---|----|-----|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | | |
| AJK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Piandri | - | - | - | - | 89 | - | - | - | - | 51 | - | - | 102 | 53 | - | - | - | - | 71 | - | - | - | - | - | - | - | - | 76 | - | - | - | - | |
| Muzaffarabad | - | - | - | - | - | - | - | - | - | - | - | 65 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 45 | - | 44 | - | - | |
| Rawalakot | - | - | - | - | - | - | - | - | - | 65 | 119 | - | 56 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Domel | - | - | - | - | - | - | - | - | - | 41 | - | - | 81 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Kallar | - | - | - | - | - | - | - | - | - | - | 70 | - | - | - | - | - | - | 48 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Hatian Bala | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 42 | - | - | - | - | |
| Sehr Kakota | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 42 | - | - | - | - | |
| Sehrkakota | - | - | - | - | - | - | - | - | - | - | 65 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| KP | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tarbela | - | - | - | - | - | - | - | - | - | - | 47 | 71 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Risalpur | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 64 | |
| Nowshera | - | - | - | - | - | - | - | - | - | - | 45 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Karna | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 56 | - | 79 | - | 48 | - | - | - | - | - | - | - | |
| Daggar | - | - | - | - | - | - | - | - | - | - | - | 64 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Risalpur | - | - | - | - | - | - | - | - | - | - | 40 | - | - | - | - | - | - | 81 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Attock Khairabad | - | - | - | - | 63 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Kakul | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 50 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Shinkiani | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 44 | - | - | 77 | - | - | |
| Malamiaba | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 87 | - | - | |
| Domel | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 64 | - | - | - | - | - | |
| Peshawar | - | - | - | - | - | - | - | - | - | - | - | - | 44 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Sindh | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Badin | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 63 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Mirpurkhas | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 45 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Rashidabad | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 40 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Diplo | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 56 | - | |
| Mithi | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 51 | - | |
| Karachi | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 56 | - | - | - | - | - | - | - | - | - | - | - | - | |
| Islamkot | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 64 | - | 40 | - | - | - | - | - | - | - | 44 | - | - |
| Nagarparkar | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 50 | - | - | - | - | - | - | - | - | - | 45 | - | - |



Major Rainfall Record – August 2017

| Station | Date Wise Significant Rainfall in mm (40 mm and above) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------|--|-----|----|---|---|---|---|----|----|----|----|----|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | |
| Punjab | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Islamabad AP | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 72 | 70 | - | - | - | - | - | - | - |
| Bokra | - | - | 45 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 45 | 85 | - | - | - | - | - | - | - |
| Said Pur | - | - | - | - | - | - | - | - | 43 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Jhang | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Jhelum | - | 155 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 44 | 70 |
| Golra | - | 53 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 50 | - | - | - | - | - | - | - |
| Shamsabad | - | 42 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 54 | 86 | - | - | - | - | - | - | - |
| Kallar | - | 42 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 43 | 48 | - | - | - | - | - | - | - |
| Lahore | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 68 | - | - | - | - | - | - |
| Murree | - | - | - | - | - | - | - | - | 57 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 46 | - | - |
| Mandibahauddin | - | - | - | - | - | - | - | - | - | - | - | - | - | 54 | - | - | - | - | - | - | - | - | - | - | 73 | - | - | - | - | - | - | - |
| Marala | - | - | - | - | - | - | - | - | - | - | 42 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Mangla | 53 | 53 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 45 | - | - | - | - | - | - | - | - |
| Mianwali | 42 | - | - | - | - | - | - | - | - | - | - | - | - | 116 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Gujranwala | - | 64 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Gujrat | - | 58 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Layyah | - | - | - | - | - | - | - | - | - | - | - | - | - | 42 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Shorkot | - | - | - | - | - | - | - | - | - | - | - | - | - | 40 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Palku | - | 88 | - | - | - | - | - | 49 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Talhata | - | - | - | - | - | - | - | - | - | 41 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Sialkot | - | 66 | 51 | - | - | - | - | - | - | 43 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 78 | - | - | - | - | - | - | - |
| Noorpur Thal | - | - | - | - | - | - | - | - | - | - | - | - | - | 45 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Dhok Pathan | - | 42 | - | - | - | - | - | - | - | - | - | 40 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Chakwal | - | 65 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| AJK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kotli | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 50 | - | - | - | - | - | - | - | - | - | - | - | - |
| Plalandri | - | - | - | - | - | - | - | - | - | - | - | - | - | 50 | - | - | - | - | - | - | - | - | - | - | 52 | - | - | - | - | - | - | - |
| Sehrakota | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

Major Rainfall Record – August 2017

| Station | Date Wise Significant Rainfall in mm (40 mm and above) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------|--|----|----|---|---|----|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | | |
| KP | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tarbela | - | 41 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 75 | - | - | - | - | - | - | - | - | |
| Kohat | - | 81 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Kund | - | 46 | - | - | - | - | - | - | - | - | - | - | - | -- | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Bannu | 40 | 82 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | -- | - | - | |
| Saidu Sharif | - | - | - | - | - | - | - | - | - | - | - | - | - | 45 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Chakdara | - | - | 41 | - | - | - | - | - | - | - | - | - | - | 45 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Risalpur | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 77 | - | - | - | - | - | - | - |
| D.I.Khan | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 64 | - | - | - | - | - | - | - | - | - | - | - | 51 | - |
| Kakul | - | - | - | - | - | 41 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Shinkiar | - | 45 | 42 | - | - | - | - | - | - | - | - | 71 | 55 | - | - | - | - | - | - | 63 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Malamjaba | - | 43 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Peshawar | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sindh | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thatta | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 46 |
| Hyderabad | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 64 |
| Karachi | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 97 |
| Sukrand | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 45 |
| Nawab Shah | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 43 |



Major Rainfall Record – September 2017

| Station | Date Wise Significant Rainfall in mm (40 mm and above) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------|--|----|---|----|---|---|----|---|---|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | |
| Punjab | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bokra | - | 46 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Said Pur | - | 45 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Jhelum | 52 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Sahiwal | 43 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Khanpur | 46 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Lahore | - | - | - | - | - | - | 60 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Mianwali | - | - | - | 61 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Sehrakota | 56 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Munawar Tawi | 68 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Zaro point | - | 49 | - | - | - | - | - | - | - | - | 43 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| AJK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kotli | 71 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Plandri | - | - | - | - | - | - | - | - | - | - | 208 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Garhi Dupatta | - | 44 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| KP | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Besham | - | - | - | - | - | - | - | - | - | - | 52 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Saidu Sharif | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 44 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Kakul | - | 40 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Sindh | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Karachi | 83 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

Annex D

To NDMA Annual Report 2017

Overseas Relief Effort (Provided) - 2017

| Country | Disaster | Period | Assistance | |
|------------------|------------|------------------|--------------|----------|
| | | | Items | Quantity |
| Republic of Iran | Earthquake | 17 November 2017 | Tents | 165 |
| | | | Tarpaulins | 200 |
| | | | Blankets | 1,050 |
| | | | Plastic Mats | 200 |

Annex E

To NDMA Annual Report 2017

NDMA Stocks

| Items | A/U | Stock Held | | Issued During the Year |
|-----------------------|-----|--------------|---------------|------------------------|
| | | January 2017 | December 2017 | |
| Tents | Nos | 76,936 | 70,777 | 6,175 |
| School Shelter Tent | Nos | 3,806 | 3,806 | - |
| Blanket | Nos | 83,912 | 82,662 | 1,250 |
| Plastic Mat | Nos | 101,419 | 91,019 | 10,400 |
| Tarpaulin | Nos | 55,493 | 55,763 | 450 |
| First Aid Kit | Nos | 10,000 | 10,000 | - |
| Life Jacket | Nos | 495 | 495 | - |
| Boat with OBM | Nos | 06 | 06 | - |
| De-Watering Pump | Nos | 90 | 90 | - |
| Generator 2 – 120 KVA | Nos | 926 | 922 | 04 |
| Sleeping Bag | Nos | 10,355 | 10,355 | - |
| Aqua Tab | Nos | - | - | - |

Note: Difference between issue and opening/ closing balance is due to receipt (procurement and / or donation) during the year.

Annex F

To NDMA Annual Report 2017

Financial Outlay NDMP

| Serial | Interventions | Indicative Cost | Responsibilities |
|--------------|--|---|--|
| 1. | Establish Institutional and Legal System for Disaster Management | 2.30 | NDMA/F/G/S/PDMAs |
| 2. | Prepare Disaster Management Plans at all Levels | 3.00 | NDMA/F/G/S/PDMAs, Federal Ministries, Departments |
| 3. | Establish National Hazard & Vulnerability Assessment | 24.00 | NDMA, PDMA, GSP, ERR, GCISC, FFC, PMD, WAPDA |
| 4. | Establish Multi-Hazard Early Warning & Evacuation Systems | 188.50 | PMD, FFC, SUPARCO, WAPDA, PID |
| 5. | Promotion of Training, Education and Awareness in relation to DM | 64.30 | NIDM/NDMA, Civil Defense, Provincial Education Departments |
| 6. | Disaster Management Awareness | 14.00 | NDMA, F/G/S/PDMAs, DDMA |
| 7. | Infrastructure Development for DRR | 707.60 *(1707.60) Revised | FFC, PID, WAPDA, Ministry of Ports & Shipping, Ministry of Health, Planning Commission |
| 8. | Mainstreaming DRR into Development | 1.20 | Ministry of Planning, Development and Reforms, NDMA, F/G/S/PDMAs |
| 9. | Establish National Emergency Response System | 31.00 | NDMA, F/G/S/PDMAs, DDMA, M/O IT, M/O information, Ministry of Communication, Ministry of Water & Power |
| 10. | Capacity Development for Post Disaster Recovery | 5.00 | NDMA, F/G/S/PDMAs, Research Institutions |
| Total | | 2040.90 Revised owing to finalization of NFPP-IV (National Flood Protection Plan) | |

Annex G

To NDMA Annual Report 2017

NDMP – Implementation Progress

| Intervention | | Progress |
|--------------|------------------------------------|---|
| No | Subject | |
| 1 | Institutional Strengthening | <ul style="list-style-type: none"> National Disaster Management Fund established and operational. NDMP Implementation Steering Committee notified. |
| 2 | Plans | <ul style="list-style-type: none"> Monsoon Contingency Plans regularly made at National, Provincial and District levels. National Contingency Plan for Industrial/ Technical Disasters. Standing Operating Procedures in emergencies (Urdu). Nuclear Emergency Management Plan (NEM). National Flood Protection Plan - NFPP IV formulated. Training manual in Gender Mainstreaming prepared. Policy Guidelines on Vulnerable Groups in Disasters. National Gender & Child Cell Framework. National Fire and Life Safety Codes launched. Act for enforcement of buildings codes under legal vetting. Multi-Sector Initial Rapid Assessment (MIRA) Guidelines. |
| 3 | Risk Assessment | <ul style="list-style-type: none"> National Working Group on MHVRA formed. MHVRA completed in five districts of Sindh (Thatta, Badin, Tando Allah Yar, Tando Muhammad Khan and Mirpur Khas) and five districts of Punjab. MHVRA of Chitral is under progress. National Industrial Hazard Risk Assessment of the Country is under progress. |
| 4 | Early Warning | <ul style="list-style-type: none"> Facilitated PMD in Upgrading EWS. Satellite based Integrated Flood Alert System (IFAS). Replacement of Automatic Weather Stations (AWS). Establishment of Specialized Medium Range Forecasting Center (SMRFC). Upgradation of existing FEWS Computer model. Replacement of Karachi & Islamabad Weather Radars. Facilitated PMD in Upgrading EWS. ECMWF product for Enhanced Medium Range Forecasting. Flash Flood Guidance System. Tsunami EWS (Sindh & Baluchistan Coast). River Flow Inundation Model (RRI) for Western Rivers. Monitoring of Real time river flow situation enhanced (Visualization tool). Revision of Mangla Dam SOPs for Flood routing. SMS based Early Warning System for communities established with the assistance of PTA and Cellular Companies. |

| | | |
|------|---|--|
| 5&6 | Disaster Education and Awareness | <ul style="list-style-type: none"> • Training and capacity building of government officials, academia and civil society in DRM through the National Institute of Disaster Management, 31 training courses organized. • Integration of DRR Component in Academic Curricula. • Recognition of Bachelor and Master Level Programme on DM by HEC. • National, regional, international conferences & workshops regularly held. • Celebration of 8th October as National Disaster Awareness Day. • Campaign on Safer Schools, Hospitals & Cities. • DRR awareness and Education material for Children Developed with collaboration of UNICEF. • 14 x PSMs developed. • Stage show of 4 x episodes "Tayar Pakistan" aired on PTV. |
| 7 | Infrastructure Development / Rehabilitation | <ul style="list-style-type: none"> • Significant Rehabilitation & Reconstruction of 2010-2014 floods damaged infrastructure completed. • Construction of over 300 new flood protection / river training works completed. • Rehabilitation plan for Awaran Earthquake 2013 in progress, implementation of Phase I completed. |
| 8 | DRR Mainstreaming | <ul style="list-style-type: none"> • DRR compliance made mandatory for recovery and reconstruction strategies & programmes. • Comprehensive feasibility study on Disaster Risk Insurance Framework in the context of Pakistan conducted with collaboration of CDKN - LEAD Pakistan and technical support of Munich Climate Initiative. • Demand pilot study on Disaster Risk Insurance in selected districts. • Establishment of National Disaster Risk Management Fund completed in which NDMA is a major stakeholder. |
| 9&10 | Disaster Preparedness & Emergency Response | <ul style="list-style-type: none"> • Multi Sectoral Initial Rapid Assessment (MIRA) tool was developed in collaboration with UNOCHA and tested in Floods 2014, final version launched. • Recovery Need Assessment (RNA) was test piloted in flood affected districts in 2014, the tool is being further developed in collaboration with UNDP. • Simulation Exercise for Punjab and entire Country conducted in 2014 & 2015. • Minimum Cash Compensation Package as per NDM Act, 2010 reviewed and guidelines prepared. • Formulation of cash dispensation Policy Guidelines initiated. • Community Based Disaster Risk Management (CBDRM) activities conducted under Buildings Disaster Resilient Pakistan project. • 6 x Humanitarian Response Facilities (HRF) established at strategic locations and work on remaining two in progress. • Two Industrial Hazard Mock Exercises conducted. |

Annex H

To NDMA Annual Report 2017

National Institute of Disaster Management (NIDM)

| No of Courses | Participants | | | |
|---------------|--------------|--------------|----------|-------|
| | Government | INGOs / NGOs | Academia | Total |
| 6 | 208 | 68 | 11 | 287 |

Types of Courses

| Serial | Course | Dates | Participants |
|--------|--|----------------------|--------------|
| 1. | Government Officials Capacity Building Training / Exercise – Karachi Division | 10 – 12 January 2017 | 36 |
| 2. | Government Officials Capacity Building Training / Exercise – Rawalpindi Division | 24 – 26 January 2017 | 20 |
| 3. | Government Officials Capacity Building Training / Exercise – Poonch Division | 15 – 17 May 2017 | 163 |
| 4. | Government Officials Capacity Building Training / Exercise – Faisalabad District | 22 – 24 May 2017 | |
| 5. | Government Officials Capacity Building Training / Exercise – Ghotki District | 13 – 15 July 2017 | 36 |
| 6. | Government Officials Capacity Building Training / Exercise – Kashmore District | 25 – 27 July 2017 | 32 |
| Total | | | 287 |

Annex I

To NDMA Annual Report 2017

Foreign Trainings / Workshops / Meetings

| Name | Designation | Dated | | Purpose | Country |
|----------------------------|--------------|-----------|-----------|--|------------|
| | | From | To | | |
| Lt Gen Omar Mahmood Hayat | Chairman | 24 May 17 | 26 May 17 | 5th UN Global Platform for Disaster Risk Reduction | Mexico |
| | | 18 Jul 17 | 21 Jul 17 | Invitation from Minister for Emergency Situations, Republic | Azerbaijan |
| | | 28 Aug 17 | 31 Aug 17 | Strengthening Capacity of Govt and Local Humanitarian Org on Preparedness for Response in Asia | Thailand |
| | | 10 Oct 17 | 12 Oct 17 | Fifth Session of the Committee on Disaster Risk Reduction | Thailand |
| | | 6 Nov 17 | 8 Nov 17 | 2017 UN Climate Change Conference, COP 23 | Germany |
| | | 5 Dec 17 | 6 Dec 17 | Regional Consultative Group on Humanitarian Civil-Military Coordination for Asia and the Pacific | Singapore |
| Major General Asghar Nawaz | Ex-Chairman | 13 Feb 17 | 16 Feb 17 | 2nd ASEAN Regional Conference on School Safety | Thailand |
| Brig Mukhtar Ahmed | Member (Ops) | 24 Apr 17 | 26 Apr 17 | Gender in Disaster Risk Reduction (GDRR-I) | Thailand |
| | | 18 Jul 17 | 21 Jul 17 | Invitation from Minister for Emergency Situations, Republic | Azerbaijan |
| | | 28 Aug 17 | 31 Aug 17 | Strengthening Capacity of Govt and Local Humanitarian Org on Preparedness for Response in Asia | Thailand |
| Mrs Raheela Saad | Member (A&F) | 24 May 17 | 26 May 17 | 5th Global Platform for Disaster Risk Reduction | Mexico |
| | | 22 May 17 | 2 Jun 17 | IDI-ASOSAI Blended Learning Specialist Certification Programme | Myanmar |
| | | 26 Jul 17 | 28 Jul 17 | Regional Seminar on Gender Equality in Climate Change and Disaster Risk Management | Korea |

| Name | Designation | Dated | | Purpose | Country |
|-----------------------------|--------------------|-----------|------------|---|-------------|
| | | From | To | | |
| Mr. Waqar Ud Din Siddiqui | Director (P&IC) | 24 May 17 | 26 May 17 | Application of Space Technology in Monitoring and Managing Risks | India |
| | | 20 Sep 17 | 22 Sep 17 | Disaster Resistance Construction Technologies | India |
| Mr. Safwan Ullah Khan | Director (Finance) | 24 May 17 | 26 May 17 | Application of Space Technology in Monitoring and Managing Risks | India |
| | | 25 Oct 17 | 27 Oct 17 | Community Based Approaches to Flood Management | India |
| Mr. Muhammad Zafar Iqbal | Director (R&R) | 03 Jul 17 | 8 Jul 17 | 29th South Asia Teaching Session (SATS) on International Humanitarian Law (IHL) | Colombo |
| Maj ® Zeeshan Haider | DD (Admin) | 09 Jan 17 | 25 Feb 17 | Country Focused Training on Disaster Risk Reduction (A) | Japan |
| Mrs. Affaf Fiaz Rasul Malik | DD (Policy) | 16 Jan 17 | 2 Feb 17 | Training Program for Young Leaders for Pakistan / Disaster Management Course-2016 | Japan |
| Maj Imran Rafique | DD (Response-I) | 03 Jul 17 | 8 Jul 17 | 29th South Asia Teaching Session (SATS) on International Humanitarian Law (IHL) | Colombo |
| Major M. Amjad Iqbal | DD (Response-I) | 21 Oct 17 | 1 Nov 17 | Training Workshop-cum-Experts Meeting on Addressing Disaster Risks Specific to South and Southwest Asia | Nepal |
| | | 17 Dec 17 | 21 Dec 17 | Asia Leadership Forum for Business Resilience | Thailand |
| Lt.Cdr Eusaf Viqar | DD (Response-II) | 07 Aug 17 | 18 Aug 17 | Humanitarian Operation Seminar (HOS) | Australia |
| Mr. Saqib Mumtaz | DD (Media) | 8 Aug 17 | 11 Aug 17 | Advance Search & Rescue Techniques | India |
| Engg Syed Ayub Shah | DD (ICT) | 30 Aug 17 | 31 Aug 17 | Asian preparedness Partnership Communications Strategy Development Workshop | Thailand |
| Mr. Nafees Ur Rehman | DD (Accts) | 20 Sep 17 | 22 Sep 17 | Disaster Resistance Construction Technologies | India |
| Mr Abdul Latif | AD (DRR) | 09 Jan 17 | 25 Feb 17 | Comprehensive Disaster Risk Management (A) | Japan |
| Mr. Akbar Bacha | AD (Log) | 10 Jan 17 | 8 April 17 | Call for Application "ADRC Visiting Researcher Program FY 2016 | Kobe, Japan |
| Mr. Tahir-ur-Din, | AD (DRR) | 06 May 17 | 21 May 17 | Third Country Training Program on Disaster Risk Management and building Disaster Resilient Communities | Turkey |



| Name | Designation | Dated | | Purpose | Country |
|------------------------|---------------|-----------|-----------|--|---------|
| | | From | To | | |
| Ms. Bushra Hasan | AD (NIDM) | 06 May 17 | 21 May 17 | Third Country Training Program on Disaster Risk Management and Building Disaster Resilient Communities | Turkey |
| Mr, Nasurullah Brohi | AD(Admin) | 21 Jun 17 | 23 Jun 17 | Short Range Regional Early Warning System | India |
| Ms Amna Shuja | AD (GCC) | 21 Jun 17 | 23 Jun 17 | Short Range Regional Early Warning System | India |
| Syed Shafi Agha | AD (Proj) DRR | 25 Jul 17 | 27 Jul 17 | ARF Workshop on Earthquake Emergency Response and Urban Search and Rescue (USAR) Capacity Building | China |
| Mr. Maqsood Ullah Khan | AD (ICT) | 20 Sep 17 | 22 Sep 17 | Disaster Resistance Construction Technologies | India |
| Mr. Ahmed Naveed Malik | AD (R&R) | 25 Oct 17 | 27 Oct 17 | Community Based Approaches to Flood Management | India |
| Mrs. Maryam Taj Din | AD (GCC) | 25 Oct 17 | 27 Oct 17 | Community Based Approaches to Flood Management | India |

Annex J

To NDMA Annual Report 2017

Procurement from NDMF During Year 2017

| Serial | Items | Quantity | Amount (PKR) |
|--------------------|--|----------|------------------|
| 1. | NDMA Jackets | 150 | 392,535 |
| 2. | NDMA Caps | 150 | |
| 3. | NDMA Special Caps | 15 | |
| 4. | NDMA Laptop Bags | 25 | |
| 5. | Payment to Consultant for revision of NDRP | - | 1,045,723 |
| Grand Total | | | 1,438,258 |

EVENT CALENDAR - 2017



Islamabad 19 April 2017: Visit to NDMA warehouse



Gilgit 3 May 2017: NDMA handed over Heavy Earth Moving Machinery to GBDMA



Gilgit 3 May 2017: NDMA handed over Heavy Earth Moving Machinery to GBDMA



Peshawar 11 May 2017: Monsoon Preparatory Review Meeting by PDMA KP



Lahore 15 May 2017: Monsoon Preparatory Review Meeting by PDMA Punjab



Karachi 18 May 2017: Meeting with Chief Minister of Sindh, Syed Murad Ali Shah



Islamabad 25 May 2017: National Stakeholder Technical Consultation Preliminary Results on Integrated Context Analysis (ICA)



Cancun Mexico 22-26 May 2017: NDMA delegation participation in Global Platform for Disaster Risk Reduction

EVENT CALENDAR - 2017



Islamabad 10 June 2017: Chairman NDMA addressing the participants of National Monsoon Preparedness Conference-2017



Islamabad 16 June 2017: Call on by Ambassador of Tajikistan, H.E Jononov Sher Ali



Islamabad 16 June 2017: Call on by Secretary Climate Change, Mr. Abu Ahmed Akif



Islamabad 20 June 2017: NDMA-UN Quarterly Coordination Conference held at UNOCHA2



Islamabd 23 June 2017: Meeting on National Industrial Hazard Risk Assessment



Islamabad 10 July 2017: Launching of Regional Toolkit on Heat Wave Management



Islamabad 7 July 2017: Call-on by Ex Chairman NDMA Maj Gen (R) Asghar Nawaz HI(M)



Islamabad 05 July 2017: Chairman NDMA and Ambassador of Cuba to Pakistan signed MoU on disaster management

EVENT CALENDAR - 2017



Islamabad 12 July 2017: Visit of Chinese Aid Review Team to NDMA



Islamabad 26 July 2017: Pre-COP23 Consultative Dialogue



Islamabad 31 July 2017: Launching of Multi-Sector Initial Rapid Assessment (MIRA) Guidelines for Disaster Management



Ghotki 13-15 July 2017: Capacity Building Training for Government Officers Organised by NIDM



Islamabad 2 August 2017: Consultative Meeting on Industrial Hazard Assessment with concerned Stakeholders



Islamabad 2 August 2017: Meeting with World Bank Mission on Disaster Risk Management and Climate Change



Islamabad 9 August 2017: Meeting with Ms. Hadia Nusrat Gender and Equality Advisor for humanitarian in DRR, UN Women Pakistan



Quetta 10 August 2017: Briefing by PDMA Balochistan

EVENT CALENDAR - 2017



Karachi 12 August 2017: Chairman NDMA visits RGDO Karachi



Islamabad 12 September 2017: Call on by Ambassador of Italy to Pakistan Stefano Pontecorvo



Islamabad 18-20 September 2017: Workshop on Preparedness for Gender Based Violence in Emergencies



Islamabad 25 August 2017: NDMA & LEAD Pakistan signed MoU for Collaboration on Mainstreaming Vulnerable Groups in DRR



Islamabad 26 September 2017: Meeting with World Bank Mission



Islamabad 26 September 2017: Meeting with Head of Advisory Service, HELVETAS Swiss Inter Corporation



Bangkok 29 August 2017: NDMA Participation in Launching Ceremony of Asian Preparedness Partnership (APP)



Islamabad 8 September 2017: Meeting with WHO Independent Oversight and Advisory Committee (IOAC) to Pakistan

EVENT CALENDAR - 2017



Muzaffarabad 28 September 2017: Briefing by DG State Disaster Management Authority (SDMA)



Muzaffarabad 28 September 2017: Briefing by Rescue 1122, State Disaster Management Authority (SDMA)



Islamabad 8 October 2017: Chairman Planning Commission of Pakistan Mr. Sartaj Aziz Addressing during the Commemoration of National Resilience Day 2017



Islamabad 8 October 2017: During the Commemoration of National Resilience Day 2017



Islamabad 8 October 2017: Chairman NDMA Signing the Pledge Wall during the Commemoration of National Resilience Day 2017



Islamabad 8 October 2017: Drawing Competition held during the Commemoration of National Resilience Day 2017



Islamabad 8 October 2017: During the Commemoration of National Resilience Day 2017



Islamabad 6 October 2017: NDMA and Oxfam GB Signed Memorandum of Cooperation

EVENT CALENDAR - 2017



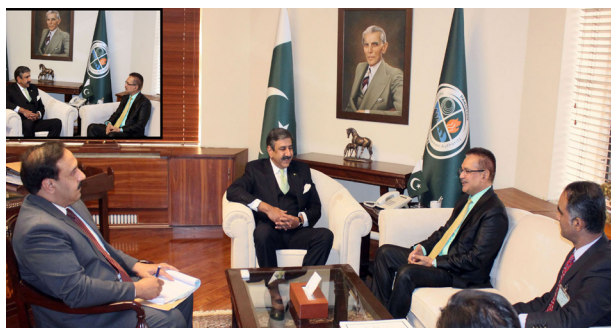
Islamabad 26 October 2017: Visit of African Asian Rural Development Organisation (AARDO) delegates to NDMA



Islamabad 17 October 2017: Launching Ceremony of Integrated Context Analysis (ICA)



Islamabad 6 December 2017: Orientation visit of 47th Inland Study Tour



Islamabad 30 October 2017: Call on by Additional secretary General Dr. Manoj Khan, African Asian Rural Development Organization (AARDO)



Lahore 16 November 2017: Visit of Rescue 1122 Punjab Lahore



Lahore 16 November 2017: Visit of Rescue 1122 Academy Lahore



Islamabad 23 November 2017: Meeting with former Ambassador to the Federal Republic of Germany Mr. Shahid A. Kamal



Islamabad 14 November 2017: Training of Trainers on MIRA Guidelines Organised by NDMA and UNOCHA

EVENT CALENDAR - 2017



Islamabad 30 November 2017: NDMA and Federal Directorate of Education (FDE) Signed MoU to Scale-up PSSF



Islamabad 5-7 December 2017: 20th Sustainable Development Conference by SDPI Pakistan



Singapore 5 December 2017: NDMA Participated in RCG 3rd Session - Humanitarian Civil-Military Coordination Asia and the Pacific



Islamabad 7 December 2017: Visit of Participants of 22nd Senior Management Course to NDMA



Islamabad 12 December 2017: Launching Ceremony of National Action Plan for Implementation of Bangkok Principles for Health



Islamabad 12 December 2017: Visit of 'Junior Diplomats of 25th Junior Diplomatic Course' to NDMA



Islamabad 23 November 2017: Meeting with officials of Ministry of Finance and Economic Affairs Division for considering Disaster Risk Financing Mechanism



Islamabad 29 November 2017: NDMA and Care International Pakistan Signed MoU for Gender in Emergencies and Building Resilience in Pakistan

EVENT CALENDAR - 2017



Islamabad 14 December 2017: Meeting with Officials of Asian Development Bank (ADB)



Islamabad 13 December 2017: Third UN Coordination Conference



Islamabad 15 December 2017: Consultative Meeting on Building on Social Protection Systems



Islamabad 18 December 2017: NDMA and UNICEF Signed Work Plan Year 2018-19



Islamabad 21 December 2017: Introductory meeting with JICA experts



Islamabad 14 December 2017: In House Launching Ceremony of Guidelines for Minimum Standards of Relief in Camp



Islamabad 22 December 2017: Meeting with UN Under Secretary General and Executive Secretary, Ms Shimshad Akhtar



Islamabad 15 December 2017: NDMA and BISP Signed a Letter of Understanding on Towards a Shock Responsive Social Protection System





National Disaster Management Authority

Prime Minister's Office
Government of Pakistan
www.ndma.gov.pk