PROGRESS REPORT: FIRST QUARTER 2013

Reporting Period:	October 1, 2012 to December 31, 2012
Organization:	iMMAP
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Program Title:	Common Operating Picture to Strengthen the Disaster Management System in Pakistan
Country/Region:	Pakistan
Grant USD Total:	$2,592,749.00

OVERVIEW

The primary objective of this project was to strengthen the Information Management [IM] capacity of Provincial and Regional Disaster Management Authorities [DMAs] in Pakistan and to provide all related humanitarian responders with effective methods for reliably capturing, reporting, sharing, and analysing information concerning the humanitarian situation according to baseline indicators and population needs. This crucial Humanitarian Information Management [HIM] support was to be provided via an integrated approach through the DMA framework.

With the negative pressure from NDMA on the Provincial and Regional DMAs to stop using iMMAP resources, the ultimate goal of supporting the DMA structure in Pakistan will not be reached by the end of the project if the status quo at NDMA is maintained.

This reporting period has seen sustained political pressure from the National Disaster Management Authority [NDMA] on the Provincial and Regional DMAs to stop using iMMAP resources, even though the

Provincial and Regional DMAs expressed an interest (in writing) in January 2012 for the continuation of the support. Consequently all IM units were closed in the previous reporting period.

NDMA has continued to exert pressure on iMMAP to close all its activities, even after the closure of all IM units in the provinces and regions. This pressure culminated with an article in the DAWN newspaper which stated that iMMAP was a security threat to Pakistan, and was conducting illegal mapping activities in Pakistan. iMMAP responded to the allegations and requested DAWN to allow iMMAP the space to respond in its publication. Nothing has been heard from DAWN since, and iMMAP has not received any response regarding the article and the response. iMMAP has since been visited by Military Intelligence and Inter-Services Intelligence personnel, and these meetings have gone well, and the agencies seem at ease with the work iMMAP is doing.

As mentioned in the previous reporting period, since the closure of the IM units, iMMAP has identified new products and opportunities that would be of benefit to the wider humanitarian community, including United Nations (UN) agencies, International and National Non-Governmental Organizations (NGOs). Consultants have been engaged collecting data and information for compilation of district profiles, as well as working on finalizing and completely documenting the suite of IM tools that have been developed.

Major developments that occurred during this reporting period are following:

- Launch of the GeoPakistan Metadata Portal. The objectives of the portal are:
    - Identify what information exists where, and identify who is the actual custodian of that information to eliminate custodianship and ownership issues, especially for spatial and statistical data of national significance;
    - Availability of open source data through one public portal resulting in enhanced understanding about the availability, updates, and quality of both spatial and non-spatial open source data;
    - Improved users perspective about each piece of information's use, restrictions, and applications;
    - Identify unidentifiable or un-sourced data, its quality, and its utilization;
    - Eliminate misleading and misguided selling and purchasing of both spatial and non-spatial data by unauthorized individuals or organization.
- Continuation of support to Sindh Relief Department [SRD]. Work with SRD has been extremely positive and SRD leadership sees the benefits of IM and mapping support. Support to SRD has been extensive following the September 2012 floods in Sindh.
- A Disaster Risk Reduction workshop was held, in collaboration with Hope 87 and under the umbrella of the Pakistan Humanitarian Forum [PHF]. The main purpose of the workshop was to provide the "Essentials of a Community Based Disaster Risk Management (CBDRM) based on participant learning's and best practices".

- District profiles. To date iMMAP has completed district profiles for 24 flood 2012 most affected districts in Pakistan and is in the process of completing another 8 district profiles which are recognized by government and humanitarian committee as emergency prone districts. This has been an extremely labour intensive exercise as data had to be sourced from a wide range of sources, compiled and analyzed. Feedback from humanitarian (national and international) organisations has been positive, and requests for profiles of additional districts have been received.

- Daily Emergency Reports. iMMAP continued to provide daily reports on the overall situation in Pakistan during the monsoon season and provided to the humanitarian community. Daily reports can be found on the DRR portal at http://drrpakistan.pk/first-level/dear-sir-2/. These reports contained updated information on the Monsoon situation and daily images of the flood from satellite imagery via OASIS Web. Sindh Relief Department have been actively using OASIS Web on a daily basis to have an update of the flood situation.

This document package provides progress targeted, achieved and updates against project components and indicators established through the Project Monitoring & Evaluation Plan [PMEP].

This report (Appendix-A) covers the period from October 1, 2012 to December 31, 2012. Appendix B is the draft IM needs assessment for NDMA, and Appendix C is the Minutes of the DRR workshop meeting, and Appendix D contains the draft workshop report. The final report will be shared upon completion.

APPENDIX-A – Quarterly Progress Report - Common Operating Picture

Quarter 4

The table below highlights the original project objectives with corresponding PMEP Components.

Project Objectives	**Respective PMEP Components**
1. Establish and augment the Pakistan Disaster Management Authorities information management capacity on sustainable basis.	PMEP Component 1 & Partial Component-4
2. Increased information management capacity of the Disaster Response	PMEP Component 2 & Partial Component-4
3. Implement Information Management Structures and Systems in Seven Disaster Management Authorities	PMEP Component 3 & Partial Component-2
4. Standardized Information Management Tools and Decision Support Systems.	PMEP - Component 3
5. Identification of baseline datasets, Information Sources and Protocols for Sharing	PMEP - Component 4, 3, & Partial Component-2
6. Integration of Complementary Information Management Systems and Databases	PMEP - Component 4, 5, & Partial Component-2

The below narrative illustrate the PMEP indicators and lists progress against the established targets and the baseline. The baseline figure illustrates the status of progress against indicators since the transition of project to USAID Mission Pakistan on Apr. 16, 2011 and later the transfer of project objectives to sub-national level starting Feb. 1, 2012.

Indicator	Definition	Cumulative Targets End Q1 Project End Jan. 15, 12	Cumulative Achievements End Q1 Baseline Project Extension Starting Feb. 2012	Revised New Project Targets From Feb. 2012 to Jan. 2013	Q2 Targets	Q2 Ach	Q3 Targets	Q3 Ach	Q4 Targets	Q4 Ach	Q1 Targets	Q1 Ach	Data Sources
Project Component 1: IM Units wind-up at NDMA and continuation of IM Unit at 4 PDMAs, and 3 Regional DMA including SDMA, GBDMA, and FDMA following donor agreed and approved decentralized methodology for implementing Common Operating Picture for Disaster Management [COP-DM].													
Number of IM Staff Recruited & Deployed	Recruitment of staff for NDMA, PDMA [Sind, Punjab, Khyber Pakhtunkhwa, Balochistan], and FDMA.	**35**	**37**	**19**	**5**	**-3**	**10**	**3**	**4**	**1**	**-**	**1**	Human Resources [HR], Country Director [CD] Chief Technical Advisor [CTA], Information Management Officers [IMO], Interviews, Assessment Sheets, Contracts signed

Progress:

Recruited a qualified short-term contract employee to assist compiling the finalizing the project document and lessons learned report. Staff member will work from Jan. 1, 2013 to Jan. 31, 2013

Indicator	Definition	Cumulative Targets End Q1 Project End Jan. 15, 12	Cumulative Achievements End Q1 Baseline Project Extension Starting Feb. 2012	Revised New Project Targets From Feb. 2012 to Jan. 2013	Q2 Targets	Q2 Ach	Q3 Targets	Q3 Ach	Q4 Targets	Q4 Ach	Q1 Targets	Q1 Ach	Data Sources
Number of Infrastructure/ Equipment Deployed – Units Established	IM Unit windup at NDMA as per USAID instructions and shift of iMMAP from Serena to an independent office. Hardware, software, furniture, and additional communication, transportation requirements for IM Unit at PDMA [Sindh, Punjab, Khyber Pakhtunkhwa, Balochistan], and Regional DMAs – SDMA, GBDMA, and FDMA.	9	9	8	8	8	-		-		-		CD, NDMA Integration Officer, Chief Technical Advisor, Purchase Requests, Quotations Received, Equipment Purchased Receipts, Equipment Deployment Confirmations
Number of DMAs agreed to sustain their IM Units beyond project timeline	Number of DMAs agreement to take over IM capacity to sustain IM Units at the end of project.	4	0	7	-	-	2	2	2	0	3	1	Project Transition Advisor, CD, CTA, IMO-PMs
Progress: Only Sindh Relief Department is interested to sustain IM Unit and expand its IM and DRR activities beyond project scheduled end.													
Project Component 2: National IM Strategy & PDMAs/ FDMA IM Needs Assessment													

Indicator	Definition	Cumulative Targets End Q1 Project End Jan. 15, 12	Cumulative Achievements End Q1 Baseline Project Extension Starting Feb. 2012	Revised New Project Targets From Feb. 2012 to Jan. 2013	Q2 Targets	Q2 Ach	Q3 Targets	Q3 Ach	Q4 Targets	Q4 Ach	Q1 Targets	Q1 Ach	Data Sources
Number of IM Needs Assessments Conducted – Reports Produced	IM Needs Assessment at 4 PDMAs/ 3 Regional Disaster Management Authorities	5	4 DRAFT	7	-		4	4	3	3	-	-	CD, CTA, PDMA IMOs Questionnaires, Interviews, Draft Reports
Progress: N/A													

Indicator	Definition	Cumulative Targets End Q1 Project End Jan. 15, 12	Cumulative Achievements End Q1 Baseline Project Extension Starting Feb. 2012	Revised New Project Targets From Feb. 2012 to Jan. 2013	Q2 Targets	Q2 Ach	Q3 Targets	Q3 Ach	Q4 Targets	Q4 Ach	Q1 Targets	Q1 Ach	Data Sources
Number of National IM Strategy Document Completed – Reports Generated	National IM Strategy Report including IM Capacity Transition Strategy, Implementation Plan, and transition strategy to DMAs and USAID/ iMMAP identified and selected national humanitarian partner/s.	1	1 DRAFT	**1 FINAL**	-		-		-		**1** FINAL	**1** DRAFT	CD, CTA, PDMA IMOs Sub-National 4 PDMAs/ 3 Regional DMA Needs Assessment Drafts Existing DRAFT NDMA IM Strategy Draft Stakeholder Presentation Minutes of Meetings Final Draft Submission

Progress:

- IM strategy remains as DRAFT without custodian. APPENDIX-B

Project Component 3: Standard Information Management Tools Deployment

Indicator	Definition	Cumulative Targets End Q1 Project End Jan. 15, 12	Cumulative Achievements End Q1 Baseline Project Extension Starting Feb. 2012	Revised New Project Targets From Feb. 2012 to Jan. 2013	Q2 Targets	Q2 Ach	Q3 Targets	Q3 Ach	Q4 Targets	Q4 Ach	Q1 Targets	Q1 Ach	Data Sources
Number of Orientations for DMAs	DMAs staff and management orientation to HAIS products and services.	20	21	31	7	12	7	6	7	0	7	4	CR, CTA, IMOs Presentation Frequently Asked Questions [FAQs] Live Demos

Progress:

- Only actively supporting with Sindh Relief Department and hundreds of humanitarian partners directly.
- Successful 1-day orientations of IM products were conducted for Institute of Space Technology [IST] Karachi, Foundation University Islamabad, and Society for Advancement of Community, Health Education and Training (SACHET) Islamabad.

Indicator	Definition	Cumulative Targets End Q1 Project End Jan. 15, 12	Cumulative Achievements End Q1 Baseline Project Extension Starting Feb. 2012	Revised New Project Targets From Feb. 2012 to Jan. 2013	Q2 Targets	Q2 Ach	Q3 Targets	Q3 Ach	Q4 Targets	Q4 Ach	Q1 Targets	Q1 Ach	Data Sources
Number of MOUs signed	DMAs reach agreement with iMMAP on how to proceed forward with COP-DM objectives and implementing HAIS products and services. HAIS Products include: 1. SRF – www.srfpakistan.pk 2. NOC – www.nocpakistan.pk 3. DRR IM Portal – www.drrpakistan.pk 4. Metadata IM Portal – www.geopakistan.pk 5. OASISWeb - www.oasispakistan.pk 6. OASIS Mobile 7. DEAR-SIR 8. PESA	4	4	7	3	1	4	0	-	-	-	-	Project Transition Advisor, CD, CTA, IMOs Presentation Frequently Asked Questions [FAQs] Live Demos

Progress:

- Despite the fact that iMMAP had signed an MOU with Punjab PDMA and were close to signing the second MOU with FDMA, both requested iMMAP to shutdown their IM Units after receiving pressure from NDMA
- Due to constant pressure from NDMA Chairman, other DMAs are reluctant to send any formal communication to iMMAP at this time.

Indicator	Definition	Cumulative Targets End Q1 Project End Jan. 15, 12	Cumulative Achievements End Q1 Baseline Project Extension Starting Feb. 2012	Revised New Project Targets From Feb. 2012 to Jan. 2013	Q2 Targets	Q2 Ach	Q3 Targets	Q3 Ach	Q4 Targets	Q4 Ach	Q1 Targets	Q1 Ach	Data Sources
Number of Service Desk Personnel Deployed	Service Desk [Help Desk] setup to provide level-1 and level-2 support while rolling out HAIS Products and Services.	4	4	4	-	-	-	-	-	-	-	-	CTA, IMOs Standard Operating Procedure Personnel TORs
Progress: • No additional personnel planned or deployed. • Service Desk staff orientations are regularly conducted in relation to new IM tools and services deployments.													
Number of Master Trainers Trained	iMMAP including DMA IM Unit Personnel trained to support smooth HAIS Products and Services rollout at national and provincial levels.	9	9	9	-		-		-		-		CTA, Capacity Building Coordinator, PDMA IMOs HAIS Products and Services Training Manuals, HAIS Products and Services Presentation, FAQs, Live Demo
Progress:													

Indicator	Definition	Cumulative Targets End Q1 Project End Jan. 15, 12	Cumulative Achievements End Q1 Baseline Project Extension Starting Feb. 2012	Revised New Project Targets From Feb. 2012 to Jan. 2013	Q2 Targets	Q2 Ach	Q3 Targets	Q3 Ach	Q4 Targets	Q4 Ach	Q1 Targets	Q1 Ach	Data Sources
Number of decentralized SRF v3 deployed for DMAs	Simplified Single Reporting Format [SRF] is a de-centralized web portal for keeping a public record through a central virtual picture of humanitarian interventions throughout Pakistan.	-	-	7	1	1	2	1	4	-	-	-	HAIS Services Desk, IMOs, Developers Create Users Requests
Number of decentralized NOC v2 Deployed for DMAs	No Objection Certificate [NOC] is a Web Application for automating DMAs NOC workflow and bringing transparency to the process.	-	-	7	1	1	2	1	2	-	2	-	HAIS Services Desk, IMOs, Developers Create Users Requests
Number of DRR IM Portal users created	Disaster Risk Reduction Information Management online application is a web portal for enhanced coordination and consolidation of DRR IM tools and resources. It requires individual user account creation to gain access to system.	-	-	350	-	-	50	500	100	700	200	500	HAIS Services Desk, IMOs, Developers, Create Users Requests

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Number of Metadata IM Portal users created	Metadata Information Management application is an online web portal for enhanced spatial and relevant non-spatial data sharing. It requires individual user account creation to gain access to system.	-	-	150	-	-	-	-	50	0	100	200	HAIS Services Desk, IMOs, Developers, Create Users Requests
Number of OASISWeb users created	OASISWeb is a web-mapping portal to bridge and link between SRF non-spatial data and available spatial data to support geographic visualization and analysis of humanitarian interventions. It requires individual user account creation to gain access to system.	-	-	250	-	-	50	0	100	10	100	10	HAIS Services Desk, IMOs, Developers, Create Users Requests
Number of OAIS Mobile Client Deployed	OASIS Mobile is a field application which automatically synchronized field data on its respect server through a secure protocol as per its respective DMA desires.	-	-	50	-		-		25	0	25	0	HAIS Services Desk, IMOs, Developers, Create Users Requests

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Number of users receiving DEAR-SIR	Daily Emergency and Response – Situational Information Report	-	450	1100	500	500	250	300	250	2000	100	3000	HAIS Services Desk, IMOs, Report Compliers, M&E, and DRR Specialist, Users' feedback and request to continue subscribing and to unsubscribe.
Number of users receiving PESA	Monthly - Pakistan Emergency Situation Analysis	-	450	1100	500	500	250	0	250	2000	100	3000	HAIS Services Desk, IMOs, Report Compliers, M&E, and DRR Specialist, Users' feedback and request to continue subscribing and to unsubscribe.

Indicator	Definition	Cumulative Targets End Q1 Project End Jan. 15, 12	Cumulative Achievements End Q1 Baseline Project Extension Starting Feb. 2012	Revised New Project Targets From Feb. 2012 to Jan. 2013	Q2 Targets	Q2 Ach	Q3 Targets	Q3 Ach	Q4 Targets	Q4 Ach	Q1 Targets	Q1 Ach	Data Sources
Progress: • Twenty [20] PESA Reports [District Profiles] have been published for districts declared as part of Flood 2012 emergency in Sindh, Punjab, and Balochistan. These reports have created a huge appreciation and respect for iMMAP IM strengthening work in Pakistan. People from all walks of life have called upon iMMAP to show their appreciation. This includes donor agencies, UN agencies, NGOs, iNGOs and individuals associated with humanitarian causes. iMMAP has circulated these reports to well over 3500+ users throughout Pakistan. At this point iMMAP is updating profiles of emergency districts with the latest status of emergency. • DEAR-SIR report is updated twice a week. Since the launch of PESA District Profiles, iMMAP started received direct feedback on emergency status of districts from area humanitarian partners. DEAR-SIR is witnessing grassroots level feedback in its reporting.													
Number of support calls – issues closed on HAIS Products and Services	Numbers of queries/ requests for modifications, feedback received related to HAIS products and services.	650	800	700	100	40	200	350	200	200+	200	200+	IMOs SRF/ OASIS Service Desk Records [Calls/ Emails]
Progress: Total Number of Support Calls and emails received on iMMAP HAIS Support Desk: 700+ This includes calls for DRR, SRF, NOC, and other HAIS products related queries.													
Number of Projects Reported through SRF	Number of Projects Reported through SRF will determine the use and success of SRF	350	658	650	100	44	100	59	200	13	200	9	IMOs, SRF Admin Records

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Progress: ***Total Projects: 702*** • **Total National Emergency Flood 2010: 667** • **Total National Emergency Flood 2011: 71** • **Total Non-Emergency Development Projects: 24** • **Complex Emergency in FATA: 7** • **Sindh Provincial Rain Emergency 2012: 9** Direct POs and IPs reporting on SRF is slow due to no compliance requirement from NDMA. However, Sindh Provincial Rain Emergency has 9 reported projects on SRF. 1 Non-Emergency despite no compliance requirements from the government. iMMAP continue adding 3W and 4W reports directly into SRF to migrate information from humanitarian MS Excel sheets into a proper IM portal – SRF. SRF is UP-TO-DATE incorporating all clusters and DRR forums 3Ws and 4Ws serving the basic purpose of humanitarian data sharing. iMMAP has continuously used SRF and NOC system in its district profiling when searching for who is doing what and where.												
Project Component # 4: DMAs Required Data Identification, Acquisition, and Availability													
% of available and acquired spatial data is integrated through OASISWeb for enhanced SRF data manipulation and analysis	Acquire available provincial and national datasets and make them available through OASISWeb. This activity might not conclude during project timeline. It will continue as a proposed continuation/transition to DMAs.	70%	60%	80%	-	-	30%	20%	30%	30%	20%	20%	CR, CTA, IMO Data, IMO OASIS, IM Data Needs Assessment Table Minimum Required Data Identification Identified data availability through OASIS

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Progress:

Additional Data Sets Acquired/ Used during this period.

Sr.	SPATIAL DATASET	TYPE	SOURCES
1	Water Areas	Polygon	Digital Chart of the World
2	Water lines	Line	Digital Chart of the World
3	Administrative Boundary	Polygon	Population Census Organization
4	Global Land Cover 2009	Grid	Globcover
5	Elevation	Grid	CGIAR SRTM
6	Population	Geotiff	Asia Pop
7	Flood Extents 2012	Polygon	MODIS (extracted by iMMAP)
8	Geological Data	Polygon	USGS maps
9	Agro-Ecological Zones	Polygon	Digitized from SSOP map
10	Land Use	Polygon	Digitized from SOP map
11	Cropping Pattern	Polygon	FAO

In addition to the above datasets, OASIS Web also now includes a wide range of live datasets from a wide range of sources. These are: Daily MODIS satellite imagery showing vegetation condition, cloud cover and flooded areas, Precipitation intensity estimate updated every 30 minutes, Live Earthquake feeds, Live news feeds, Population count and density data, and daily fire data from MODIS.

Plus

- SRF 3W reports data
- SRF 4W reports data
- Disaster Risk Maps with SRF data analysis

Metadata for all the above has been created and will be available through Pakistan's Metadata Portal.

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Number of procedures/ agreements in place to share data among disaster response and management partners	Number of Inter-agency procedures and agreements in place to share data among DMAs and larger humanitarian community	3	1	7	-	-	2	1	2	0	3	30+	Project Transition Advisor, CD, CTA, IMOs IM Data Needs Assessment Table Minimum Required Data Identification Minutes of Meetings IM Strategy MoUs/ Agreements Data licensing
Progress: MOU with Sindh Relief Department is signed. 30+ strategic MOUs are signed with humanitarian partners throughout Pakistan for close collaboration on IM tools implementation and DRR capacity building. Reponses to iMMAP collaboration request was highly positive.													
% of IM and GIS coordination meetings chaired/ attended	A higher percentage will mark close coordination between humanitarian partners and its government counterparts where iMMAP is providing an IM Coordination role.	70%	90%	90%	25%	25%	25%	25%	25%	12.5%	25%	0%	CD, CTA, IMOs Participants Lists Minutes of Meetings

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% of PHF DRR coordination meetings attended	A higher percentage will mark close coordination between humanitarian partners and its government counterparts where iMMAP is providing DRR related IM Coordination role.	70%	70%	90%	25%	25%	25%	25%	25%	25%	25%	25%	CD, CTA, IMOs Participants Lists Minutes of Meetings
Progress: • UNOCHA has stopped inviting iMMAP to IM Coordination Meetings.													
% of HAIS Working Group Meetings conducted/ facilitated	Percent of HAIS Working Group Meetings conducted/ facilitated	-	-	75%	-		25%	0	25%	0	25%	0%	PTA, CR, CTA, TT, IMOs Participants Lists Minutes of Meetings Action Items
Progress: • This activity is delayed due to NDMA negative communication and loss of PDMAs support for such initiative.													

Indicator	Definition	Cumulative Targets End Q1 Project End Jan. 15, 12	Cumulative Achievements End Q1 Baseline Project Extension Starting Feb. 2012	Revised New Project Targets From Feb. 2012 to Jan. 2013	Q2 Targets	Q2 Ach	Q3 Targets	Q3 Ach	Q4 Targets	Q4 Ach	Q1 Targets	Q1 Ach	Data Sources
# of Spatial & Information Management Working Group Meetings conducted/ facilitated	Number of Spatial & Information Management Working Group Meetings conducted/ facilitated	-	-	6	-		1	0	1	0	4	0	PTA, CR, CTA, TT, IMO-PMs Participants Lists Minutes of Meetings Action Items
Progress: • This activity is delayed due to NDMA negative communication. Starting next quarter [Q1] iMMAP will call for SIM-WG in their respective provinces and regions with support from DMAs to strengthen their IM and GIS data sharing and coordination mechanics.													
National IM Conference	Call for National IM Conference	-	-	1	-		-		-	-	1	1	PTA, CR, CTA, TT, IMO-PMs Participants Lists Minutes of Meetings Action Items
Progress: • iMMAP co-hosted and chaired DRR Workshop with HOPE87 under PHF umbrella, which included participants from both public and humanitarian sector. Minutes of Meetings attached in APPENDIX-C and the draft workshop report in APPENDIX-D.													

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Provincial/ Regional IM Workshops	Call for Provincial IM Workshops	-	-	5	-	-	1	0	2	0	2	1	PTA, CR, CTA, TT, IMO-PMs Participants Lists Minutes of Meetings Action Items
Progress: • Successful 1 day orientations of IM products were conducted for Institute of Space Technology [IST] Karachi, • iMMAP participated in Khyber Pakhtunkhwa University of Peshawar DRR Day Celebration and demonstrated its DRR and IM capacity university faculty, students, and in a exclusive meeting to the university's voice chancellor. The VC has shown serious interest in working with iMMAP.													
% of Metadata cataloging is completed for both spatial and non-spatial data	Percentage of Metadata/ Data cataloging is completed for the DMAs identified spatial and non-spatial information to facilitate in prompt disaster management/ containment scenarios	60%	50%	75%	25%	25%	25%	25%	25%	15%	-	40%	CR, CTA, IMO GIS, Email Communications Telephone Calls Record Minutes of Meetings Metadata hardcopy Metadata sheets

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Progress: • All metadata is now available for larger public benefit through www.geopakistan.pk													
Humber of identified DMAs and Humanitarian Partners oriented and trained in the use of HAIS products	Number of identified DMAs and Humanitarian Partners which are aware of HAIS products and are trained its utilization.	**200**	**200**	**200**	**-**		**50**	**200**	**50**	**50+**	**100**	**100+**	CR, CTA, IMOs, TT User Manual Online Help Information Explorer Orientation Orientation/ Training Participants List
Progress: Hundreds of humanitarian agencies personnel are trained in DRR and IM Capacity especially in the use of SRF and DRR portals to extract relevant information and share information among each other for better DRR/ DRM activities. Further capacity has been built at selected academic institutions.													
Project Component # 5: IM Capacity Development													
Number of identified DMAs & humanitarian agencies personnel trained in HAIS Products	To quantify the total number of personnel identified at DMAs trained in the use of HAIS products: DMA= 7x7=49 Other Govt. Departments: 51 Humanitarian Partners = 1600	**570**	**1500**	**1700**	**500**	**600**	**300**	**300**	**400**	**400+**	**500**	**500+**	CTA, TT, IMO OASIS, Master List of Trainees Trainings Delivered Training Assessment Sheets

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Progress:

DRR and IM Training material is revised following hundreds of feedback to expand 1 day training program to a 2 days training program at minimum.

iMMAP has received capacity building requests from hundreds of agencies and individuals for DRR and IM trainings, mapping, and even reaching out communities directly. iMMAP also conducted a DRR/IM training in collaboration with HOPE87 for Higher Education Commission:

Location	Scheduled Date	DRR Training Location	Scheduled Date
Islamabad	04 - 05 Sep 2012	Naseerabad	09 - 10 Oct 2012
Islamabad	11 - 12 Sep 2012	Bagh	10 - 11 Oct 2012
Lahore	18 - 19 Sep 2012	Shaheed Benazir Abad	10 - 11 Oct 2012
Hyderabad	18 -19 Sep 2012	DI Khan	16 - 17 Oct 2012
Peshawar	19- 20 Sep 2012	Tasp Panjgoor	16 - 17 Oct 2012
Quetta	19 - 20 Sep 2012	Haveli	17 - 18 Oct 2012
Gilgit	25 - 26 Sep 2012	Hyderabad	17 - 18 Oct 2012
Muzafarabad	25 - 26 Sep 2012	DG Khan	23 - 24 Oct 2012
Nowshehra	02 - 03 Oct 2012	Rajanour	25 - 26 Oct 2012
Sukkur	02 - 03 Oct 2012	Mirpur Khas	29 - 30 Oct 2012
Multan	03 - 04 Oct 2012	Mansehra	29 - 30 Oct 2012
Bahawalpur	05 - 06 Oct 2012	Jaffarabad	31 Oct - 1 Nov 2012
Mardan	09 - 10 Oct 2012	Thatta	05 - 06 Nov 2012
Bannu	05 - 06 Nov 2012		

Indicator	Definition	Cumulative Targets End Q1 Project End Jan. 15, 12	Cumulative Achievements End Q1 Baseline Project Extension Starting Feb. 2012	Revised New Project Targets From Feb. 2012 to Jan. 2013	Q2 Targets	Q2 Ach	Q3 Targets	Q3 Ach	Q4 Targets	Q4 Ach	Q1 Targets	Q1 Ach	Data Sources
% of project transition strategy achieved	Percentage of project delivers transited to DMAs and USAID/ iMMAP identified/ selected local humanitarian partner/s.	-	-	**75%**	-	-	-	-	**25%**	**0**	**50%**	**0**	CTA, TT, IMO OASIS, Master List of Trainees Trainings Delivered Training Assessment Sheets
Progress: At this time no serious custodian has shown formal interest in acquiring and maintaining IM capacity. However, many academic institutions are interested to sustain such capacity. This will be discussed and proposed to USAID for the future transition of the project, as part of exit strategy.													
Number of Lessons Learned documented	Number of Lessons Learned documented	**75%**	**45%**	**75%**	-	-	**25%**	**25%**	**25%**	**25%**	**25%**	**25%**	CTA, PTA, IMOs IM Needs Assessment SRF/ OASIS Rollout Feedback SRF/ OASIS Services Desk Training Assessment Sheets Lessons Learned Report

Indicator	Definition	Cumulative Targets End Q1 Project End Jan. 15, 12	Cumulative Achievements End Q1 Baseline Project Extension Starting Feb. 2012	Revised New Project Targets From Feb. 2012 to Jan. 2013	Q2 Targets	Q2 Ach	Q3 Targets	Q3 Ach	Q4 Targets	Q4 Ach	Q1 Targets	Q1 Ach	Data Sources
Progress: Lessons learned are documented. DRAFT version is ready, and final document to be provided in the next reporting period.													
Number of HAIS related documents provided to/ from DMAs and IMO-PMs to support smooth transition	HAIS documentation both technical and procedural.	**10**	**10**	**18**	**-**		**2**	**3**	**8**	**3**	**8**	**6**	CTA, PTA, IMO OASIS, Installation/ Configuration Manuals, System Administration Manual, Users Manuals, FAQs

Progress:

Continuous Updates are made to the following SRF/ OASIS documentation:

- SRF System -DRAFT Report
- NOC System – DRAFT Report
- DEAR-SIR – DRAFT Report
- PESA – Districts Profiles – DRAFT Report
- DRR IM Portal – DRAFT Report
- GeoPakistan – Metadata Portal – DRAFT Report

Indicator	Definition	Cumulative Targets End Q1 Project End Jan. 15, 12	Cumulative Achievements End Q1 Baseline Project Extension Starting Feb. 2012	Revised New Project Targets From Feb. 2012 to Jan. 2013	Q2 Targets	Q2 Ach	Q3 Targets	Q3 Ach	Q4 Targets	Q4 Ach	Q1 Targets	Q1 Ach	Data Sources
# of barriers and constrains are identified	Number of barriers and constrains are identified	**20**	**20**	**21**	**6**	**4**	**4**	**4**	**5**	**0**	**6**	**1**	CD, CTA, IMOs IM Needs Assessment, IM Strategy Minutes of Meetings Quarterly Reports
Progress: • NDMA Chairman's negative communication continues													
Number of alternatives are identified per identified barrier	Number of alternatives are identified per identified barrier	**18**	**20**	**21**	**6**	**4**	**4**	**4**	**5**	**0**	**6**	**1**	CD, CTA, IMOs IM Needs Assessment, IM Strategy Minutes of Meetings Final Project Report
Progress: • iMMAP strategizing its media campaign to make public aware of its good work and services.													

National Disaster Management Authority
Information Management Strategy

2010

NDMA IM Unit

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1. Acronyms

ACAPS	Assessment Capacities Project	NADRA	National Database and Registration Authority
ADB	Asian Development Bank	NCMC	National Crisis Management Cell
AJK	Azad Jammu and Kashmir	NDMA	National Disaster Management Authority
CAA	Civil Aviation Authority	NDMC	National Disaster Management Commission
COM	Component Object Modelling	NDMO	National Disaster Management Ordinance
DCO	District Coordination Officer	NEOC	National Emergency Operations Centre
DDMA	District Disaster Management Authority	NFIs	Non-food Items
DMA	Disaster Management Authority	NGOs	Non-governmental Organizations
DRM	Disaster Risk Management	NHA	National Highway Authority
DRR	Disaster Risk Reduction	NOCs	No Objection Certificates
EDO	Executive District Officer	OASIS	Operational & Situational Information System
EOC	Emergency Operations Centre	OCHA	United Nations Office for the Coordination of Humanitarian Affairs
ERC	Emergency Relief Cell	PDMA	Provincial Disaster Management Authority
ERRA	Earthquake Reconstruction and Rehabilitation Authority	PDMC	Provincial Disaster Management Commission
FAO	Food and Agriculture Organization of the United Nations	PFERP	Pakistan Floods Emergency Response Plan
FRC	Federal Relief Commission	PHED	Public Health Engineering Department
GB	GilgitBaltistan	PIA	Pakistan International Airlines
GHQ	General Head Quarters	PKR	Pakistan Rupees
GIS	Geographical Information Systems	PPAF	Pakistan Poverty Alleviation Fund
GOP	Government of Pakistan	RTE	Real Time Evaluations
HCT	Humanitarian Country Team	SMBR	Senior Members of Board of Revenues
HIM	Humanitarian Information Management	SMS	Short Message Service
HQ	Head Quarters	SOPs	Standard Operating Procedures
HTTP	Hypertext Transfer Protocol	SQL	Structured Query Language
IASC	Inter-Agency Standing Committee	SRF	Single Reporting Format
ICS	Information and Communications System	SUPARCO	Space and Upper Atmospheric Research Commission
ICT	Information and Communications Technology	UN	United Nations
IDP	Internally Displaced Persons	UNAIDS	The Joint United Nations Programme on HIV/AIDS
IFRC	International Federation of the Red Cross	UNDP	United Nations Development Programme
IM	Information Management	UNEP	United Nations Environment Programme
iMMAP	Information Management & Mine Action Programmes	UNFPA	United Nations Population Fund
IMS	Information Management System	UNHCR	United Nations High Commissioner for Refugees
IOM	International Organization for Migration	UNICEF	United Nations Children's Fund
IOs	International Organizations	USD	United States Dollars
ISDR	UN International Strategy for Disaster Reduction	VB	Visual Basic
KP	Khyber Pakhtunkhwa	WAN	Wide Area Network
LAN	Local Area Network	WASH	Water, Sanitation and Hygiene
M&E	Monitoring and Evaluation	WFP	United Nations World Food Programme
McRAM	Multi-cluster Rapid Assessment Mechanism	WHO	World Health Organization of the United Nations
MOU	Memorandum of Understanding		

Comment [i1]: KT: This version requires editi and formatting – no spell check has been conducte the fonts are all different etc. Sentences do not rea well.

DRAFT

Executive Summary Information Management Strategy

The National Disaster Management Authorityis the Federal Government Agency for designing, promoting and coordinatingnational guidelines and standards for disaster management, through all the phases of disaster management which includes relief, returns, early recovery, reconstruction and rehabilitation as well as disaster risk reduction and preparedness. Its role is multifaceted: to provide technical guidelines to all national and provincial stakeholders about formulation of disaster risk management plans, strategies and programmes; to supportprogrammes for capacity building of national, provincial and local stakeholders; and facilitate coordination amongst multiple stakeholders to ensure collaborative approaches for disaster management through all the cycles of disaster response.[1]

Information Management is critical in disaster prone countries particularly as it forms the basis forany organisations' programming, planning, implementation, and monitoring processes efficiently and effectively. Large emergencies as have been the cases in Pakistan, have multiple partners and stakeholders resulting in very large volumes of information, and the resulting critical need for the quality assurance of information to be available for decision-makers in achieving the objectives of maximizing the impact of the collective response activities. Lessons from global post disaster management and from the Earthquake in Pakistan in 2005, clearly demonstrate the need and importance of establishing a coherent, well managed coordinated information management system at all levels of disaster response; in government at the federal provincial and district levels and also amongst the key humanitarian actors and United Nations agencies.

The concept of Information Management is still not well understood. The perception that Information and Communications Technology (ICT) are similar functions is misleading. The qualifications and necessary understanding of performing IM tasks are specific. Information management requires developing program information into formats and standardized frameworks for planner's monitors and managers to analyze program cycles. The design and standardization disaggregation requires both management and technical capacity which is not software related. IM specialists must understand the needs of program and analyses data sets based on designed information gathering sheets. The lack of understanding of information management needs, has resulted in inadequate resources dedicated to the task.

Government of Pakistan has agreed to adopt the single reporting format tool for all its disaster management authorities' information management systems, and has also requested the humanitarian community funded by the Pakistan Floods Relief Early Recovery Response Plan 2010 to ensure the information management tool is adopted for its operations for the Floods 2010.

Challenging though it may be, standardizing and agreeing amongst over 134 partners, in government, international non governmental organizations, national non governmental organizations, and the United Nations agencies, will facilitate efficient and timely planning for the optimum use of acute scarce resources and the need to provide for millions speedily and effectively. Pakistan as a UN Reform Pilot Country, and also a signatory to the Paris Aid effectiveness Agenda is committed to developing a robust information management system to ensure disaster risk reduction during regular development planning and also through post disaster management.

Further Government of Pakistan is committed to developing a transparent and comprehensive information management system in which a 360 degree picture of all the stakeholders will be available to all levels of partners through all three tiers of administration. This will include the traditional UN Cluster partners, which have thus far been able to provide a partial picture of the contributions in program results and expenditure reports financially in a Disaster response program. With the single reporting format the UN cluster information management system will strengthen and reflect its expenditure reports more accurately, while programmatically a results oriented monitoring framework will be enabled; further non cluster partners contributions will also be captured in the IM system; Most importantly, the Government's contributions will also now be integrated into the

Comment [i2]: KT: this has been added by SP – it requires editing and is very ambitious, not realistic. Also, there is some confusion over the scope of the SRF.

Comment [i3]: Clear misunderstanding of the SRF

[1] NDMA *Terms of Reference for Composite Risk Assessment of Pakistan*

information management system, contributions from the federal and provincial departments/agencies ; Finally the national and international private/individual philanthropists contributions will also be captured in this information management system.

Accurate Information is the critical ingredient for policy planning and evaluation; success and failure cannot be determined without appropriate barometers. The provincial and district disaster management authorities will become an integral part of the policy planning, monitoring and evaluation process of disaster response program and preparedness. The primary objective of the disaster risk management agenda will be strengthened by ensuring the over arching capacity (s) in government will be functional to participate equally and fully in disaster management. The strategy aims to build capacity in all the disaster districts in Pakistan, giving priority first, to the 29 priority districts as a result of 2010 Floods. The national information management strategy is the framework in which Pakistan will enable its disaster management authorities and partners to work towards

DRAFT

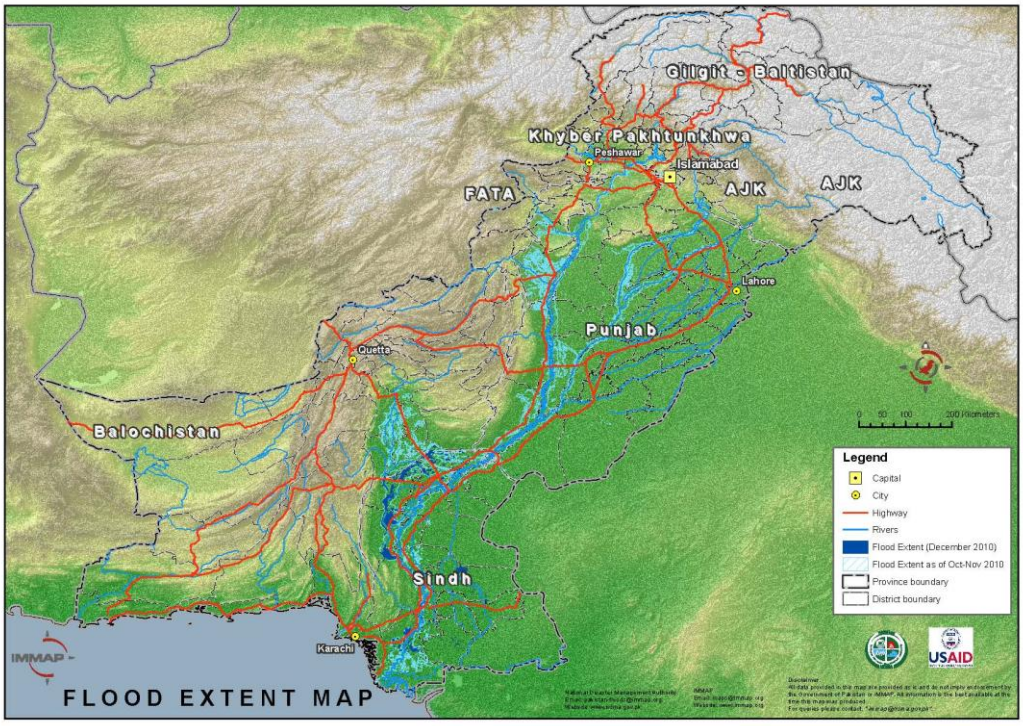
1.Introduction:

Comment [i4]: KT: This had some informatio deleted and requires some edits to allow for a mor coherent read.

Pakistan experienced unprecedented rainfall in mid – July 2010 which continued on until September of the same year. The result was massive flooding across the length and breadth of the country. Additionally, flash floods and landslides triggered by the rain caused severe damage to infrastructure in the affected areas. Entire villages were swept away, provincial road, rail & communication networks destroyed and thousands of acres of agricultural crops and land inundated.

The Floods have affected 78 districts out of a total of 121 districts in Pakistan, and around 20 million people – one-tenth of Pakistan's population – devastating villages from the Himalayas to the Arabian Sea. About 1900 men, women and children lost their lives, and at least 1.7 million homes were damaged or destroyed.

Figure 1: 2010 Pakistan Monsoon Flood Extent Map



The Pakistan National Disaster Management Authority (NDMA) rates Pakistan's exposure to natural hazards and disasters between moderate to severe[2]. Natural hazards including avalanches, cyclones and storms, droughts, earthquakes, epidemics, floods, glacial lake outbursts, landslides, pest attacks, river erosion, and tsunamis all pose risks to Pakistani society. A variety of human-induced hazards also threaten the society, economy and environment. to the 2010 floods, and since its independence, Pakistan has faced eight severe flood disasters. These floods have resulted in more than 8,000 deaths, affected more than 100,000 villages

[2] NDMA: *National Disaster Risk Management Framework* (March 2007)

and towns, and eroded some 285,000 hectares of land. The most recent of these major floods occurred in 1988 and 2002. The cumulative financial loss of these floods is estimated at about PKR 765 billion[3].[4]

According to analysis from the United Nations World Food Programme (WFP), nine major disasters have inflicted significant damage in Pakistan during the period 1926-2006 (damages and losses are detailed below inTable 1: Analysis of Natural Disasters in Pakistan). Of more import, disasters are striking more frequently today than they have in the past; it is evident that the frequency of disasters in Pakistan shows that more than one-third of the disasters occurred during 62 years between 1926 and 1988, whilst two-thirds occurred in the 17 years between 1990 and 2006.

Figure 2: Disaster trend analysis over 80 years

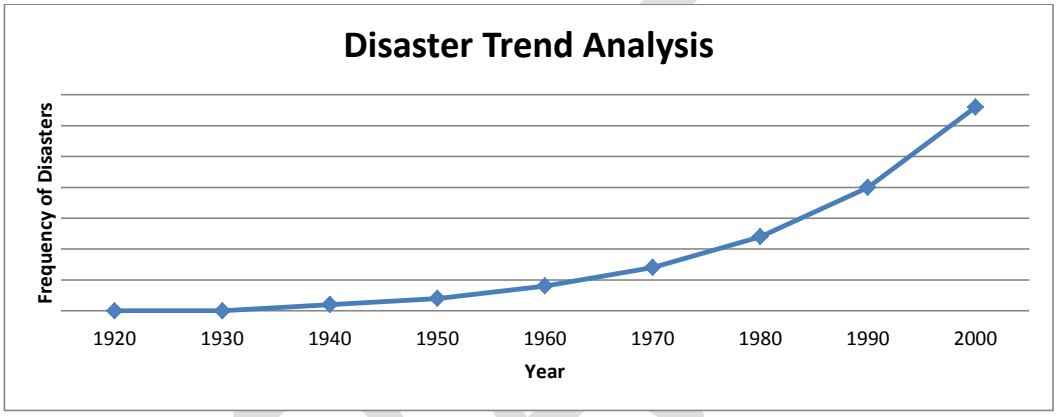


Table 1: Analysis of Natural Disasters in Pakistan[5]

No	Disaster Type	People Homeless	People Killed	People Injured	People affected	Total affected	Total Damage 000$	%	Ranking
1	Wind Storm	22,597	11,654	1,183	1,057,000	1,080,780	4,100	2	6
2	Earthquake	2,853,585	**142,812**	**88,096**	1,294,429	4,236,110	**5,019,255**	8	2
3	Flood	**8,927,685**	11,702	1,262	**38,669,447**	**47,598,394**	2,746,030	86	1
4	Land Slides	3,100	384	114	200	3,414	-	0	7
5	Famine	-	-	-	300,000	300,000	-	1	4
6	Epidemic	-	283	211	16,275	16,486	-	0	5
7	Extreme Temperature	-	1,406	324	250	574	-	0	7
8	Drought	-	223	-	2,269,300	2,269,300	2,47,000	4	3
9	Insect Infestation	-	-	-		-	-	-	8
	Total	11,806,967	168,464	91,190	43,606,901	55,505,058	8,016,385	100	
Flood 2010		1,744,471	1,984	2,946	20,184,550	20,184,550			

[3]PKR 765 billion is approximately USD 9 billion (Dec. 2010 conversion rate of 1.00 USD = 85.66 PKR)
[4]Federal Flood Commission*: Flood Protection Plan 2006* and *Pakistan Journal of Life and Social Science, Poverty and Riverine Areas: Vulnerability, Social Gaps and Flood Damages, 2008*
[5] WFP: *Analysis of Natural Disasters in Pakistan (Presented at NDMA OneUN DRM Quarterly Review November 2010)*

The table below provides an idea of the scale of damages from the 2010 Pakistan Floods in comparison with other recent humanitarian disasters. The requirement for verifiable information concerning damages, losses and needs in order to facilitate an efficient response is enormous.

Table 1: Recent Humanitarian Disasters - Comparative Statement[6]

	Pakistan Flood (Aug 2010)	Haiti Earthquake (Jan 2010)	Nargis Cyclone Myanmar (May 2008)	Pakistan Earthquake (Oct 2005)	Katrina Cyclone USA (Aug 2005)	Tsunami Indian Ocean Basin (Dec 2004)
Affected Population	*20,251,550	3,200,000	2,420,000	3,500,000	500,000	2,273,723
Area Affected (Sq Km)	*132,000	13,226	23,500	30,000	N.A.	N.A.
Deaths	*1,985	230,000	84,537	73,338	1,836	238,000
Injured	*2,865	300,000	19,359	128,309	N.A.	125,000
House-holds Damaged	*1,884,708	250,000	450,000	600,152	200,000	N.A.

** Figures based on initial assessments*

Section 1.1 What is Information Management?

The phrase 'information management' (IM) encompasses 'the various stages of information processing from production to storage and retrieval, to dissemination towards the better working of an organization; information can be from internal and external sources and in any format.'[7]

The concept of IM in smaller organisations is still not well understood. The perception that Information and Communications Technology (ICT) officers are qualified and capable of performing IM tasks while their competencies are quite different.Many see IM officers as report writers. When in fact an IM officer understands program and analyses data sets based on designed information gathering sheets. As a result of assuming this expertise as merely information technology based work inadequate resources dedicated to the task. IM officers need to have a complete understanding of the programme activities within their organizations and also an appreciation of what other organizations are doing. Only with this understanding can they fully understand the needs of the programme staff and help design the IM systems in the organization appropriately.

Comment [i5]: KT: SPU has rewritten and i doesn't read so well.

IM is critical in disaster prone countries as it forms the basis for organisations' programming, planning, implementation, and monitoring, in addition to inter-actor coordination. As such, the quality of information available to decision-makers is a crucial factor in achieving the objective of maximizing the impact of collective response activities.

Within the context of the humanitarian response cycle, (disaster risk reduction, rescue and relief, early recovery, reconstruction, rehabilitation and preparedness), information forms the basis for agency programming, planning, implementation, and monitoring, in addition to inter-agency coordination and recognition of various non-traditional actors' contributions in case of an emergency. As such, the quality of information available to decision-makers is a crucial factor in achieving the objective of maximizing the impact of collective response activities.

Comment [i6]: Repeditive could be combined with above paragraph

[6] Pakistan National Disaster Management Authority
http://www.ndma.gov.pk/Documents/flood_2010/flood_comparison.pdf
[7] Association for Information Management 2005 (See http://www.aslib.co.uk)

Table 2: Information Management Principles

The IM process requires a robust organisational structure and clear communication flows of information and data, this may be broken down into the following sequence:
Defining information requirements:
○ Well-defined operational objectives of the users of information; please add examples as requested
○ Well-defined baselines, indicators and targets. Please add an example
Data modelling:
○ Database field and value domain definitions (columns and values in database tables); either move this entire section where the examples will be so it is understood when it is read or add them here
○ Business and data validation rules (entered and analysed data is coherent and non-contradictory, e.g. numbers aggregated are measured using the same units). All users apply the same units to measure food distribution, for example, reporting by metric tonne or kilogram (defining one unit in order to compare and account cumulatively all partners distributions in a report).
Development of data collection/collation mechanisms:
○ Standardised data collection/collation tools (paper/mobile/web) based on the data model described above, i.e. using the same modality to capture standardised data;
○ Clear methodology and Standard Operating Procedures; understood roles and responsibilities of each actor in the data processing chain, e.g. Authorisation to enter new information, edit and visualise existing information. No idea what this means please explain
Data processing:
○ Processing; enabling data received in various formats to be absorbed / aligned with adopted IM structure. Explain the meaning
Data warehousing
○ Storage; management of archival and retrieval of collected data;
○ Retrieval for analysis; transformation and analysis of data into information / knowledge: maps, reports, graphs etc.
Reporting and dissemination:
○ Clearly defined audience/user base and understood purpose of use;
○ Identified product formats (maps/reports/tables/graphs);
○ Identified dissemination medium (print/digital/web).

Comment [i7]: KT: SPU added these – examp are available in earliest drafts of the IM strategy.

Comment [i8]: KT: As track changes has not been used, careful editing of the whole document required

IM is vitally important because it improves the speed and accuracy of information delivered, creating a shared frame of reference that enables decision makers to coordinate and plan response programming based upon the best available knowledge of needs and a clear understanding of each responding organization's capacity.[8] It is also essential to monitor, evaluate and track aid effectiveness, both in terms of programming and resource mobilization.

Table 3 : Information Management and the Humanitarian Context8

Comment [i9]: KT: References have been lost they will need to be tracked through previous versions of the IM Strategy.

Operational principles to be used to guide IM and information exchange activities in emergencies:	
Accessibility	Humanitarian information should be made accessible by applying easy-to-use formats and tools and by translating information into common or local languages when necessary
Inclusiveness	Information exchange should be based on a system of partnership with a high degree of ownership by multiple stakeholders, especially representatives of the affected population and Government
Inter-operability	All sharable data and information should be made available in formats that can be easily

[8] OCHA IM Guidelines: *Information Management and the Humanitarian Context*

	retrieved, shared and used by humanitarian organizations
Accountability	Users must be able to evaluate the reliability and credibility of information by knowing its source and having access to methods of collection, transformation and analysis
Verifiability	Information should be relevant, accurate, and consistent and based on sound methodologies, validated by external sources, and analyzed within the proper contextual framework.
Relevance	Information should be practical, flexible, responsive, and driven by operational needs in support of decision-making throughout all phases of a crisis
Objectivity	A variety of sources should be used when collecting and analyzing information so as to provide varied and balanced perspectives for addressing problems and recommending solutions
Neutral	Information should be free of political interference that distorts a situation or the response
Humanity	Information should never be used to distort, to mislead or to cause harm to affected or at risk populations and should respect the dignity of those affected
Timeliness	Humanitarian information must be kept current and made available in a timely manner
Sustainability	Humanitarian information should be open sourced, preserved, cataloged and archived, so that it can be retrieved for future use, such as for preparedness, analysis, lessons learned and evaluation.
Confidentiality	Sensitive data and information that are not to be shared publicly should be managed accordingly and clearly marked as such

Section 1.2 Global Best Practices and Lessons Learned

Comment [i10]: 1.1KT: Change of title from "The Importance of Coherent Information Management & Lessons Learned"

The Government of Pakistan established the National Disaster Management Authority (NDMA) as the focal authority for designing, promoting and implementing guidelines and standards for disaster management, throughout its lifecycle including: relief, returns, early recovery, reconstruction and rehabilitation and disaster risk reduction/ preparedness. Its role is multifaceted: to provide technical guidelines to all national and provincial stakeholders about formulation of disaster risk management plans, strategies and programmes; to support programmes for capacity building of national, provincial and local stakeholders; and facilitate coordination amongst multiple stakeholders to ensure collaborative approaches for disaster management.[9]

Comment [i11]: KT: SPU pasted this into this section, it seems to disrupt the flow of the docume The original, showed the severity of the floods as compared to other global disasters and then elaborated on lessons learnt from other global disaster responses. This was specifically requested by Nilofer, took at least a day to research and writ and now has been deleted completely except for t bullet points below, which now seem out of conte or too isolated as stand alone lessons.

The past decade has seen a considerable increase in the role of IM and Geographic Information Systems (GIS) as vital decision-support tools during humanitarian interventions globally. However, still in its infancy and with a sudden increase of IM actors, coherent, collaborative IM frameworks have not been adequately established. Recent large-scale operations, such as the humanitarian interventions in Iraq and Afghanistan, the 2004 South Asian Tsunami, and the 2005 Pakistan and 2010 Haiti earthquakes have suffered not from a lack of data, but from a lack of timely and useful information organised within a coherent IM system.

- **Following the 2010 Haiti earthquake, a key lesson learned was the need to be able to verify incoming information**.
- **Key lesson learned from the Darfur conflict was the need for up-to-date, and accurate baseline data for effective planning of disaster response**
- **Key lessons learned from the Indonesian tsunami response**:

Comment [i12]: KT: These are very basic summaries of examples which the SPU requested add, much time was spent on researching and writ these examples to be now left with generalisations without any solid justification. It would be better t remove where these lessons were learnt as they ar lessons applicable to evry disaster and without the texty explaining the situation they are misleading.

- Appoint an information coordinator in the field to promote well-informed decision making during hectic, exhausting relief operations. Train people in reporting and information sharing.

[9] NDMA *Terms of Reference for Composite Risk Assessment of Pakistan*

- Promote joint assessments by agreeing that specific organizations coordinate sector-wide, inter-agency assessments to provide baseline data for all agencies.
- Deploy sufficient numbers of civil-military liaison staff so that mutual information needs can be negotiated.
- Strengthen information links with local networks, through simple, "lowtech" structures.

Table 4: IM Lessons Learned Pakistan 2005 Earth Quake

Based on the challenges and problems faced in the handling of the 2005 earthquake, below are two key lessons (of seven identified by the NDMA) that pertain to strengthened IM within the NDMA:
a) Permanent National Disaster Management Authority
There is a clear need for a permanent body to deal with various aspects of disaster risk management, including mitigation, preparedness, emergency response and recovery. Such an organization should have a permanent core staff, but also possess the ability to "surge" in size and capacity at short notice. It should have access to a constantly updated national database of information and, based upon this tool, should prepare and constantly refine contingency planning. The organization should have the authority and ability to coordinate and harness support from different Government agencies and departments, as well as wider aid agencies, NGOs and civil society. It should be in regular contact with these stakeholders to ensure effective coordination when disaster strikes.
d) National Database
A national database is an essential requisite for effective disaster risk management, including emergency response. It should contain information concerning population numbers and spread, livestock, demographic characteristics, infrastructure and facilities, topography, etc. The database should be updated regularly and, while centrally controlled for effective coordination and retention of information in one location, should be readily accessible (and disbursed) to all relevant stakeholders. Local and Wide Area Network (LAN/WAN) facilities should be provided that can facilitate links with a variety of bodies involved in relief operations and thereby ensure real-time information for planners and decision-makers.

Currently, NDMA and the humanitarian community lack effectivetools for reliably capturing multiple data sets, disaggregating various data sets/surveys, reporting accurately against them, sharing accurately, and analyzing many key elements of information according to baseline indicators. Information is often in narrative format, lacks standardization, is missing geo-coordinates, and thus does not include the data necessary to facilitate useful analysis. These shortcomings inhibit the delivery of effective aid and place the government unable to appropriately plan or monitor and the humanitarian community to plan delivery of services accurately as a result the beneficiaries they serve receive haphazard support unnecessarily.

A Common Operating Picture that couples post disaster response information with information on sector programs like health, agriculture, education, shelter, food security, logistics, and water-related data in addition to information on the security situation, as well as topographic maps and terrain data, is essential to providing field actors with sufficient knowledge to make informed decisions concerning where and how to intervene. Field programs require up-to-date information regarding the above topics to effectively and safely guide daily movements and operations. Likewise, decision makers at strategic levels need current information that enables them to plan, coordinate, monitor and evaluate the impact of humanitarian operations, aid effectiveness and to identify areas requiring additional input. This is critical in an environment where resources are scarce and resource limitations force strategic choices. With good IM, data and information will be more accurate and timely to enable identification of needs, prioritization of activities, coordination and thus avoiding duplication and wasted resource allocation and mobilization. Further in any future disaster the systems would be in place at the district/ lowest tiers' of administration to

Comment [i13]: KT: Again, much has been deleted – it came from the International Federatio of Red Cross and Red Crescent Societies (IFRC) identified key lessons learned from the Indonesia tsunami response.

Comment [i14]: The text explaining IM durin the earthquake has been deleted. Of all the history delete I think this should stay as it is directly linke to the history of IM in Pakistan govt disaster management bodies.

Comment [i15]: **This is all cut and pasted and the document flow has changed. This is about w is currently lacking in Pakistan and what needs t be established. If you jump forward to p14 there a section on the current IM Capacity in Pakistan don't understand all the edits. It will be good to have fresh eyes on the doc.**

speedily respond effectively and also inform policy planners at the provincial and federal levels of immediate needs timely.

The objective of the NDMA IM Strategy is to improve humanitarian coordination and disaster response through augmented IM capacity at federal, provincial and district levels with partners of, and within, the Government of Pakistan, and other humanitarian actors. It aims at providing all humanitarian responders with effective methods for reliably capturing, reporting, sharing, and analyzing information concerning the humanitarian situation according to baseline indicators and population needs. This crucial Humanitarian Information Management (HIM) support will be provided via an integrated approach through the National Disaster Management Authority (NDMA) and the broader humanitarian community.

2. Overview

2.1 2010 Pakistan Floods

NDMA data on the damage and needs assessment are based on the initial provincial disaster management authorities assessments and datasets; the humanitarian community also initially conducted several rapid assessments of macro and sector specific in nature. The damage and needs assessment of the Asian Development Bank (ADB) and World Bank which is a macro survey conductedsohortly after any disaster on the request of the government verifies the provincial damage and needs assessments and is accepted by the Government of Pakistan (GOP) as the baseline data. The clusters continue to conduct various surveys such as the MCRAM and cluster specific surveys like the agriculture livelihood or shelter needs etc. in all instances a system has to be in place to receive, disaggregate and plan these multiple necessary/unnecessary costly surveys in field.

Table 1 Damage by Sector (WB-ADB Damage and Needs Assesment Report)

Sector	Direct Damages PKR millions	Indirect Losses PKR millions	Total Damage	
			PKR millions	USD millions
1. Social Infrastructure				
Housing	91,843	43,171	135,014	1,588
Health	1,562	2,661	4,222	50
Education	22,047	4,418	26,464	311
Subtotal	**115,451**	**50,249**	**165,700**	**1,949**
2. Physical Infrastructure				
Irrigation & Flood Management	23,600		23,600	278
Transport & Communications	62,491	50,420	112,911	1,328
Water Supply & Sanitation	3,194	6,112	9,306	109
Energy	13,184	13,116	26,300	309
Subtotal	**102,469**	**69,648**	**172,117**	**2,025**
3. Economic Sectors				
Agriculture, Livestock & Fisheries	315,547	113,257	428,805	5,045
Private Sector & Industries	14,463	9,468	23,932	282

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Financial Sector	110	57,141	57,251	674
Subtotal	**330,120**	**179,866**	**509,987**	**6,000**
4. Cross Cutting Sectors				
Governance	3,141	2,835	5,976	70
Environment	992		992	12
Subtotal	**4,133**	**2,835**	**6,968**	**82**
Total	**552,173**	**302,599**	**854,771**	**10,056**

Table 5: Severely Flood Affected Districts (29)[10]

Province	District	Province	District
AJK	Neelum	Punjab	Bhakkar
Balochistan	Jaffarabad		D. G. Khan
	Nasirabad		Layyah
Khyber Pakhtunkhwa	Charsadda		Mianwali
	D. I. Khan		Muzaffargarh
	Kohistan		Rahim Yar Khan
	Lower Dir		Rajanpur
	Nowshera	Sindh	Dadu
	Peshawar		Jaccobabad
	Shangla		Jamshoro
	Swat		Kashmore Sukkur
	Tank		Larkana
	Upper Dir		QambarShahdadkot
			Shikarpur
			Thatta

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2.1.1 Disaster Management Response

The Government of Pakistan (GOP), in partnership with the United Nations (UN), has launched a flash appeal and revised flash appeal requesting approximately 1.9 billion USD[11] for immediate relief in 2010 and early recoverythrough to the end of 2011. This effort is one of the largest humanitarian appeals to date. Funding requirements to meet the resulting relief and early recovery needs are detailed below[12]:

[10]NDMA IM Unit
[11] Equivalent to 162,848,998,260 PKR(Dec. 2010 conversion rate of 1.00 USD = 85.66 PKR)
[12]UN *Pakistan – Revised Flood Relief and Early Recovery Plan 2010*

Table 6: Pakistan – Revised Flood Relief and Early Recovery Plan Appeal Figures

Early Recovery	Relief	Relief/Early Recovery	Total Requirements
$956,550,640	$928,579,763	$53,076,875	$1,938,207,278

Further the government of Pakistan both at the federal level and provincial level immediately contributed budgetary support towards rescue relief and early recovery activities in several sectors.DATAon government departmentsallocating how much towards what areas/sector is critical in managing accurate information and also to communicate it appropriately at variousstrategic forums. Further to ensure provincialequity this kind of information is critical to manage expectations of all humanitarian contributing actors. Further, information further accurately gauging the contribution of the government of Pakistan's efforts in the rescue relief phases must also include the information of the contributions of the armed forces. The many strands of the contributions of the multiple public sector institutionsneed to be linked in the national information management system to ascertain accurate contributions in any given phase of the response and planning.

As described in the 2010 Pakistan Floods Relief and Early Recovery Response Plan[12], the response of the Government of Pakistan is organized at the three tiers of government, federal, provincial and district levels. The overall leadership for donor coordination rests with the Economic Affairs Division (EAD), whereas the NDMA is responsible for overall coordination of disaster response efforts by both the government and the international community. The NDMA works closely with federal ministries, government departments, the armed forces, UN agencies and donors to mobilize receive and deploy relief goods. The NDMA is also the coordination body for logistical operations in support of the rescue and relief operation phases of disaster response management.[13]

Table 5. Government Allocation from Public Sector Development Program (Planning Commission)

Govt. Level	Allocated from PSDP 2010-11 (billionRps.)
Federal Govt.	130
Punjab	42
Sindh	63
KP	28
Balochistan	TBA
Total	263

In the provinces, response activities come under the overall leadership of provincial chief ministers. Provincial governments are made up of various line departments. Provincial administrations are headed by chief secretaries. Provincial Disaster Management Authorities (PDMAs) play a critical role as an interface for the humanitarian community. District-level administrations and District Disaster Management Authorities(DDMAs) are led by district coordination officers, under whom executive district officers are responsible for district-level line departments.

The Pakistani military is one of the major national organizations active in the disaster rescue and relief operation. There are also approximately 2,500 international troops deployed upon the request of and in support of the Government of Pakistan. The main assets provided are helicopters, field hospitals and water treatment capabilities. NDMA is responsible for tasking the Pakistani and international militaries deployed,

[13] See NDMA Law in Annexure

and coordinate all requests for national and international military support to humanitarian organizations on the federal level. In the provinces, the Pakistan Civil Administration is filling a similar role.

Table 6. Army Contribution to Relief Efforts[14]

Sr. No.	Item	Cost (Millions)
1.	Internal Security Allowances	186.2154
2.	Fuel Costs	790.469
3.	Army Rations Distributed	110.655
4.	Ordinance Stores (NFIs)	8.58
5.	Medicines	107.436
6.	Heavy Mechanical Transport Hiring	5.45
7.	National Logistic Cell	12.03
8.	Maintenance and Repairs	741.5805
9.	Miscellaneous Expenditures	232.452
10.	Army Relief Fund for Relief and Reconstruction	585.00
	Total	**2779.8679**

2.2 Current Information Management Structure & Capacity in Pakistan

2.2.1 The Government of Pakistan

Prior to the formation of the National Disaster Management Authority (NDMA) there was no centralized coordination body responsible for disaster management. The awareness of policy makers, media, civil society, NGOs, UN agencies and other stakeholders remained low about disaster risk management and the country as a whole lacked a systematic approach towards disaster management.

Within the Federal government, the disaster response was dealt with by the Cabinet Division through the Emergency Relief Cell (ERC), while emergency response was the responsibility of the Ministry of Interior, with the National Crisis Management Cell (NCMC) as the point agency dealing with terrorism and law-and-order situations. At the Provincial level, the Relief Commissioner, who was also the senior board member of revenue, managed disaster relief and compensation, while the Home Secretary dealt with emergency response. In the Districts, the Executive District Officer (EDO) Revenue and his revenue staff responded to disasters as the surveyors of the damages and needs reporting to the District Coordination Officer (DCO), while the District Police Officer responded to crisis situations in terms of provision of law and security during various kinds of unrest in emergencies.

In addition to NDMA there are a number of national level agencies specialized in some aspects of Disaster Risk Management functions such as the Emergency Relief Cell (Cabinet Division), the Federal Flood Commission (FFC), the National Crisis Management Cell (Ministry of Interior) and Civil Defence (Ministry of

[14] *Information Updated as of 25/12/2010. Received from the office of the Director General Military Operations, Pakistan Army.Apart from these costs, 60,000 armed forces personnel took part in the relief operation at various levels.*

Interior). These organizations have some relevant capacities in preparedness, response and mitigation, and there is a need to streamline their activities as the NDMA evolves. Line Ministries as well as provincial and local departments too require technical assistance to align existing DRM-related activities and implement the provisions laid down in the ordinance and NDRMF. Although the National Disaster Management Ordinance 2006 envisages the revamping of old system, but at the province levels, the system of Provincial Relief Commissioners is very much intact. At least some of the provinces seem reluctant in transforming the current system of Relief Commissioners to the proposed PDMAs[15]. Therefore, at province level, the capacity development of the offices of Provincial Relief Commissioners might be required. There is also a need to harmonize provisions of the Disaster Management Ordinance with the Local Government Ordinance vis-à-vis the devolution process at district and commissionerate levels.

2.2.1 a) National Disaster Management Authority

The need for strong institutional and policy arrangements has been fulfilled with the issuance of National Disaster Management Law, 2010. Under the NDMA Ordinance, 2006, the National Disaster Management Commission (NDMC) was established under the Chairmanship of the Prime Minister as the highest policy making authority in disaster management. As an executive arm of the NDMC, the National Disaster Management Authority (NDMA) has been made operational to coordinate and monitor implementation of National Policies and Strategies on disaster management.

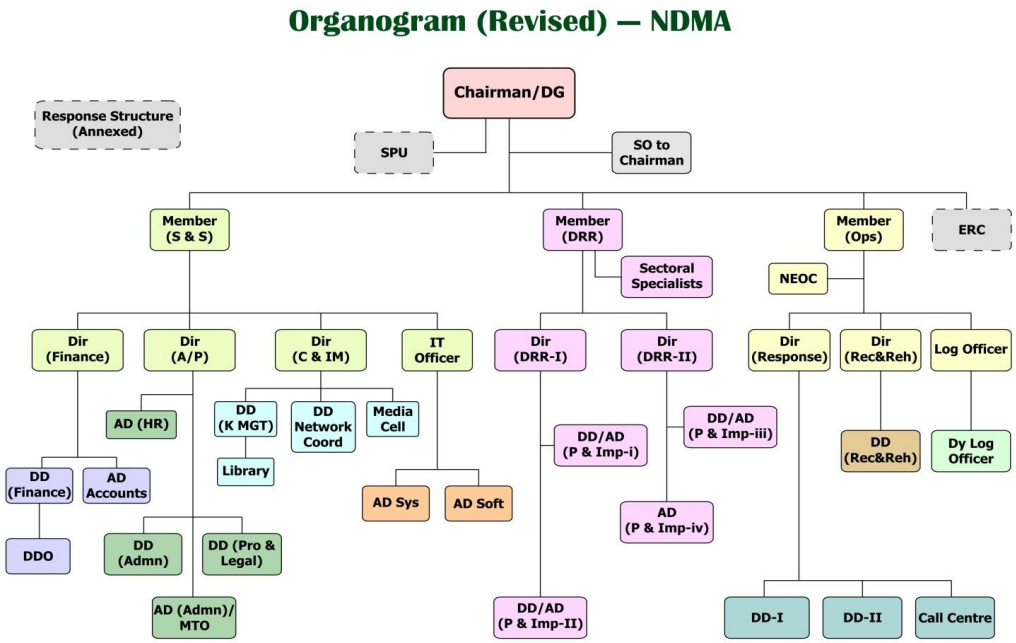
The NDMA system envisages a devolved and de-centralized mechanism for disaster management. Accordingly, Provincial Disaster Management Commissions (PDMCs) and Authorities (PDMAs) have been established while similar arrangements have been made in AJ&K FATA, and Northern Areas. The District Disaster Management Authorities (DDMAs) have been notified across the country. The DDMAs are going to be the linchpin of the whole system and would play the role of the first line of defense in the event of a disaster.

The Framework envisions, "achieving sustainablesocial, economic and environmental development in Pakistan through reducing risks and vulnerabilities, particularly those of the poor and marginalized groups, and by effectively responding to and recovering from disaster impact". Nine priority areas have been identified within this Frameworkto establish and strengthen policies, institutions and capacities over the next five years: These include:-

i)	Institutional and legal arrangements for DRM
ii)	Hazard and vulnerability assessment,
iii)	Training, education and awareness,
iv)	Disaster risk management planning,
v)	Community and local level programming,
vi)	Multi-hazard early warning system,
vii)	Mainstreaming disaster risk reduction into development
viii)	Emergency response system, and
ix)	Capacity development for post disaster recovery

[15] UNDP: DRM JPC Document 18th December 2009

Figure 3: NDMA Organogram (Dec. 2010)



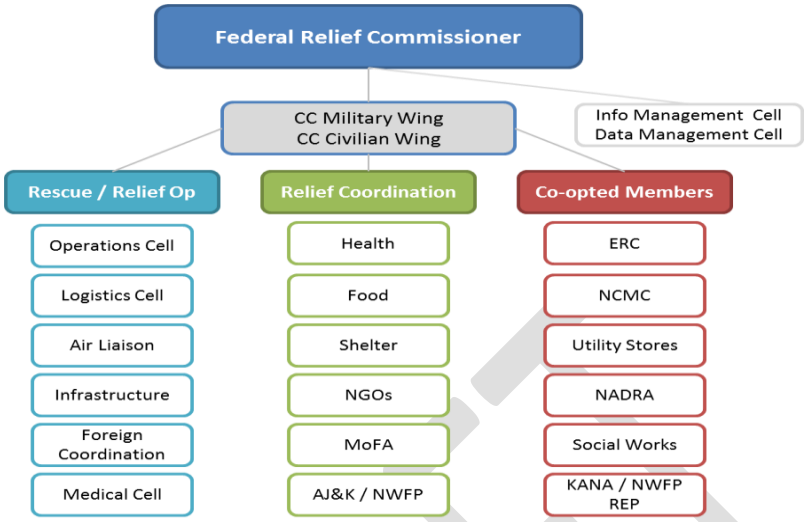
Currently, the NDMA has an Information Management unit comprising of two Information Technology (IT) specialists. NDMA coordinates information from several partners as noted in figure 6. The information is the basis on which NDMA is able to direct support and response during an emergency situation. Planning for the appropriate support is managed through NDMA as a one window operational focus on disaster management. Furthermore, NDMA is responsible in providing information to key government departments and senior public officials regularly; NDMA reports directly to the Prime Minister who must fulfill his obligation to report regularly to Parliament on the disaster management. Parliamentary Committees, with their constituencies' interests and the Ministry of Foreign Affairs and Ministry of Interior also require regular specific sector updates and information on the situation and progress on the ground.

Figure 4: NDMA Information Flow

2.2.1 b) Federal Relief Commissioner

Despite the challenge of its creation at the onset of the earthquake emergency, the FRC was largely able to fulfill its mandate owing to strong support from constituent organizations and partners, as well as to the active patronage of the country's top leadership and generous assistance from the people of Pakistan. The FRC's focus in the immediate aftermath of the 2005 earthquake was primarily on rescue and relief. Later stages of recovery, reconstruction and rehabilitation were left to the Earthquake Reconstruction and Rehabilitation Authority (ERRA) formed in January 2006. The FRC was merged with the ERRA in March 2006.

Figure 5:Error! Bookmark not defined. Organizational Structure of the



2.2.1 c) Provincial Disaster Management Authority (PDMA)

At the provincial level the Chief Minister is responsible for the population welfare in his province; the notified PDMA is responsible for the coordination of disaster response/management. In the PDMAs, a nascent IM structure exists with varying levels of capacity. Khyber Pakhtunkhwaprovince is one of the strongest, while others have borrowed from other government IT units to support their IM needs until capacity is established. Punjab PDMA is also notified but is experimenting with multiple options in developing information management systems with perhaps multiple partners. Sindh PDMA has also be notified but is borrowing civil servants from other services to provide some support to PDMA with IM capacity borrowed from the Benazir income support program ICT section. Baluchistan is also a nascent office with two person team with little IM or ICT support structure.

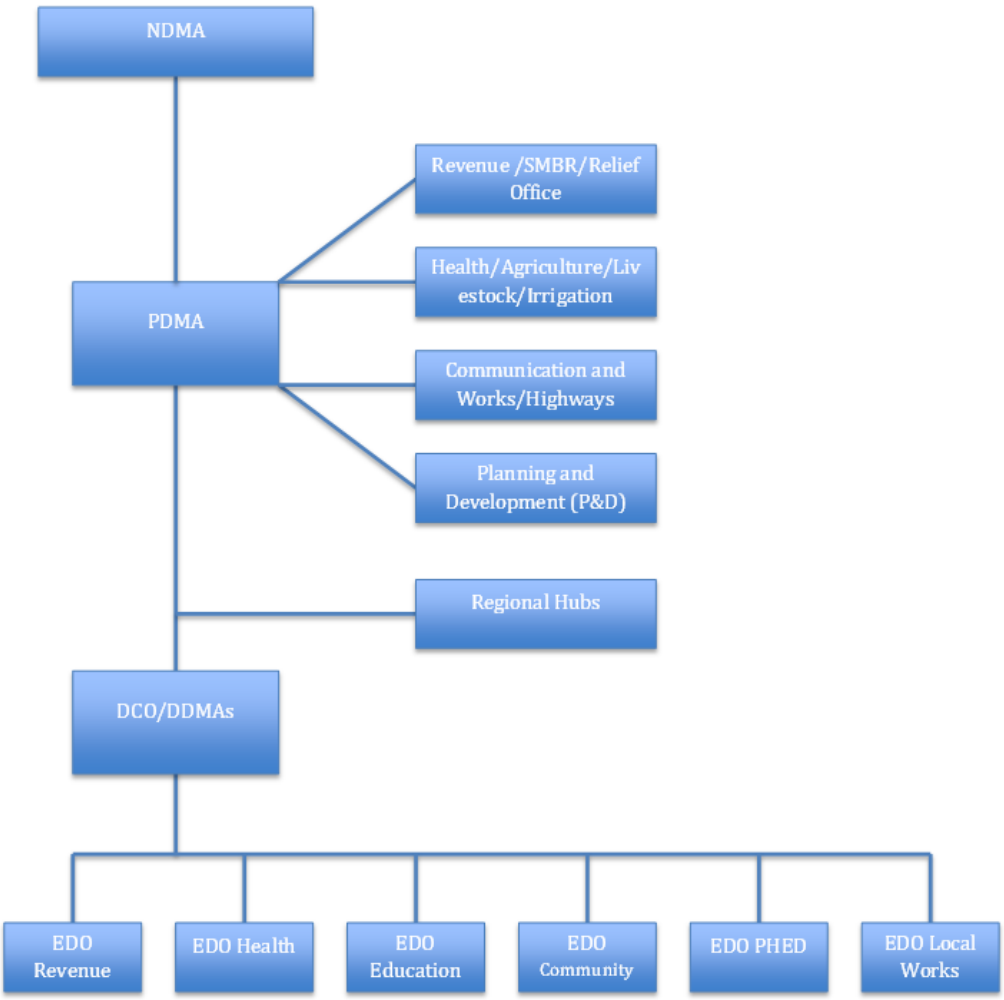


Figure 6: PDMA Information Flow

2.2.1 d) District Disaster Management Authority (DDMA):

At the district level various District Coordination Offices' (DCO) staff have been trained in DRM and are therefore familiar with some humanitarian IM concepts. DCOs rely heavily upon Revenue Department, police local networks (with DPO's cooperation) and allied departments with grass root foundations, such as the Forest and Irrigation Departments. However, only the Police Department possesses dedicated communications. Moreover, their capacities need to be enhanced for provision of early warning to vulnerable communities and timely passage of critical information.[24]A dedicated IM capacities are missing in almost all the DCOs offices in flood-affected districts. Any humanitarian response activity at the district level, be it governmental, that of individual philanthropic organizations, the UN, NGOs, Pakistan Poverty Alleviation Fund (PPAF) or other actor's requires the GOP administration at that level to have augmented capacity to coordinate, plan, and analyses humanitarian gaps and allocate, track and monitor appropriate resources. Furthermore, it is important that expenditures and investments within the district are properly recorded, ranked and monitored to ensure speed, lack of duplication and coherence. In addition, all household information is collated through the revenue system that the DCO manages through the EDO

Revenue. "Patwaris" of the Revenue Department are the surveyors and maintain records of all damages and report ad-hoc in times of disaster.

Capacity building and training at this level is critical to the success of augmented IM during disaster response. Therefore, it is imperative that a robust IM system exist at the district level in order to manage these various strands of humanitarian activities and baseline data collection The DCO is the first port of call in the information management at the district level; it collects, plans, monitors, verifies and is also responsible administratively to the provinces and to the Prime Minister. Hence augmented IM capacity of DCOs and DDMAs is essential for improved disaster management nationally. The most important EDO is the officer in charge of revenue, who provides the data on needs and surveys assessments for the government. Since EDOs can be appointed at the discretion of the chief secretary of the province it could be possible to strengthen DDMAs to establish EDO disaster management/ information management as well

2.2.2 United Nations Cluster Approach

Within the last decade, organizations have increasingly realized the value of employing a coordinated response to humanitarian emergencies. In 1991, the United Nations formed the Office for Coordination of Humanitarian Affairs (OCHA). The objective in creating OCHA was to provide coordination among the various UN bodies responding to humanitarian emergencies. *"Humanitarian coordination is based on the belief that a coherent approach to emergency response will maximize its benefits and minimize its potential pitfalls -in short, that the whole will be greater than the sum of its parts."* [16] The UN has recognized the need to promote collaboration among international NGOs and governments, as well.

In international responses to humanitarian crises, some sectors have in the past benefited from having clearly mandated lead agencies to coordinate UN agencies, while others have not. This has led repeatedly to *ad hoc*, unpredictable humanitarian responses, with inevitable capacity and response gaps in some areas. In lieu of this and as a result of the UN's Humanitarian Response Review it was agreed by the Inter-Agency Standing Committee (IASC) in September 2005 that the cluster approach would be implemented in all new emergencies. One month later, it was employed for the first time, in Pakistan, in response to the earthquake of 8 October 2005.

In December 2005 the IASC Principals designated global Cluster Leads from the UN side (see table below) for nine sectors or areas of activity that in the past either lacked predictable leadership in situations of humanitarian emergency, or where there was considered to be a need to strengthen leadership and partnership with other humanitarian stakeholders. These nominations complement those sectors and categories of population where leadership and accountability are already clear, e.g. agriculture (led by the United Nations Food and Agriculture Organization [FAO]), logistics (led by the United Nations World Food Programme [WFP]), refugees (led by the United Nations High Commissioner for Refugees [UNHCR]) and education (led by the United Nations Children's Fund [UNICEF]).[17]

Table 7: Global Cluster Leads

Global Cluster Leads		
Sector or Area of Activity		Global Cluster Lead
Agriculture		FAO
Camp Coordination/Management:	IDPs (from conflict)	UNHCR
	Disaster situations	IOM

[16] UN OCHA website http://ochaonline.un.org/webpage.asp?Nav=_coordination_en&Site=_coordination
[17] UN OneResponse website http://oneresponse.info/Coordination/ClusterApproach/Pages/Global%20Cluster%20Leads.aspx

Early Recovery		UNDP
Education		UNICEF
		Save The Children - United Kingdom
Emergency Shelter:	IDPs (from conflict)	UNHCR
	Disaster situations	IFRC (Convener)*
Emergency Telecommunications		OCHA/WFP
Health		WHO
Logistics		WFP
Nutrition		UNICEF
Protection:	IDPs (from conflict)	UNHCR
	Disasters/civilians affected by conflict (other than IDPs)**	UNHCR/OHCHR/UNICEF
Water, Sanitation and Hygiene		UNICEF
Cross-cutting issues		
Age		HelpAge International
Environment		UNEP
Gender		UNFPA / WHO
HIV / AIDS		UNAIDS
** IFRC has made a commitment to provide leadership to the broader humanitarian community in Emergency Shelter in disaster situations, to consolidate best practice, map capacity and gaps, and lead coordinated response. IFRC has committed to being a 'convener' rather than a 'cluster lead'. In an MOU between IFRC and OCHA it was agreed that IFRC would not accept accountability obligations beyond those defined in its Constitutions and own policies and that its responsibilities would leave no room for open-ended or unlimited obligations. It has, therefore, not committed to being 'provider of last resort' nor is it accountable to any part of the UN system.*		
*** UNHCR is the lead of the global Protection Cluster. However, at the country level in disaster situations or in complex emergencies without significant displacement, the three core protection-mandated agencies (UNHCR, UNICEF and OHCHR) will consult closely and, under the overall leadership of the HC/RC, agree which of the three will assume the role of Lead for protection.*		

At the global level, the aim of the cluster approach is to strengthen system-wide preparedness and technical capacity to respond to humanitarian emergencies by ensuring that there is predictable leadership and accountability in all primary sectors or areas of humanitarian response. Similarly, at the country level the aim is to strengthen humanitarian response by demanding high standards of predictability, accountability and partnership in all sectors or areas of activity. It is about achieving improved strategic responses and better prioritization of available resources by clarifying the division of labour among organizations, better defining the roles and responsibilities of humanitarian organizations within the sectors, and providing the Humanitarian Coordinator with both a first port of call and a provider of last resort in all the key sectors or areas of activity.[18] The Cluster approach is beneficial to the government in order to manage, coordinate, guide and monitor multiple actors involved in supporting the government led disaster response.

Table 8: Cluster Support to the Field

The global cluster leads, together with their partners, provide the following types of support to strengthen field response:
○ Technical surge capacity (e.g. camp management and coordination staff, early recovery advisors, Logistics Response Teams, Health Emergency and Assessment Response Teams);

[18] Inter-Agency Standing Committee (IASC) *Guidance Note on Using the Cluster Approach to Strengthen Humanitarian Approach (24 November 2006)*

○	Trained experts to lead cluster coordination at the field level;
○	Increased stockpiles, some pre-positioned within regions (e.g. emergency shelter materials);
○	Standardised technical tools, including those used for information management;
○	Agreement on common methods and formats for needs assessments, monitoring, and benchmarking;
○	Best practices and lessons learned from field-test.

The clusters and cluster coordinators are lead on behalf of the UN agencies reporting to the humanitarian coordinator through OCHA the coordination office. The clusters are co led by government counter parts to ensure ownership and leadership in the sectors of the disaster response process. A cluster represents only the set of organizations that choose to coordinate through this particular system. The Sector coordinator is government by its innate responsibility to its citizens for any and all restitution in all areas of damages and needs as a result of a disaster. As outlined in UN General Assembly Resolution 46/182 "Each state has the responsibility first and foremost to take care of the victims of natural disasters and other emergencies occurring on its territory. Hence, the affected State has the primary role in the initiation, organization, coordination, and implementation of humanitarian assistance within its territory".

2.2.2 b) IM capacity in the clusters

In the wake of the Pakistan earthquake response, the question of the IM role in supporting effective humanitarian response was first raised before the IASC Working Group. Since then, the profile of IM has garnered increased attention in the context of humanitarian reform efforts. The work plans of virtually all Clusters contain explicit or implicit activities to improve IM capacity and processes. Cluster Lead agencies have established dedicated IM capacity at the global level, and significant agency capacity is currently being harnessed to support the development of IM tools to support the implementation of the Cluster approach. NDMA has instructed the UN to ensure Clusters have IM and Monitoring and Evaluation (M&E) dedicated staff for the 2010 floods' response.[19] While these are all encouraging steps, there remains a long way to go toward meeting the goal of creating a common dynamic and effective information environment in support of coordinated humanitarian response. Interoperability of concurrent systems must be addressed; assuring differing UN agency systems are able to integrate with others. Key challenges are likely to be political rather than technological, including sharing of information, institutional behaviour issues, and fears of loss of ownership, as well as verification of data and information end-use through a transparent and equitable sharing platform. Key roles and responsibilities and guidelines must be established, and in addition, all concerned actors must "buy-in", not only to the utilisation of common systems but also in their design and accompanying business rule designs. Internal training and capacity on IM systems and reporting cycles in sync with government/donor reporting cycles are also necessary. Further agency expenditure reports need to be streamlined to be available for SRF reporting cycle which will involve headquarters agency support.

Comment [WU16]: This is a generic problem challenge we need some analysis of the 12 agecni and their IM capacity

Further internal capacity of IM in the UN is critical since a key responsibility of Cluster Leads at the country level is to ensure that humanitarian actors build upon local capacities and that they develop and maintain appropriate links with government and local authorities, state institutions, local civil society, and other stakeholders. The UN needs to invest capacity training and IM information capacity development in the local NGOS who are the service delivery organizations of almost all the international agencies and UN organizations.

The table below illustrates the government and lead agencies within each Cluster as detailed in the Pakistan Revised Floods Emergency Response Plan.

[19] As stated in the Pakistan Floods Relief and Early Recovery Plan 2010

Table 9: Cluster Responsibilities Pakistan Monsoon Floods 2010

Cluster Primary	Governmental Counterpart	Cluster Lead Agency
Agriculture	Ministry of Agriculture	FAO
Community Restoration	National Disaster Management Authority and Provincial Disaster Management Authorities	UNDP
Food	National Disaster Management Authority and Provincial Disaster Management Authorities	WFP
Health	Ministry of Health	WHO
Shelter & Non-food Items (NFIs)	National Disaster Management Authority and Provincial Disaster Management Authorities	IOM
WASH	Ministry of Environment, Provincial Public Health Engineering Departments	UNICEF
Logistics, Emergency Telecommunications	National Disaster Management Authority and Provincial Disaster Management Authorities	WFP
Coordination	National Disaster Management Authority and Provincial Disaster Management Authorities	OCHA
Nutrition	Ministry of Health	UNICEF
Education	Ministry of Education	UNICEF/Save the Children
Protection	Ministry of Social Welfare	UNHCR
Camp management/ Camp Coordination	National Disaster Management Authority and Provincial Disaster Management Authorities	UNHCR

Comment [WU17]: This table can come after discussion point on the government co chairing th clusters

Challenges of the Cluster System:

Many of the Humanitarian partners involved in disaster response operate outside the cluster system hence information of their activities is not captured by the respective sector's cluster. Most of these actors outside the system are non-UN agencies and even UN agencies avoid common planning within the clusters.

While the Cluster approach has produced mixed results, it should be stressed that previous alternatives in disaster response methods were discredited during the tsunami response, and Clusters, even if not fully developed and ready for use, offered more potential for effectiveness. The consensus among most stakeholders, from NGOs to the UN system to the government was that there were definitely errors and room for improvement, but that on-the-whole the Cluster approach had led to a better response than normal.[20] In relation to Clusters and IM, two key recommendations from the NDMA review of the Pakistan Earthquake[20] were:

- Efforts should be made to ensure a unified response by all those involved in humanitarian responses.
- Efforts should be made to avoid duplication of effort by different agencies and donors. This requires accurate and regular data collection and sharing of this.

[20]NDMA: Earthquake 8/10

Theoretically, the majority of humanitarian actors should coordinate planning, implementation and reporting of activities through the Cluster mechanism.

2.2.2 c) IM Capacity of NGOs

Pakistan has many development related NGOs, who, in the aftermath of the 2005 earthquake have had to enhance their capacity to deal with humanitarian service delivery. A vast majority of them, however, have varying degrees of information management capacity. Some of the established and large-scale NGOs have good information management structures for some specific areas; information is maintained for projects and rarely developed integratedly or for any other long term purpose. Others mostly have either weak or non-existent capacity at the present time. To forward the agenda of aid-effectiveness, efficacy of intervention, and streamlining of response, IM capacity will have to be built within those NGOs that play a crucial role in disaster response and humanitarian service delivery. In this regard, the cluster system and its partners, as well as the GoP will have to play a lead role in augmenting existing structures through human resource investment, trainings, and financial contribution. In the current Appeal there are 134 Partner organizations who are involved in the humanitarian response. Thus to effectively report all 134 partners would have to have sufficient IM capacity to regularly report against the SRF and also receive training and support from the appealing agencies they function on behalf of.

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3. Information Management Strategy

3.1 Objectives

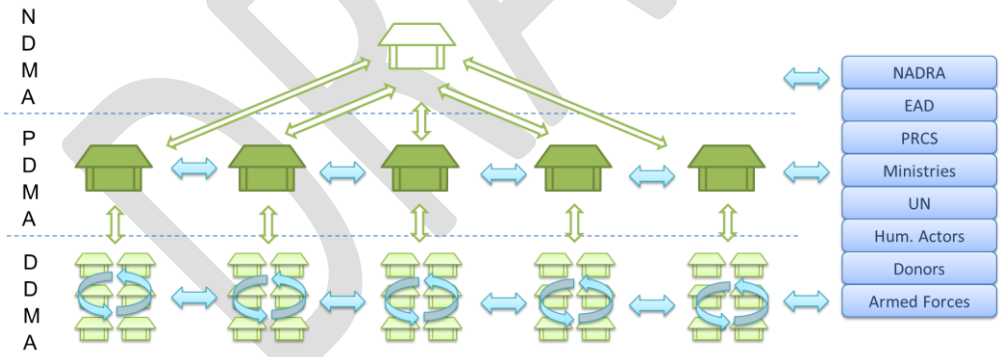
The key desired outcome of the IM Strategy is improved humanitarian coordination and disaster response, through augmented IM capacity and systems at federal, provincial and district levels with partners of, and within, the Government of Pakistan, and other humanitarian actors. In order to reach this goal it is necessary to facilitate improved Humanitarian Information Management (HIM) throughout the entire life-cycle of disaster management, and amongst as broader user group as possible.

As mandated in the NDMA ordinance[26], the NDMA disaster management responsibilities cover: response; recovery and rehabilitation; reconstruction; and preparedness phases of a disaster. The IM Strategy aims to provide all disaster management actors with effective methods for reliably capturing, reporting, sharing, and analyzing information concerning the disaster situation, according to baseline indicators and population needs, throughout the life cycle of the disaster and its management.

During the full cycle of response to humanitarian crises, effective coordination saves lives. Information management is a key, though often overlooked component of effective coordination. Coordination and information management are essential to the delivery of assistance in a transparent, cohesive and successful manner.

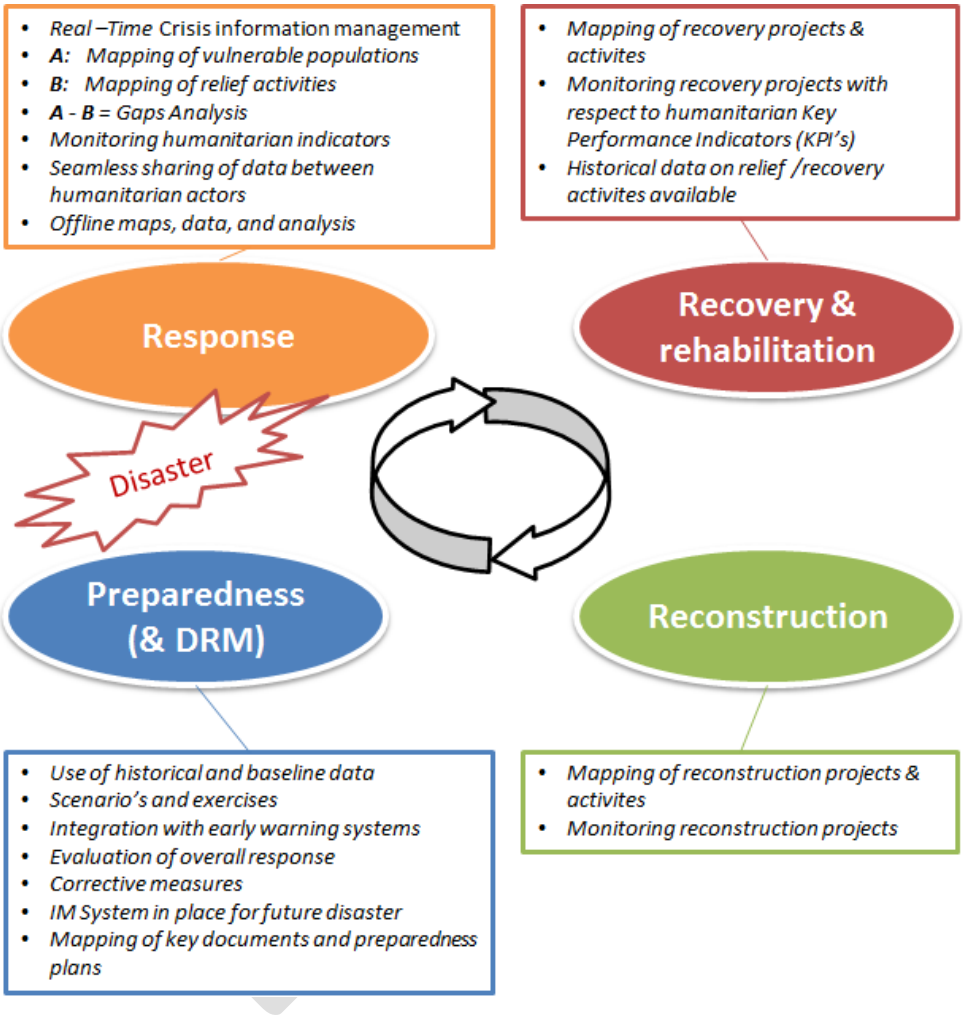
It is essential to the success of the IM strategy that IM capacity and systems implementation covers the full life cycle of disaster management and facilitates the flow of information vertically between Federal, Provincial and District levels (end-to-end), as well as, horizontally within each administrative level; between all the DMAs and external actors, as illustrated in Figure 7.

Figure 7: IM Framework communication and information flow from end-to-end



In reference to the National Disaster Management Framework, the Chairman of NDMA, Lt. Gen. (Retd.) Nadeem Ahmed stated that "…the fact that disaster risk management is a provincial subject, the cooperation and political will of the provincial governments through the Provincial Disaster Management Authorities (PDMAs) would be critical for successful implementation of priorities identified in the Framework." This holds true for all strategies emerging from the framework including the IM strategy; successful implementation of the IM strategy will depend on co-ownership and 'buy-in' from all three tiers of the DMA, and other government bodies and disaster response actors. Therefore, it is essential that the strategy implementation lead by NDMA is conducted in a systematic manner; in collaboration with PDMA and DDMA and other relevant stakeholders. National, provincial, district and community trainings and capacity development will be integral to the adoption and implementation of the NDMA IM Strategy and will be provided via an integrated approach through DMA and humanitarian actors operating in Pakistan.

Figure 8: IM throughout the life-cycle of Disaster Management



In order to facilitate a national coherent information management strategy which is more efficiently implemented, has strong coordination and is able to monitor the disaster response in Pakistan the following IM Strategy Objectives have been identified:

	Objectives
1	Establish and augment IM capacity at National, Provincial and District levels of DMA;
2	Augment the capacity of IM throughout the disaster response actors international and national ;
3	Enhance and streamline IM structure and systems within the DMAs;
4	Design and provide tools to the disaster response actors to facilitate accurate, timely and relevant information sharing and thus, provide a Common Operating Picture of Humanitarian Data and Baseline Humanitarian Indicators;
5	Identify disaster information sources and establish protocols to facilitate the sharing of data and information among disaster experts, managers and planners across sectors and between tiers;
6	Identify and facilitate the integration of complementary disaster management IM Systems
7	Empower NDMA to fulfil its mandate as the lead authority for coordination and monitoring in any disaster situation in Pakistan.
8	Adopt standardised IM formats and methodologies into the DMA and wider community in order measure and analyse improved disaster response preparedness and coordination for future emergencies;
9	Enable monitoring of expenditure reports of disaster response actors in order to assess aid effectiveness of aid delivery

3.1.1 Establish and augment DMA IM Capacity

As previously stated, the 2.2.1 a) National Disaster Management Authority, augmented capacity within the government to manage information in order to plan, implement, coordinate and track disaster management and monitor dedicated resources is urgently required. In order to build capacity, Information Management Officers (IMO), experts in their respective fields, shall be deployed to NDMA, PDMAs (commencing with the four flood affected provinces of Khyber Pakhtunkhwa, Punjab, Sindh and Baluchistan) and the 30 severely flood affected DDMAs or DCOs, as detailed in *Table 5: Severely Flood Affected Districts (29).*If resource mobilization permits the deployment of information management staff will be placed to build capacity in additional DDMAs, the focus will be on the high-risk disaster-prone districts identified by the One UN DRM Programme of Pakistan. These experts shall be responsible to operationalize the IM strategy, conduct trainings and workshops to build IM capacity at their respective administrative levels, both within the DMAs and the broader disaster management community and eventually exit with a sustainable IM capacity established.

Organograms

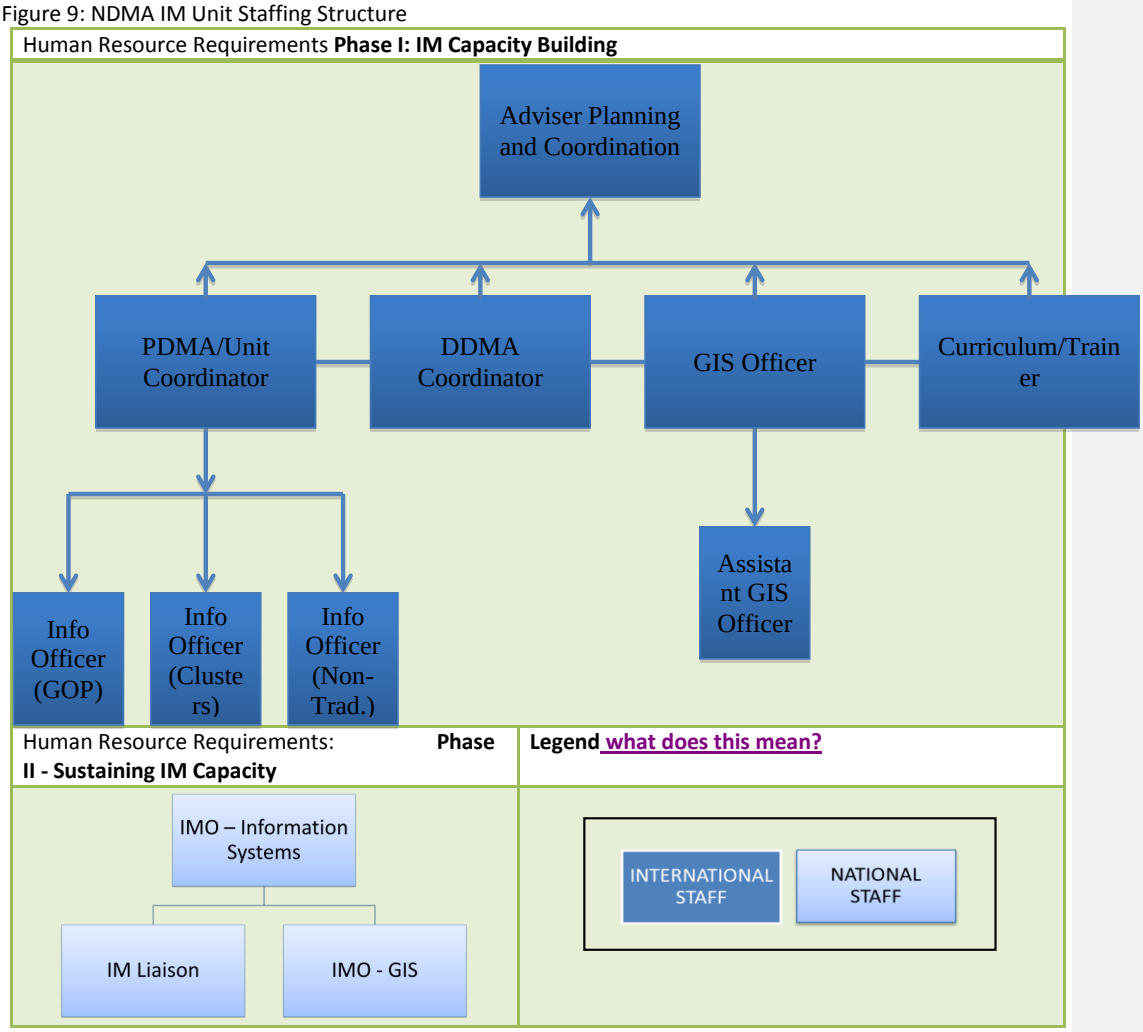
The following organograms detail the IM staffing structures in two phases: phase one details initial human resource requirements to build capacity within the DMAs, utilizing national and international experts in the various IM fields to train and build capacity of the DMA staff and establish networks of information sharing; whilst phase two illustrates the minimum IM capacity staffing levels to sustain the augmented IM capacity and established networks, within each tier of the DMA. It is worth noting that during large-scale disaster response, these staffing structures may need to be scaled up to meet surge capacity staffing levels,

dependent upon available resource mobilization. Descriptions of roles can be viewed in Annex Roles and Responsibilities.

NDMA IM Structure

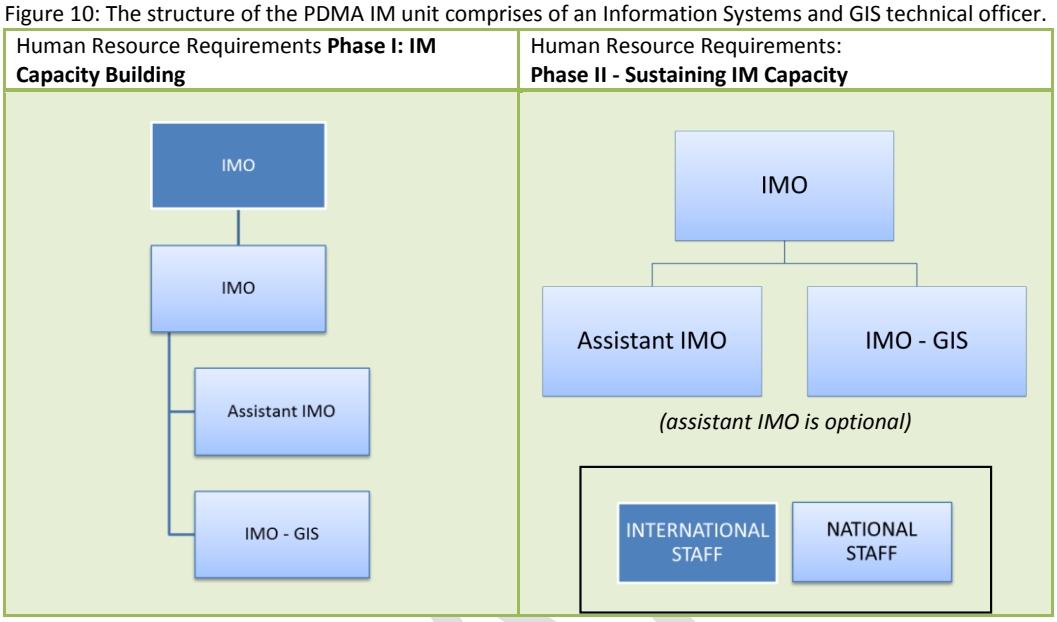
The structure of the NDMA IM department contains three units (Integration/liaison, Information Systems, and Field Coordination).

Figure 9: NDMA IM Unit Staffing Structure



PDMA IM Structure

Figure 10: The structure of the PDMA IM unit comprises of an Information Systems and GIS technical officer.

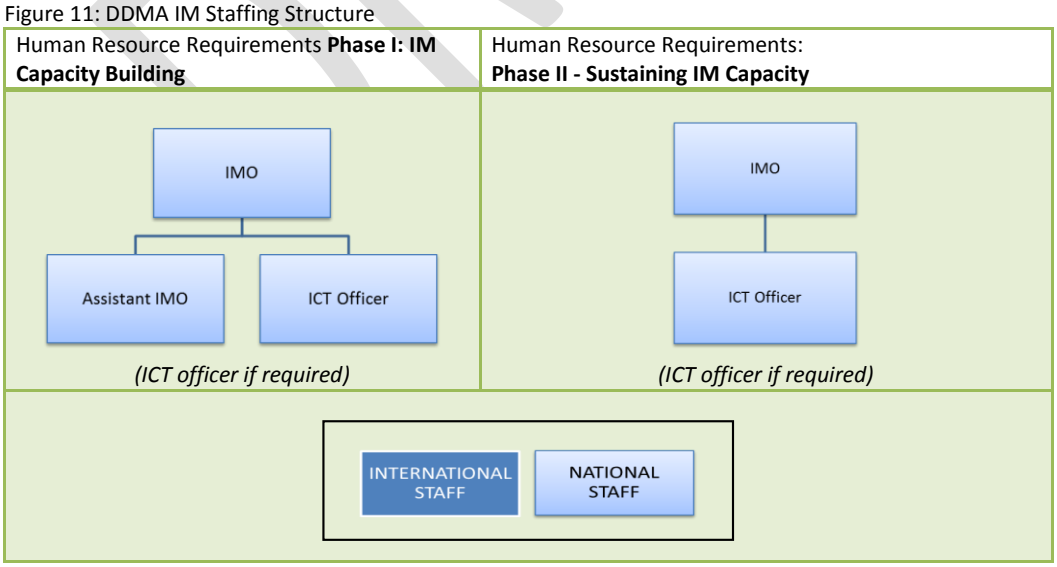


DDMA IM Structure

The staffing requirements of each district will be focused on collecting data to develop baselines; also to track service providers activities; the nature of the DDMA staff in the information management unit will reflect these necessary capacities.

The current DDMA/DCO levels of infrastructure, in certain districts, maybe restrictive in the full implementation of the proposed staffing structure.

Figure 11: DDMA IM Staffing Structure



During Phase I, the capacity development stage, on-the-job training of NDMA, PDMA and DDMA staff as well as the development and implementation of a number of training workshops at Federal, Provincial and District levels will be executed. These will cover the IM Strategy; IM principles and methodologies, GIS development and analysis, database and web development, as well as, field data collection and collation, all placed in the specific context of disaster management and with the reference to the developed tools to support the long term sustainable national IM framework. Training curriculums, training of trainer (ToT) programs and training materials will be developed .Where international consultants exist within the various DMA IM staffing structures, the aim is to establish a 'buddy' system whereby Pakistani national staff will be recruited to shadow the international specialists and take over their function during the course of the capacity development period. Subsequently, these staff should be supported from the National, Provincial and District budgets. In order to facilitate the absorption of these national staff into the DMA payrolls, salary scales have been aligned, as much as possible. PDMAs and DDMA will participate in the recruitment process.

~~Currently, NDMA and the humanitarian community lack effective methods for reliably capturing, reporting, sharing, and analyzing many key elements of information, including the collation and analysis in relation to baseline indicators. Information currently available is often in narrative format, lacks standardization, is missing geo-coordinates, and thus does not include the data/information necessary to facilitate analysis. These shortcomings inhibit the delivery of effective aid coordination and disaster management.~~

~~The Independent Evaluation Group's 2010 paper titled Response to Pakistan's Floods: Evaluative Lessons and Opportunity, states that a number of observers believe that the government lacks an effective mechanism to coordinate among different administrative levels, donors, and non-state actors. Given the broad evaluation experience of the importance of ownership, strong institutions, and communication, this suggests [the requirement of] a careful assessment of capacity, delineation of boundaries of responsibility [and] the design of linked reporting requirements across the core institutions, and communications capacity.~~

~~In line with the above recommendation, the starting point for a coordinated information management framework to be utilized by DMA and in turn the broader disaster response actors in Pakistan, is an assessment of the information needs and the ability of current information processes to meet these needs, (*See also paragraph 4.2Needs Assessment)*. As the responsible entity for disaster management coordination, NDMA must make the initial assessment of information flow within the three tiers of the DMA and define the reporting roles and responsibilities for each phase of the disaster management life cycle (response, recovery and rehabilitation, reconstruction, and preparedness).~~

Comment [WU18]: we need ddma capacity enhancement here in real HR terms only. This par all theory

~~The assessments (IM flow and user requirements) will be the base for identifying all ongoing DMA projects, specifically those with large IM components (such as those reliant on databases or developing systems for information storage and sharing) which shall benefit directly from the IM Framework and augmented capacity detailed in the Strategy document.~~

3.1.2 IM Tools

~~As was described in previous sections, there are existing coordination attempts between and among humanitarian actors at the country and regional level in Pakistan. Although some framework mechanisms are in place, primarily via the Cluster approach, they lack a complete overview of the humanitarian situation that clearly illustrates where the need is for assistance against the ongoing activities in the emergency/ disaster response. This gap analysis exists but is based upon information which is usually out-of-date and originating from a hybrid of multiple information management systems and sources, being collated from a variety of different mediums, terminologies, methodologies and definitions.~~

Comment [WU19]: repeptition

~~The coordination mechanisms in their current form do not promote a real exchange of information. For example, agencies provide Cluster Leads with information regarding agency activities, and then this information is not seen again by the implementers in derivative/expanded form or product. There is little information regarding humanitarian situation indicators, and if available, this data is not easily accessible. This lack of easily accessible information leads to resources not being allocated where they are most required and the intended beneficiaries do not receive relief services when needed, leading to a worsening humanitarian situation.~~

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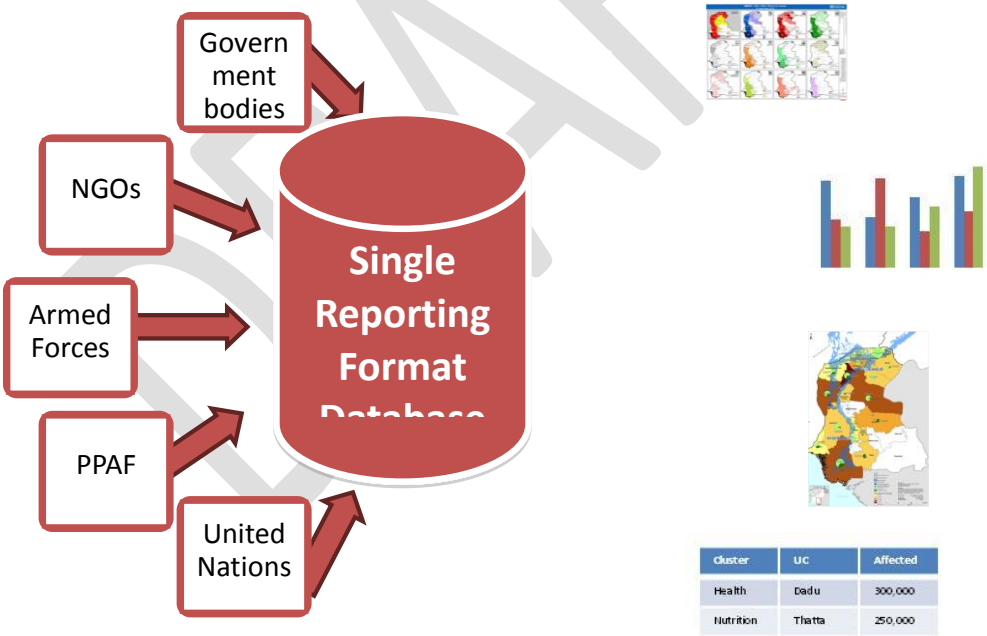
~~An organic system is required where agencies can provide information from their own disbursed locations, in a common and standardized format and updates are seen immediately. In this way everything from agency activities and project information, to information regarding humanitarian indicators can be shared in near real-time. Agencies that need information about a particularCluster should be able to obtain a picture of the situation at any given time. This timely access to relevant information will enable all users of the common system to respond quicker during the current crisis, while allowing NDMA and humanitarian decision makers to monitor what agencies are doing in order to avoid duplication of effort and waste of resources.~~

Single Reporting Format

The Single Reporting Format is a tool to standardize the reports from response partners in disaster management, so that policy managers are able to plan, track and monitor progress regularly and more accurately. The development of the Single Reporting Format (SRF) for the NDMA and broader humanitarian community is a key component to the provision of a common web platform for all Implementing Partners (IP's) to report on their humanitarian activities and will enable better coordination of humanitarian assistance in Pakistan. Through the use of the SRF by all disaster management actors (UN, NGOs, Government – Line Ministries, Military, PDMAs, DDMAs – donors, NFRC, PPAF, to name a few) a common operating picture may be achieved enabling identification of needs, disaster response to date, gap analysis and monitoring of aid effectiveness.

Figure 12: The Single Reporting Format



NDMA with Cluster Leads will develop a set of key performance indicators against which activities and projects will be measured. Three user groups (Sector/Cluster Lead, Project Owner and Implementing Partner) are able to enter data from any location with internet connectivity to report on their activities in real-time, likewise any actor with a user account may log into the SRF to access specific data from other users. For smaller agencies lacking the capacity or access to the internet, static data-collection forms will be

issued (using Microsoft Word, Excel or a hardcopy printout); the data collected in this manner will be entered into the SRF system by the responsible project owner.

Table 10: Example Indicator with Activity and Data (Food Sector)

Indicator	FOO_1	Households receiving relief food assistance, as % of planned			HH
Activity 1	General food distributions (Households receiving, as % of planned)		Target	Actual	HH
Weight= n/a	Data 1	# of male-headed households receiving food			HH
	Data 2	# of female-headed households receiving food			HH
	Data 3	# of male beneficiaries receiving food assistance			Bene
	Data 4	# of female beneficiaries receiving food assistance			Bene
	Data 5	# of metric tons of food distributed			MT
	Element 01	# of metric tons of cereal			MT
	Element 02	# of metric tons of pulses			MT
	Element 03	# of metric tons of salt			MT
	Element 04	# of metric tons of sugar			MT
	Element 05	# of metric tons of vegetable oil			MT
	Element 06	# of metric tons of high energy biscuits			MT
	Element 07	# of metric tons of ready-to-use sup. foods			MT
	Element 08	# metric tons of fortified blended foods			MT
	Element 09	# of metric tons of MNPs			MT
	Element 10	# of metric tons of canned foods			MT
	Element 11	# of metric tons of tea			MT
	Element 12	# of metric tons of fresh food			MT
	Element 13	# of metric tons of other			MT

This online reporting system, which facilitates data entry, has already been developed, and is now in its final acceptance and testing phase. A series of training workshops to support all users (especially field-based staff) will be carried out by NDMA and the UN. The Clusters and NDMA will act as focal points for establishing the framework of indicators and activities, from which Project Owners (appealing agency or the agency which has received money to implement a project) will establish their project reporting framework specifying implementing partners and allocating targets at specific geographical locations. Implementing Partners will then log in and simply report against the activities (targets met at UC level) achieved within that reporting period. The workflow can be seen below in Figure 13: Workflow of the Single Reporting Format.

Comment [i20]: Obtain brief history and use t date of SRF in Pakistan from Christian OCHA

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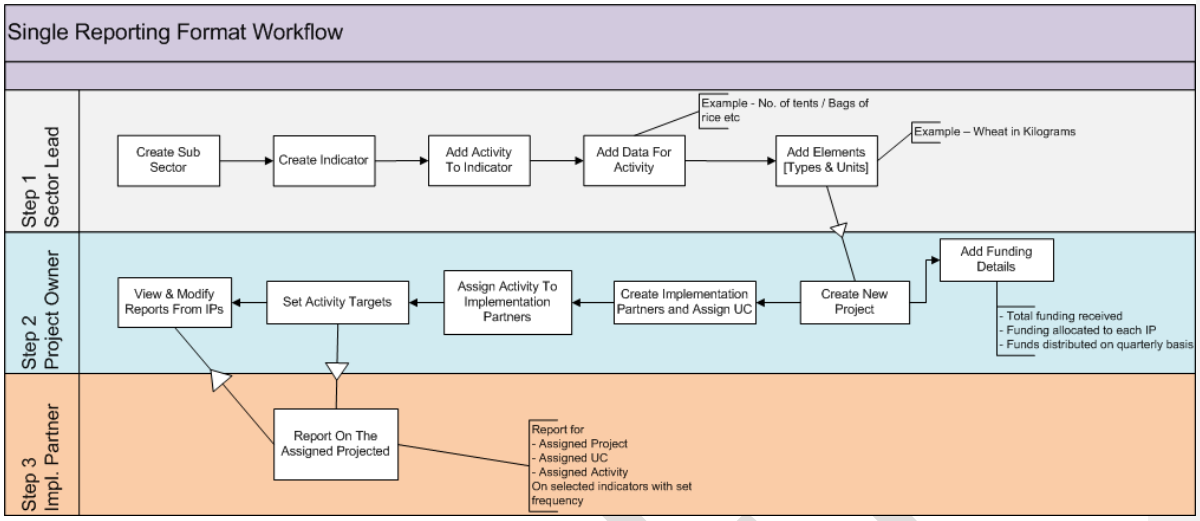
Figure 13: Workflow of the Single Reporting Format



This standardized, common tool for the collection of data will enable a more robust and efficient disaster management community. The impact and results of the humanitarian community's contribution will be measured against the agreed key performance indicators. Specifically, the SRF will collect information on the following topics to track progress against indicators:

- Activity types and outputs
- Partners activities (including government agencies and implementing partners)
- Project locations (to UC level)
- Identified beneficiaries and beneficiaries served
- Project budgets and expenditure

Comment [i21]: NILOFER states:
What do all these mean?

Katie: This is rather self-explanatory, I have adde
text above and the workflow figure – I believe thi
clear and an explanation of tracking progress agai
beneficiaries, for example, is clear.

Figure 14: SRF Cluster Lead Functionality

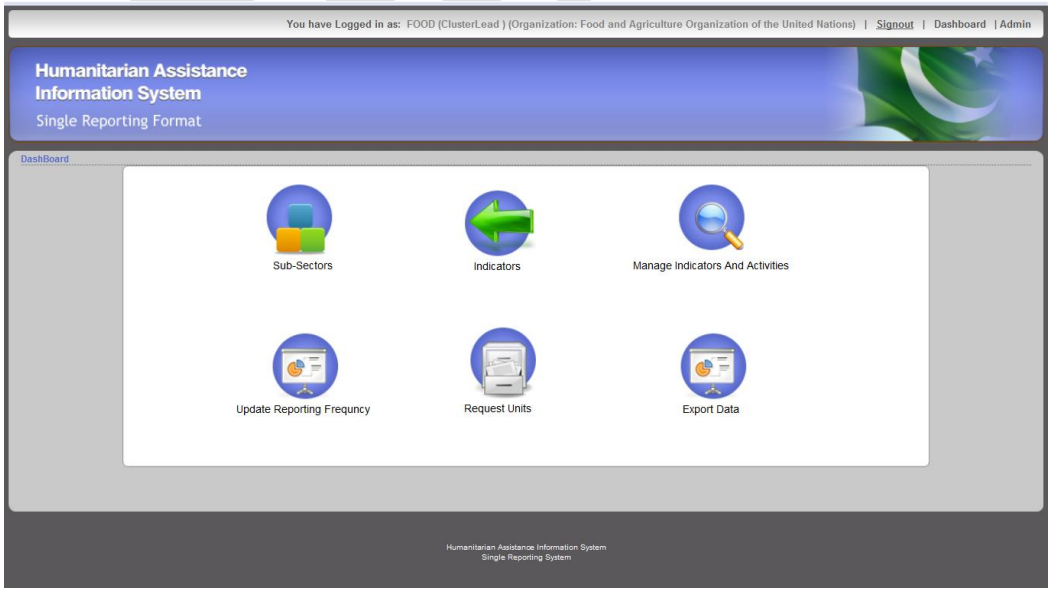


Figure 15: SRF Cluster Lead - add indicator

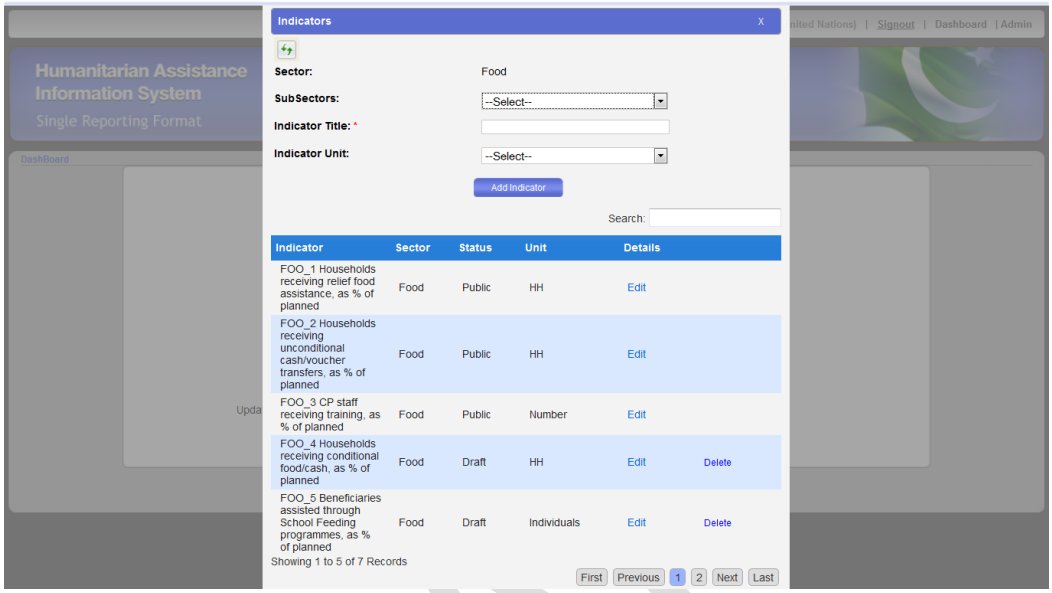


Figure 16: SRF Cluster Lead - add activities

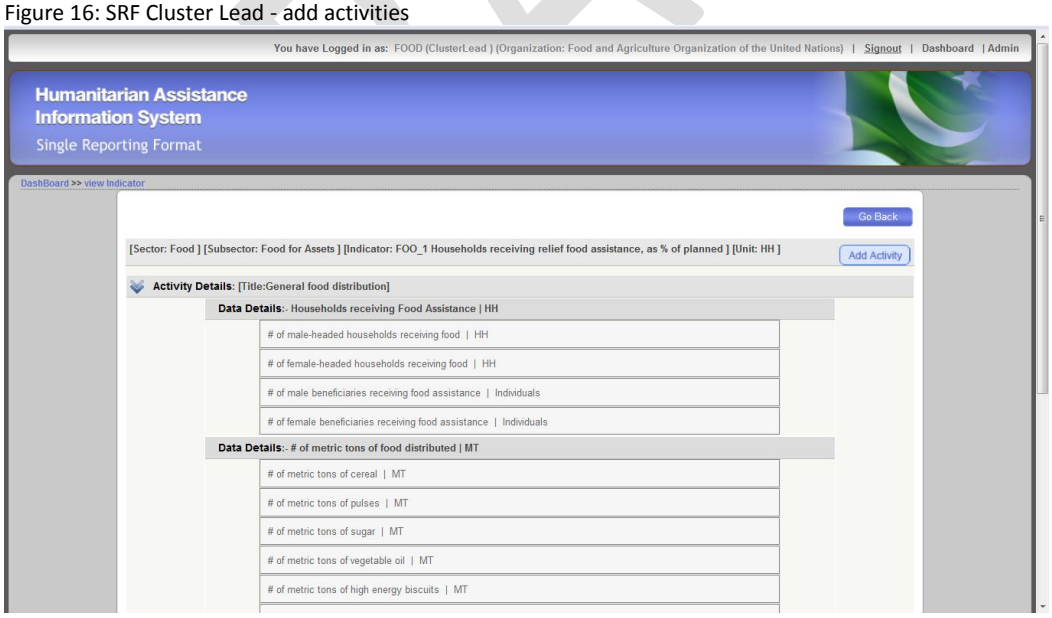


Figure 17: SRF Project Owner - Manage Project

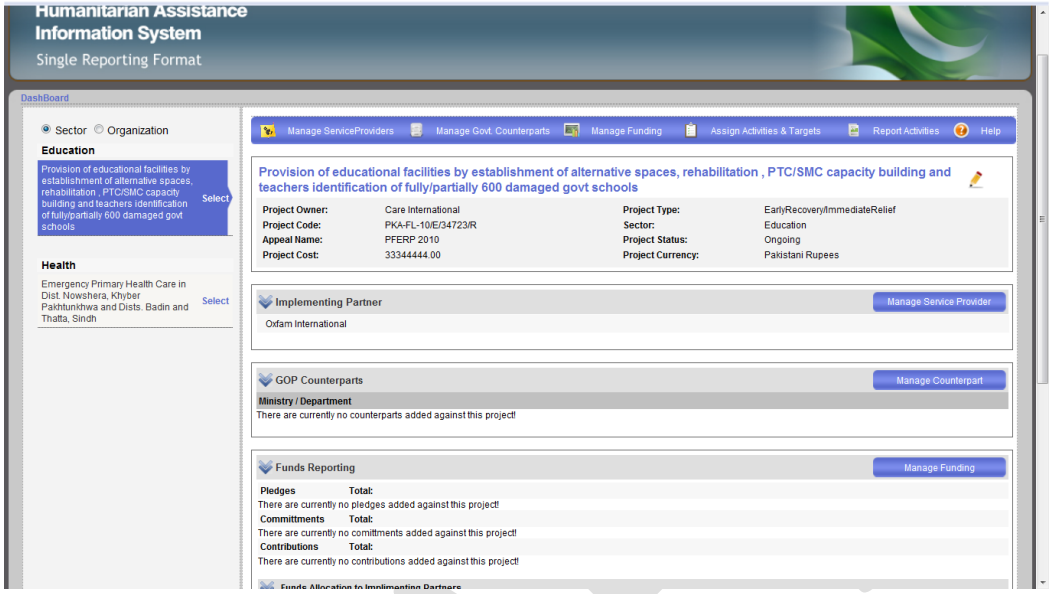
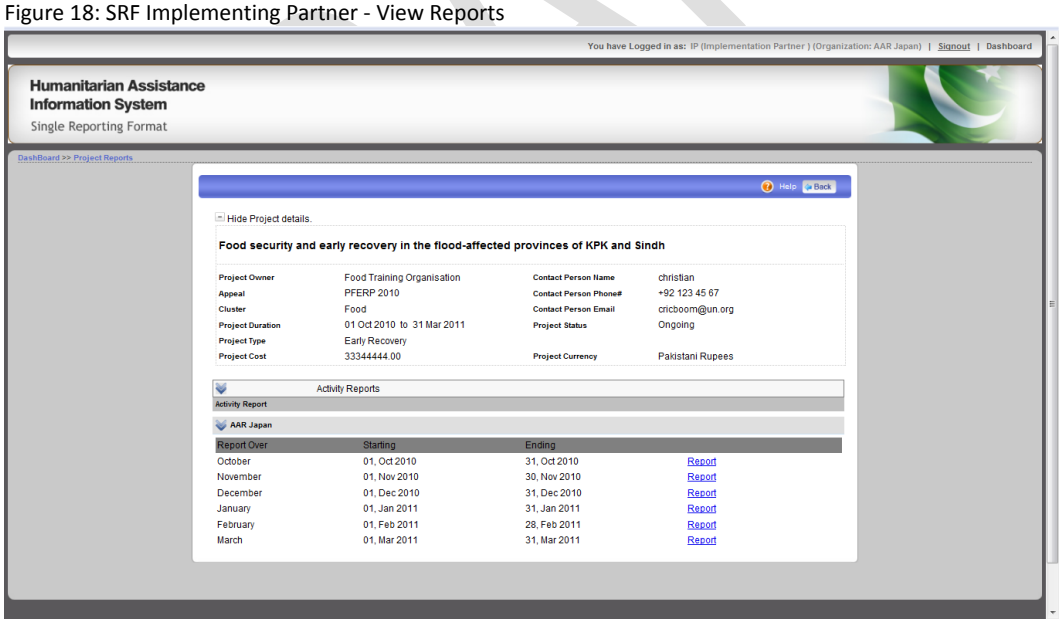


Figure 18: SRF Implementing Partner - View Reports



With overall guidance and support from NDMA and the UN all disaster management actors operating in Pakistan will train its staff and partners to be able to fill in their relevant sections within the Single Reporting Format system. The SRF will be gender disaggregated and vulnerability sensitive to ensure tracking and

monitoring accordingly. The appropriate disaggregated information will be collected for various targeting, analytical and impact assessments. The government of Pakistan has defined vulnerability for the Floods 2010 PFRERRP : 'social marginalized groups women, children, landless, non ID card holding Pakistani, Afghan Refugees, older people, people with disabilities, chronic diseases and serious medical conditions'.

With the creation of the SRF for Pakistan and given the detailed participation of major stakeholders in the development of the system it is believed that usual barriers to information sharing and collection, collating and analysis will be overcome. The SRF is a tool defined by the wide Pakistan DMA, other government counterparts, and the humanitarian community. It is hoped that this participatory approach will facilitate the buy-in from all stakeholder who will feel like they are part of this system.

OASIS the Software for Information Management

Is a soft ware developed
It has been used in
It can do

> *"A database will be developed to record disaster response resources available with different departments at district, provincial and national levels. This would allow authorities to mobilize the resources and deploy them in affected areas at the time of disaster. Based upon an agreed list of resources and equipment, the departments will submit lists of resources available with them to the DDMA, PDMA and NDMA. The database will be made available on line, so that all stakeholders can access this information when needed. The PDMAs, DDMAs and MDMAs will manage the databases at provincial, district and city levels."*

National Disaster Risk Management Framework

Experience from disaster responses suggest that disaster management coordination may be improved upon through the following activities:

- Provide a Common Operating Picture during any complex emergency, upon which all information is built;
- Eliminate overlap and duplication among humanitarian implementers, especially between NGOs and government/military entities;
- Improve vehicles for data sharing among Government actors, NGOs, International Organizations (IOs), and other humanitarian actors;
- Establish baselines upon which to make decisions of resource allocation;
- Deploy tools to facilitate distribution and sharing of humanitarian information, analysis, and other data;
- Provide a mechanism for near "real time" editing and updating of information.

These improvements will aid the reduction of overlap on assistance efforts & hence provide better targeted relief to those who need it most.

OASIS in conjunction with the SRF supports the above recommendations.

OASIS an Information Management suite which facilitates humanitarian coordination through advanced tools and services, including:

- Seamless sharing of data between all users of the system;
- Offline access to information and analysis, and also offline data entry;
- Access control denoting what information people are permitted to see / edit;
- The ability to seamlessly visualize all information in the system on a map;
- Definition of pre-defined reports which can be shared across and institution;
- Simple integration of existing databases which in-turn instantly enables existing database to utilize all of the above outlined features.

The SRF brings a constant supply of information to the OASIS suite, which will be updated by the multitude of humanitarian actors throughout Pakistan. This information supplied to the OASIS suite will enable users to view up-to-date analysis on the humanitarian efforts and their respective projects funded by donors. Once users update the SRF this information will be seamlessly updated in OASIS and hence providing the most up-to-date & comprehensive Information System that encompasses mapping and analysis in modern day humanitarian affairs.

OASIS is compatible with most GIS proprietary formats which in-turn facilitates integration with existing information sources such as ESRI ArcGIS, Google, and MapInfo for example.

OASIS is designed to be used by everyone. Although this tool initially looks like a GIS tool it has been carefully designed **to allow non-technical actors to utilize all the functionality of the system with minimal training.** Thus **DCO** and pdma dg and ndma sector advisers can use it and access it? The system enables non-technical users to perform simple data entry, spatially enable this data (represent the data on maps), & even allow them to perform advanced spatial (and non-spatial) analysis.

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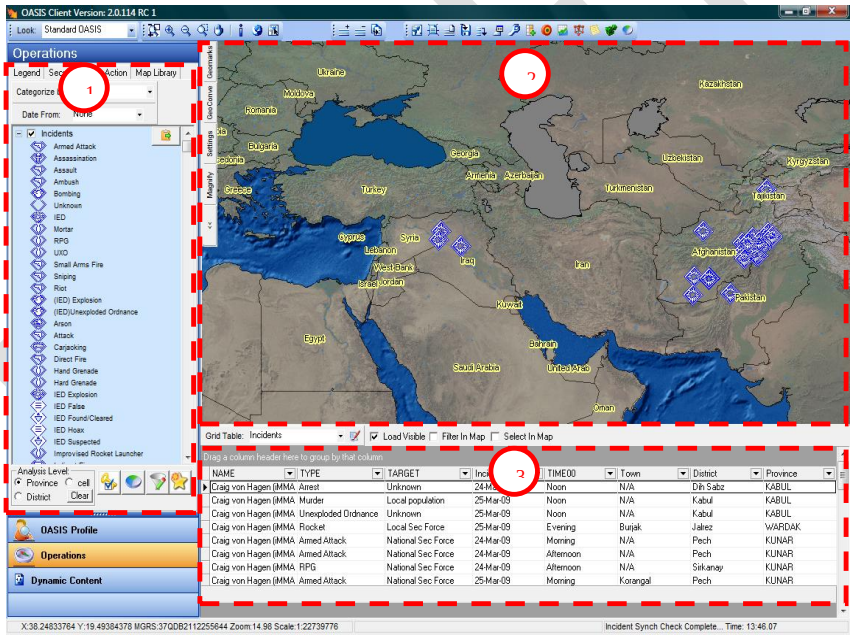
This main graphical user interface is composed of 3 main elements:

1. The view layers control allows the user to control what information is to be displayed on the screen
2. The data view allows the user to navigate to the information geographically or by record detail
3. The data grid allows the user to view all the data in a table

Figure 19: OASIS Graphical User Interface



The OASIS Framework consists of three elements:

1. OASIS Client. This is the core application, which is installed locally on each client computer. All users of the system can install this software on their computer in a similar fashion to installing Microsoft office.
2. OASIS Server. This is an enterprise web database that houses all information which is to be shared between all users of the system. This server also manages access control for all users and also controls the synchronization of information between such users.

3. OASIS Web Service: This is a scaled down version of OASIS that is available offline enabling users to access the information in the OASIS application via a web browser.

In any operation you can have many users requiring access to an Information Management System (IMS) to enter data or to perform analysis. In order to facilitate these users the framework allows users to have a "snapshot" of the system at all times and hence provide them with the power to be mobile in the field, working offline. can you give me an example? An adviser can review unicefs project completion or current status on progress against the agreed indicators? What kind of reports can she generate? Thus information managers at federal, provincial, and district levels will be able to operate the system during internet outages and also in places where there is no internet access available.

Seamless information sharing is accomplished in the OASIS framework via synchronization. This means that:

- Once you are connected to the internet OASIS automatically synchronizes your data in the background. This means that:
- Any information you input into OASIS while you are offline will automatically upload to the OASIS Server once you are connected to the Internet.
- Any information which has been added to the OASIS from other users while you were offline will be downloaded once you connect your computer to the Internet.

While you are offline you still have access to the same information you last used while you were connected to the Internet. The result of this type of synchronization is a system which is truly portable and enables users to share information seamlessly. Hence non-technical users do not need to understand how the synchronization mechanism works; they can rest assured that it "just works". So the DCO can do and see what? Or dg PDMA ?Or an appealing agency?

The of main sources of data to be imported into OASIS will be the SRF for reporting on the flood response appeal; but the information management system being developed would be for the entire ambit of preparedness and DRM, data entered directly into OASIS through easy-to-create data entry templates or data imported directly from other existing databases, such as: the Disease Early Warning System, (the creation of the Health Ministry in collaboration with the World Health Organization); data acquired from the WATAN Card programme operated by National Database and Registration Authority (NADRA); and the Multi-Cluster Rapid Assessment Mechanism (McRAMS) statistical data, to name a few. These databases will be identified during the assessment of information sources, flow and utility, as described in the above section **Error! Reference source not found.Error! Reference source not found.**.

OASIS has a purely dynamic data entry module which allows IM officers to design their database to capture all the information they require. For example the vulnerability criteria and the disaggregatedlevel of data necessary for various analytical reports. Thus, in addition to the SRF and importing data from existing databases, OASIS can enable data-entry directly into the system, depending on the requirements of the user. In this functionality, the GUI is displayed in a similar format to the main OASIS Client GUI, but the map has been replaced with a data entry form.

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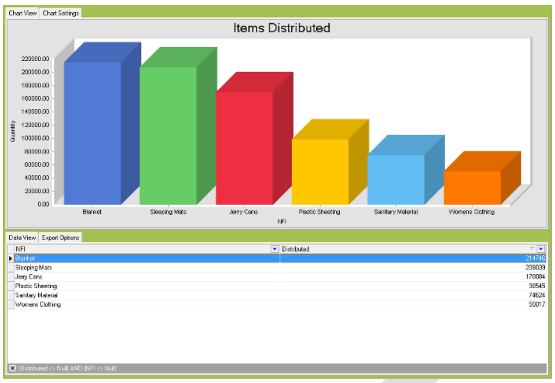

Figure 20: OASIS Reporting

The creation of OASIS reports is easily accomplished. The only requirement for a user to create such reports is experience building queries in basic Structured Query Language (SQL). Once suitable queries are built in the dynamic database OASIS can render them graphically and also in a data table. These queries can be pre-set in order to generate regular reports based on user requirements. Training will take how long?

In summary, the combination of the synchronization engine and the dynamic data module make OASIS an attractive tool to be used by IM specialists in all ~~organisations~~organizations. One of the core requirements for coordination is having up-to-date and comprehensive information on ongoing activities. Enabling stakeholders to easily enter data into a database system that also transmits this information to the coordinating agencies seamlessly is a huge step for IM in the humanitarian & disaster management sector.

OASIS has been chosen as the tool for implementation of IM throughout Pakistan due to its lightweight design, adaptability to existing databases, seamless information sharing, GIS visualization, and ease of distribution to a wide network due to no licensing restrictions.

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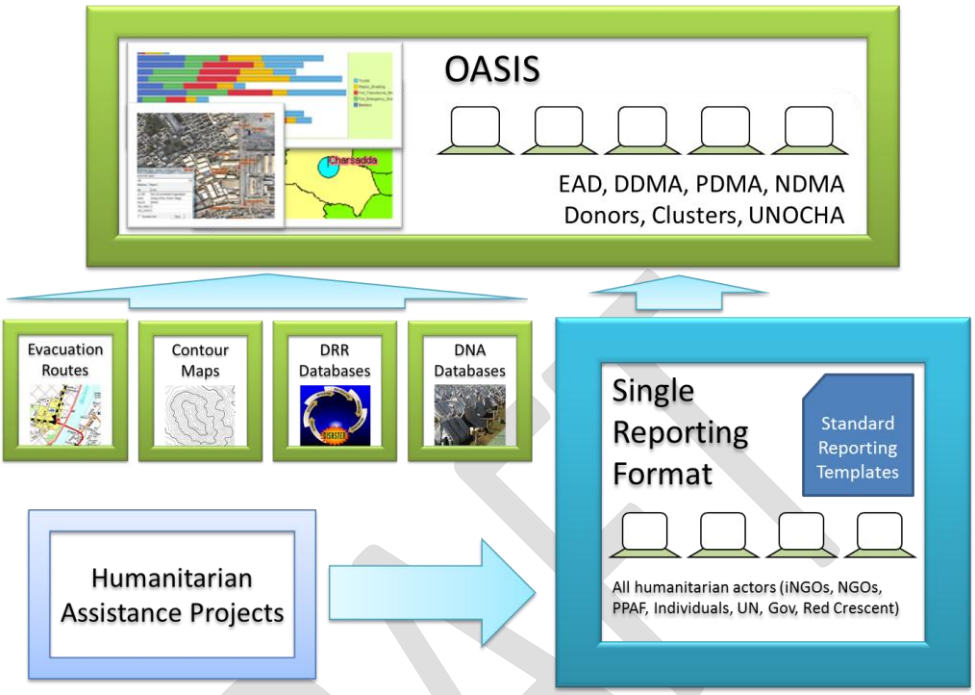
Figure 21: Coordination and Information Sharing Framework



OASIS will ultimately act as the data warehouse for all data within the Pakistan DMAs framework. The SRF data will be shared with OASIS and other data will be integrated directly into the OASIS data warehouse. This flexibility of OASIS will prove essential in order to be adaptable to varying and changing needs of the different stakeholders.

3.1.3 Information Sources and Protocols for Sharing

Comment [i22]: NILOFER States:

We can also add here which partners need to begi to share database information list (mou to be sign which partners need to standardize what? Etc

Katie: This can only be done once the needs assessments have been conducted and key data owners identified, this is the strategy doc on how achieve these objectives and not the actual implementation and reporting of the steps detailed within the Strategy.

At the onset of an emergency, information such as assessments, statistics, and census reports is needed immediately and must be as accurate as possible in order to gauge the necessary level of response. Despite this need, the typical reality in disaster response is that existing information is outdated, hard-to-find, scattered among different sources, or unreliable for political or other reasons. The difficulties of sending assessment teams to a site without accurate information are extreme, often resulting in wasted time and resources.

Core datasets are essential to guide humanitarian actors' interventions; these include, but are not limited to, administrative divisions, demographic information, population movements, health and education facilities, etc. The acquisitions of appropriate data and information, with early incorporation into relief planning have been identified as a priority by OCHA for humanitarian response.[21] Among the most critical information needs are:

- Estimated number of individuals affected
- Geographical area affected
- Numbers and location(s) of displaced populations

[21] UNOCHA *Guidelines for OCHA Field Information Management April 2006*

- Critical immediate needs (i.e. medical assistance, shelter, food)
-

An enabled DDMA would be able to upload the damage and needs initially of the above immediately. At the federal level Specialized organizations such as the Pakistan Meteorological Department, the Geological Survey of Pakistan, the National Institute of Oceanography, the Pakistan Space and Upper Atmosphere Research Commission (SUPARCO) and other agencies are involved in the monitoring of hazards. However, data/ maps on multiple hazards are currently not compiled in a systematic manner and not integrated/ correlated with data/ maps on vulnerabilities. Early warning s would be more accurate and speedily shared once systems are in place. Therefore the level and dynamics of risks are not yet sufficiently analyzed. This constitutes a gap for the setting of national, provincial and local priorities in risk management/ development.[22]

Key data / information owners will be identified during the information and user requirement assessments, the Information Unit of the DMA will then enter negotiations to establish protocols for continual sharing of up-dated data-sets. This in part will constitute a vast majority of base-line data, essential in disaster management from preparedness through to reconstruction phases.

Disaster management IM Working Groups shall be established to maintain the relationships and protocols of data sharing both amongst key disaster management actors and also these identified information owners.

3.1.4 IntegrationofIMComplementary Systems

~~'Disaster' means a catastrophe, or a calamity in an affected area, arising from natural or man-made causes, or by accident which results in a substantial loss of life or human suffering or damage to, and destruction of, property." The initial phase within disaster management, 'Response' covers from the initial emergency response, for example search and rescue, to humanitarian relief activities.~~

~~In addition to natural disasters Pakistan is facing an increasing number of man-made risks, such as, traffic collisions, mushroom growth of high-rise buildings which often do not meet minimum safety standards, chemical and hazardous material incidents, growing number of terrorist activities and above all, unsafe and risky living practices in the community.[23] A UN OCHA evaluation of disaster response agencies of Pakistan, conducted in 2006[24], identified a demand for quality emergency services including real-time crisis-information management, which has brought numerous contributions to the fore, some voluntary and others market driven. All such services and systems currently operate in the absence of an integrated framework.~~

Some provinces have already seen the importance of such systems and are looking for solutions. For instance the Punjab government is in the process of deploying a real-time crisis management computer system to allow fast and efficient response to emergencies (beside its already operational first-responder "1122" emergency service). Sindh is looking into a similar approach and have secured funding to start building up its own infrastructures. The effectiveness of these tools relies on available and accurate data, as explained below. Based on a national strategy on information management various stages of provincial IM systems can be streamlined and integrated into a coherent IM disaster management system.

In Pakistan, a multitude of databases exist and reside on disparate systems hosted by numerous organizations. These systems are not compatible on a data level due to varying terminologies, schemas, and methodologies underpinning the datasets. In order to obtain a common operating picture across Pakistan these datasets need to be encompassed into a single data warehouse. In addition, staging this data will

Comment [i23]: Joe – this section could do w some fine tuning

Comment [i24]: NILOFER states - basically delete this section

Katie: this is an essential strategy component - perhaps needs to be more clearly defined. The ide being that IM systems already exist, OASIS and S are not competing or replacing such systems but complimenting them. Thus identification of these systems and definition of how they can be complimented should be undertaken by the IM Un of DMA.

Comment [i25]: NILOFER states to delete thi

Katie: many of the ICS (explained in this section) systems that are used more often than not in respo to explosions or man-made disasters. They are a priority within the PDMAs and thus should be recognised as ongoing projects that could be complimented by OASIS.

[22]UNDP: *Joint Programme Component on Disaster Risk Management: One UN Disaster Risk Management Programme 18 Dec 2009*
[23]Rescue 1122 website *http://rescue.gov.pk/RChallenge.aspx*accessed December 2010
[24]OCHA *Evaluation of Disaster Response Agencies of Pakistan December 2006*

enable different themes of data (such as different sectors) to be integrated via GIS. This scenario is not unique to Pakistan and such trends are a common theme in other humanitarian contexts.

Having such information in a humanitarian data warehouse will also enable better access for this data for decision makers and should in concept provide incentive in stakeholders to utilize such a system and hence in-turn enhance it through their usage.

In the order for the NDMA to be effective in managing the complex disaster situations in its mandate, it needs to be equipped with an up-to-date operations center (at all three tiers of government), capable of receiving and processing data as it is received from the disaster zones. This calls for an information management system for collection, processing and storage mechanisms that utilizes, at best, all resources/ data available from different entities taking part in the emergency response. At the center of such an integrated system are GIS tools that allow visual instant updates of situations on the ground. As described in the previous section 3.1.2IM Tools, OASIS meets these requirements, including being flexible enough in design to complement any systems already being utilized (such as the real-time crisis management systems currently in development in the provinces).

The effectiveness of these tools relies on available and accurate data. An effective IM strategy should include a provision for a centralized system, flexible enough to adapt to diverse data formats and complement various existing systems or databases. This will allow the NDMA to benefit from the large pool of data available with the different actors and to enable a better assessment of the situation in order to respond to it accordingly.

3.1.5 IM for Preparedness

Comment [WU26]: repetititon

The collation, storage and sharing of base-line data, and historical data of past emergency response, in addition to the utilization of a common set of IM tools and protocols amongst the DMA and wider disaster management community will provide a wealth of information, readily available for specific queries, analysis and incorporation into preparedness plans and disaster risk reduction programs. Accessible information for all actors is critical to augmented national capacity for disaster risk management and implementation of disaster management programs and coordination. DDMA capacitated is preparedness.

3.1.6 Monitoring and Evaluation of Aid Effectiveness

Once the Single Reporting Format is fully operationalized amongst as broader disaster management user group as possible, the evaluation and monitoring of funded programs will become much more manageable. Periodic reports generated from the SRF will facilitate NDMA and UN Clusters to evaluate the progress of disaster response, review and change project components and sector focus or resource mobilization requests as needed and demanded by the changing face of the disaster. The coordination of large numbers of actors will be easier as will monitoring and verification of aid effectiveness. Expenditure reports will demonstrate actual capacity to deliver services on agreed timelines and also justify resource mobilization requests.

Comment [i27]: NILOFER states: The input o the DDMA in these decisions automatically also becomes much easier. Katie - not sure why one would only mention DDMA and not all actors.

In turn, communications with the public and the affected population on progress will be based on actual reported facts and thus far more tangible; public information and response to any public disquiet will be countered with 'facts' which can be more readily verified and cross-checked.

3.2 Needs Assessment

Information management begins in the defining of requirements; to map the information objectives to the end users' strategic objectives and, from there, frame the 'information space'; the set of concepts and relations among them held by the information system. In order to define user needs and emphasize data sets and formats that directly supports decision-making it is necessary to conduct the following activities at three levels; the national, provincial and district:

- Identify user groups;

- Conduct user requirement analysis;
- Take inventory of information resources, and;
- Take inventory and define core information products based on user inputs.

An assessment of the type, quality, format and use of information or data provided to, or obtained from, organizations or other entities outside the DMA, is to be conducted. By assessing the usefulness and appropriateness of information from each source and the modality in which it arrives, NDMA will be able to prioritize the following:

1. Identification of external databases or datasets to be imported into a centralized IMS;
2. Identification of data owners to be met and establishment of information sharing protocols;
3. Identification of key information owners for capacity development activities (as described in section **Error! Reference source not found.Error! Reference source not found.**);

3.3 Target Beneficiaries

The primary beneficiary of the IM Strategy the disaster management community, through augmented IM capacity, specifically within:

1. The National, Provincial and District Disaster Management Authority;
2. The line ministries and G.O.P. partners involved within disaster management or key information owners pertinent to disaster management;
3. The UN, NGO, donors and other international community involved in disaster management.

The secondary beneficiaries of this IM strategy are the millions of disaster affected population in Pakistan, year after year afflicted by an increasing number of natural and man-made disasters. Improved IM capacity will result in improved disaster management coordination and far greater aid effectiveness which will save lives and reduce the loss and damages of annual disasters.

3.4 Identified Priorities

	Objectives	Priorities
1	Establish and augment IM capacity at National, Provincial and District levels of DMA	Recruit full teams to the NDMA and 4 identified PDMAs
		Secure resource mobilisation for recruitments at 29 identified DDMAs
2	Augment the capacity of IM throughout the disaster response community	Schedule IM trainings within the DMA and broader disaster management community
		Conduct IM capacity assessments at each administrative tier of DMA
3	Enhance and streamline IM structure and systems within the DMA	Conduct information flow assessments within the DMA and identify current DMA projects' IM systems
		Advocate amongst all of DMA the use and implementation of IM tools and procedures as detailed in the IM Strategy
		Implement and train on the use of IM tools
		Establish DMA IM working groups
4	Design and provide tools to the disaster response community to facilitate accurate, timely and relevant information sharing and thus, provide a Common Operating Picture of Humanitarian Data and Baseline Humanitarian Indicators	Roll-out SRF and OASIS to DMA and external partners
		Provide guidance and/or assistance to PDMAs and DDMAs in the development of nationally compatible SOPs, data models and reporting templates

Comment [i28]: NILOFER states A workplan for the roll out of the 29 districts ddma capacity ca be attached with timelines/curruclum and training phases. When can they be operational? Lets have realistic matrix.

Katie: This will be the iMMAP project document and will be written in the coming weeks.

5	Identify disaster information sources and establish protocols to facilitate the sharing of data and information among disaster experts, managers and planners across sectors and between regions;	Identify key disaster management information/data owners with whom to define information sharing protocols
6	Identify and facilitate the integration of complementary disaster management IM Systems	Identify user requirements within the DMAs in order to incorporate any existing IM systems
7	Support NDMA to coordination and monitoring in any disaster situation in Pakistan.	Establish IM working groups at all tiers of DMA
8	Adoption of standardised IM formats and methodologies into the DMA and wider community in order improve disaster response preparedness and coordination for future emergencies;	Develop standardized terms and categories and disaggregated datasets for SRF Training and dissemination on the above terminologies across all agencies Working with the DRR unit of NDMA, identify ongoing DRR and DRM projects to utilise the IM tools and compile repository of data and information for base-line and historical disaster management analysis
9	Enable the monitoring of aid delivery and expenditure throughout Pakistan in order to assess aid effectiveness	In collaboration with donors, EAD and all administrative tiers of the DMA ensure the SRF captures financial data reflecting expenditure broken down into three categories agreed in the pferrp operations cost program cost and overhead cost financial data to enable more precise monitoring of resource mobilisation and aid effectiveness monitoring

Conclusion

==========

This is an annex or a workplan for the roll out of the pdma ddma 29, and ndma

Resource Mobilization

Comment [i29]: Nilofer – some guidance on t section please. It follows the titles that SPU gave iMMAP to follow for all strategy docs.

For govt

The organogram of each tier in the IM unit
The funding that would be required for that staffing
From pfeerp
Cluster coordinators were funded to install IM units
Training of partners in SRF filling out
Tot

Non traditional actors

Planning to reach out to them at ddma level on the srf and training

This can be annexed

Potential Risks

Information is a key asset for humanitarian inter-organizational coordination. Information management must contend with its production, retrieval, processing, validation, consumption and distributions. Criteria for success include its relevance to decision-makers, timeliness and accuracy (Maitland, 2009). Obstacles and barriers exist in the implementation of an IM framework which include:

- In humanitarian disasters IM in international organizations suffers from the high turnover of staff. A common complaint from staff is the reinvention of the wheel; new IM systems and data warehouses with each new staff or project.
- Despite literal contradiction, competition is increasingly becoming an intrinsic element of humanitarian work. This can largely be attributed to the fact that many disaster management actors rely on donor funding for their programmes. This competitiveness hinders effective coordination (Abiew, 2003) and often leads to trust and information sharing issues. While donors are amongst those that most vociferously demand coordination; donor earmarking, micromanaging, visibility concerns and political agendas all confound disaster management coordination (Nicola Reindorp, 2001). Donors and government bodies often demand immediate information on the situation in order to determine the amount of funding required for assistance in a given disaster response or regional allocation of said funding. This demand for immediate information on the situation often lends to inaccurate information disseminated by disaster management actors which can give a false overview on the impact of the disaster which can lead to gross overestimation (or underestimation) of the situation at hand.
- Inability of humanitarian community to train and roll out SRF during the reporting periods of the PFEERP 2010. This is dependent on OCHA providing sufficient training to approximately 132 agencies in time.
- Coordination is an iterative process of gradually building trust, understanding and working relationships (Hartnett, 2005).In systems where individuals cannot verify the information before acting on it; this requires that the sender of the information be trusted. Without trust being placed in the coordinating body any attempt for coordination may fail. Trust in this context can range from other humanitarian actors not respecting the competency of the coordinating body to privacy concerns where there is potential for misuse of the information for unintended purposes (Ashish, 2007).Trust can also be an internal factor where humanitarian actors may be unwilling to share their information due to their not having any confidence in their own information. This can occur when humanitarian actors do not have adequate (if any) information management infrastructure within the organization. Ironically, sharing data with other actors would help improve this; it therefore becomes a 'Catch-22'.Maitland (2009) pointed out that even if humanitarian actors agree to share information, the impact on coordination would be minimal without a joint plan of analysis. The information is only utilized properly once it is analyzed in a logical, recognizable and clear format that all parties agree on.
- Each agency encounters internal barriers to communication and understanding between headquarters and the field. When agencies try to coordinate with one another at either level these vertical bureaucratic barriers increase exponentially. Thus, coordination efforts must always address the bureaucratic barriers between the different levels of one agency as well as the differences between agencies (Hartnett, 2005).

Comment [i30]: NILOFER States:

1.Challenge one: multiple actors develop information management systems in Pakistan: counteract: this is not going to allowed by ndm since they have agreed on a single strategy to operationalized in accordance to this. For coherence and aid effectiveness

Katie: This is a strategy document and not a law o MoU – therefore, not being allowed by NDMA because they have agreed on a single strategy is rather draconian and goes against some of the strategy objectives of building trust and an atmosphere of information sharing.

2.Sfr is not operational amongst all the 150 partners in time: which gives partial informatio which means no information. Counteract: training will done by xxxx with xxx partners th will cover xxx amount of appealing agencies at covering those agencies in the appeal process. This will give us a picture of x accuracy given th the same amount is outside of the appeal. But since almost all the appealing agencies are the outside of appeal agencies they can be convinc to adopt the srf for all humanitarian activities. The ddma can ensure this.

Katie: Again this is an overall IM Strategy and not snapshot of its implementation. I think the challenge should be getting agencies and actors t use the SRF.

3.Ddma not operational in time for sept review using the srf: counter act this: physical verification of the cluster srf will be sent to the districts for physical sample verification of the progress claimed?

Katie: What September review do you refer to ? A what physical verification – I am lost?

4.Funding

Katie: - I will rework the donor section and competitiveness for funds

5.Training glitches

Katie: what do you mean - please expand?

6.Systems compatibility?
Katie: As detailed in the OASIS section system compatability does not pose a challenge it is the challenge of getting actors to use the system and trust each other.

7.Standardization of terms not adopted?
Katie: Please expand, am not sure of this point.

DRAFT

- Changing the organizational processes (and perhaps culture) of an organization can be a mammoth task. Old, large legacy systems may be used in some organizations and getting them to adapt to new technologies can be an uphill battle. The organizational change is essential in some organizations to give IM the priority within the organization it deserves.
- The lack of system-wide agreement on what standards should be used and questions about who has sufficient power or legitimacy to assess compliance predominate in most settings (Nicola Reindorp, 2001). Incompatibility between systems is a massive barrier to effective information sharing. If common terminology, formats, and schema cannot be agreed on then the merging of such systems to give an overall view on activities is a huge task for the IM officer performing the merge. Often during such merges assumptions and misunderstandings in the data being merged can lead to the production of inaccurate information.
- Diversity of information sources: Information can be coming from a wide range of sources such as satellite imagery, government statistics, field assessments, remote sensing, and logistics information.
- Diversity of information users: Differentorganizations have differing information needs and priorities of certain information. For example, an NGO may need to know what the diameter of each pond they cleaned for their programme information, but the Water, Sanitation, and Hygiene (WASH) cluster coordinator only needs to know how many ponds were treated.
- Information flow limitations: A system needs to be able to give the user what they want and be adaptable to changing and increasing information needs throughout the emergency response despite constraints on technology and communications.
- Insufficient incentives can hinder the success of an IMS. Without immediate benefit of an IMS being made available to all users (especially field staff), they are often reluctant to use it as frequently as they should, especially when time is a big constraint. If they could immediately perform analysis and print maps of their current activities this process becomes more useful. Users must not get the impression that any data they enter gets submitted into a "black hole"; it is their data so we should enable them to take advantage of it being turned into viable information via an IMS.

The implementation of a data warehouse (SRF and OASIS) for the Pakistan DMA needs to take into consideration all the barriers to good IM. Firstly, trust needs to be established between all users of the system. Without this trust resistance will occur and ultimately bad data will be housed in the data warehouse. This trust needs to be built between the different levels of the Pakistan DMA and also between the humanitarian actors and the Pakistan DMA.

"Coordination happens where incentives to coordinate are increased" (Nicola Reindorp, 2001). Although incentives to use IMS to coordinate can range from increased situational awareness to simply satisfying donors' demands, this strategy argues that an effective IMS which helps everyone to do their job better is incentive in itself. Not only does such a system require input from all parties in the response but it should just as importantly provide the analysis and overview of the operation in a clearly defined and agreed-on format. A large coordination system could be used to provide visibility to all involved actors. Such systems should be easy to implement, adaptable, and enable sharing of information between humanitarian actors at the push of a button.

4. List of Approved Projects

Annex A

Figure 22: List of Non-UN Organisations in PFERP

Comment [i31]: Katie – Lets annex these tabl agreed

Comment [WU32]: I agree this can be annexe

List of Non-UN Organisations in PFERP			
1	AAGAHI	69	Malteser International
2	Abaseen Foundation	70	Mamoona Development Foundation
3	Action Contre la Faim	71	Marie Stopes International
4	Aga Khan Development Network	72	Medical Emergency Relief International
5	Aga Khan Rural Support Programme	73	Mercy Corps
6	Agency for Technical Cooperation and Development	74	MOJAZ Foundation
7	AIMS Organization	75	Muslim Aid
8	AJK Rural Support Programme	76	Muslim Hands International
9	Al-Mehran Rural Development Organization	77	National Commission for Human Development
10	AL-Nijat Welfare Society	78	National Integrated Development Agency
11	American Refugee Committee	79	National Rural Support Programme
12	American Rescue Committee	80	New World Hope Organization
13	Association for Behavior and Knowledge Transformation	81	NGOs (details not yet provided)
14	Awammi Development Organization	82	NGOs Coalition on Child Rights
15	Balochistan Rural Development Society	83	Norwegian Refugee Council
16	Balochistan Rural Support Programme	84	Oriental Women Organization
17	Bedari	85	OXFAM GB
18	Bilal Foundation	86	OXFAM Netherlands (NOVIB)
19	Bright Future Organization	87	PAIMAN Alumni Trust
20	CAMP	88	Pak Rural Development Program
21	CARE International	89	Pakistan Education Society
22	Catholic Organisation for Relief and Development Aid	90	Pakistan Rural Development Program
23	Catholic Relief Services	91	Pakistan Rural Workers Social Welfare Organization
24	Cavish Development Foundation	92	Participatory Integrated Development Society
25	Children First	93	Participatory Rural Development Society
26	Children's Global Network, Pakistan (Guarantee) Limited	94	Partner Aid International

27	Church World Service	95	Pattan Development Organization
28	Civil Society Human and Institutional Development Programme	96	Peace and Development Organization
29	Community Development Organization	97	Philanthrope
30	Community Motivation and Development Organization	98	Plan International
31	Community Social Welfare Council	99	Potohar Organization for development Advocacy
32	Concern Worldwide	100	Punjab Rural Support Organization
33	DehiSamajiTaraqiati Council	101	Qatar Charity
34	Dosti Development Foundation	102	Realistic Approach to Nature and Nation Awareness
35	Durawa Development Organization	103	Relief International
36	Farmers Development Organization	104	Research & Awareness for Human Development Benefits and Rights
37	Focus Humanitarian Assistance	105	Roshni Development Organization
38	Foundation for Rural Development	106	Rural Development Project
39	Friends Foundation	107	Rural Education and Development Foundation
40	Frontier Primary Health Care	108	Rural Health & Development Foundation
41	Gender and Reproductive Health Organization	109	Rural Support Programmes Network
42	Global Peace Pioneers	110	Salik Development Foundation
43	Hammda Foundation	111	Sarhad Rural Support Programme
44	Handicap International	112	Save the Children
45	Hayat Foundation	113	Sewa Development Trust Sindh
46	Help In Need	114	ShirkatGah
47	Helping Hand for Relief & Development	115	Sindh Rural Support Organization
48	Human Appeal International	116	Sindh Youth Welfare Organization
49	Human Resource Development Network	117	Social Youth Council of Patriots
50	Initiative for Change	118	Society for Appraisal and Women Empowerment in Rural Areas
51	Initiative for Development and Empowerment Axis	119	Society for Education Promotion and Rural Support
52	Insan Foundation Trust	120	Society for Sustainable Development
53	Institute for Peace & Human Development	121	Society for the Advancement, Community, health, Education and Training
54	Integrated Community Development International	122	Society of Collective Interests Orientation
55	Integrated Development Support Program	123	Step Towards Empowerment of Pupil
56	Integrated Health Services	124	Strengthening Participatory Organization
57	International Medical Corps	125	Sungi
58	International Organization for Migration	126	Support Agency for Rural & Human Association's Development
59	International Relief and Development	127	Takhleeq Foundation
60	International Rescue Committee	128	Taraqee Foundation
61	INTERSOS	129	Trocaire
62	Islamic Relief Pakistan	130	Women Association Struggle For Development

63	JohanniterUnfallhilfee.V.	131	Women Welfare Organization Poonch
64	Just Peace International	132	World Vision International
65	Khyber Aid	133	World Vision Pakistan
66	Kohsar Welfare and Educational Society	134	Yar Muhammad Samejo Educational Society and Development Organization
67	Kurram Welfare Home	135	Youth Parliament of Pakistan
68	Malakand Community Development Organization		

Theannex ~~above~~ list of 135 NGOs working in response to the 2010 Monsoon Floods is not exhaustive; it does not include international and national NGOs and local organizations which have not participated in the UN-led appeal *Pakistan Floods Emergency Response Plan*. These additional NGOs do not necessarily operate within the framework of the cluster system. This makes information gathering and monitoring of all the actors involved in field activities challenging. Nevertheless, once an IM system is in place, the district coordination officer, (who is aware of all the actors operating in his area of administration), will be able to identify non-cluster delivering partners. Thus, once IM systems are operational at the DDMA level, a much more accurate picture may be captured in terms of who is doing what, where. This in turn will facilitate more accurate planning, tracking and monitoring of activities.

Comment [WU33]: The above blurb in purpo on the non traiditonal actors can also be put heree

Figure 23: List of UN Organisations in PFERP

	List of UN Organisations and IOM in PFERP
1	Food and Agriculture Organization of the United Nations
2	United Nations Office for the Coordination of Humanitarian Affairs
3	United Nations Children's Fund
4	United Nations Department of Safety and Security
5	United Nations Development Fund for Women
6	United Nations Development Programme
7	United Nations Educational, Scientific and Cultural Organization
8	United Nations High Commissioner for Refugees
9	United Nations Human Settlements Programme (UN-HABITAT)
10	United Nations Joint Programme on HIV/AIDS
11	United Nations Office for Project Services
12	United Nations Population Fund
13	United Nations World Food Programme
14	World Health Organization
15	International Organization for Migration

Comment [i34]: NILOFER states:

ocha is not a un agency /organization in the UN it a coordination unit in support of the humanitaria coordinator

Katie: I obtained this table from OCHA and they a listed in the PFERP as such.

Comment [i35]: NILOFER States: is it operat in Pakistan?

Katie: Yes – they are listed in the PFERP

Table showing damage by province and list of districts affected

Province	Deaths	Injured	Houses Damaged	Population Affected	Severely Affected Districts	Moderately Affected Districts
Punjab	110	350	500,000	8,200,000	Muzzafargarh, Rajanpur, Mianwali, R.Y. Khan, Layyah, D.G. Khan, Bhakkar	Multan, Sargodha, Khushab, Jhang
Sindh	199	1,072	1,098,720	7,000,000	Kashmore, Shikarpur, Jacobabad, Larkana, Qambar-Shahdadkot, Thatta, Dadu, Jamshoro	S. Benazirabad, Hyderabad, Matiari, T.M. Khan, Tandu Allah Yar, Sukkur, Khairpur, NausheroFeroze, Ghotki

KP	1,156	1,198	200,799	3,800,000	Tank, D.I. Khan, Kohistan, Peshawar, Charsada, Nowshera, Lower Dir, Upper Dir, Shangla, Swat	LakkiMarwat, Bannu, Abbottabad, Battagram, Mardan, Chitral, Karak, Kohat, Malakand, Mansehra, Swabi, Buner, Hangu, Haripur
Balochistan	48	102	75,261	1,300,000[25]	Nasirabad, Jaffarabad	Sibi, Kachi, KillaSaifullah, Loralai, Mussakhail, Sherani, Hamai, JhalMagsi, Kohlu, Barkhan
Other federating units	254	147	9,928	300,000	Neelum	Bagh, Bhimber, Kotli, Mirpur, Muzafarabad, Neelum, Rawlakot, Astor, Diamir, Ghanche, Ghizer, Gilgit, Hunza-Nagar, Skardu
Total	1,767	2,869	1,884,708	20,600,000		

Table 11: NDMA Core Functions[26]

The NDMA was established as the focal point and coordinating body to facilitate implementation of Disaster Management strategies. It interacts directly with all key stakeholders (Ministries, Divisions, Departments, armed forces, donors, International Organizations, and NGOs). Disaster Management is to be conducted as a one-window operation through the NDMA. The "macro" structure comprises of the NDMC and NDMA, as well as Provincial (Regional) Disaster Management Commissions (PDMC), Provincial (Regional) Disaster Management Authorities (PDMAs), District and Municipal Disaster Management Authority (DDMAs and MDMAs), in addition to Tehsil and Town Authorities and community-based organizations. The PDMCs and PDMAs have corresponding roles and functions at provincial level to the NDMC and NDMA. DDMAs are to be established by provincial governments in hazard-prone areas on a priority basis. These and the MDMAs in urban areas/cities will be responsible for district-level disaster management.
As stated in the GOP's Ordinance[26]to provide for the establishment of a National Disaster Management System for Pakistan, "disaster management" means managing the complete disaster cycle including: ○ preparedness; ○ response; ○ recovery and rehabilitation; and, ○ reconstruction
Powers and functions of the National Disaster Management Authority as outlined in the NDMA Ordinance[26] are:
a) Act as the implementing, coordinating and monitoring body for disaster management; b) Prepare the National Plan to be approved by the National Commission; c) Implement coordinate and monitor the implementation of the National policy; d) Lay down guidelines for preparing disaster management plans by different Ministries or Departments and the Provincial Authorities; e) 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

[25] This figure is composed of 700,000 affected people affected residing in Balochistan, and 600,000 IDPs from Sindh who have taken refuge in Balochistan as a result of the floods.

[26]GoP'sNational Disaster Management Ordinance, 2007

National Commission;

f) Coordinate response in the event of any threatening disaster situation or disaster;
g) 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;
h) 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;
i) Promote general education and awareness in relation to disaster management; and
j) Perform such other functions as the National Commission may require it to perform.

DRAFT

DRR NATIONAL WORKSHOP -CONSULTATIVE MEETING AGENDA POINTS

Date: 30th Oct 2012
Venue: PHF

Participants:

1 – Mubashir- Redr Uk

2 – Jannat Durrani (JD) – (Program Manager DRR& Project Development- HOPE'87)

3– Aisha Batool (AB) – (Media & Communication Officer- HOPE'87)

4- Zohaib Omer (ZO) – (DRR IM Coordinator-iMMAP)

5 – Mian Khalid (MK) -(Diakonie Katastrophenhilfe)

6- Lucie Dechifre (LD)- (Handicap International)

A meeting was held on the 30th of October to discuss the details of DRR National Workshop coming up on the 27th and 28th of November 2012. The following points were discussed

Agenda:

- **List of participating organizations:**

JD shared that 27 organizations have shown their interest to participate in the workshop. Furthermore Mubashir stressed that in order to increase the number of interested organizations an invitation should be sent to Ngos/INgos through NHN platform. The idea of sending invitation with DRR working group was also discussed.

- **List of organizations willing to Finance:**

JD updated that currently 6 organizations intend to co-finance the event. The participants proposed the idea that the organizations who are unable to co-finance can contribute in the preparation of the workshop by providing human resource.

- **Organizations should be clubbed and 5 themes should be set**

JD proposed 5 themes on which models will be presented. They are

- ✓ Inclusiveness
- ✓ Child-centered approaches
- ✓ Community based DRM

- ✓ Role of Stake holder/Policy making for DRR
- ✓ Replicability

Each theme was discussed and the CBDRM model matrix was chosen to be the standard model in which all the organizations will fill up their data and will share with the forum latest by 10th Nov 2012. Moreover, two objective of the workshop were identified

Objective no 1: Proposing a CBDRM model.

Objective no 2: Recommendations based on the Best practices for the i/ngos, government departments, donors and the community.

Further to the objectives identification Mubashir gave an idea that instead of having the above mentioned themes, we should have 6 themes which are already there in the DRR project mapping matrix, these themes are within the CBDRM model, the themes then would be

- Community DRM Organization & Planning
- Community Disaster/Response Preparedness
- Community-Implemented Structural Measures
- Sustainability & Support to Communities
- Cross Cutting themes
- Replicability

On the basis of these themes then it's the responsibility of the Management group to see what would be feasible; to generate dialogue in those days on these themes with reference to the models that the organizations have or to club organizations and make ask them to prepare presentations on the themes in order to meet the set objectives.

- **How many members should be invited from each organization?**

At least 2 to maximum 5 persons from each organization will be likely to invite for the workshop

- **Which stake holders should be invited?**

The participants agreed that NDMA, PDMA, Media, Met Dept, UN, Secretary Education KPK, INGOs, DCOs from all the provinces and northern areas and the Pakistani delegates who participated in the ministerial conference Indonesia will be invited. The idea of brining beneficiaries instead of case studies was also debated. The list of members in the delegate will be shared by LD with JD via Email.

- **Formation of a workshop management/organizing group**

The participants agreed that a workshop management group will be formed by the end of week 4th of November 2012, who will be responsible for the management of the event. Some responsibilities highlighted were as follows:

- ✓ Coordinating with all the i/ngos
- ✓ Coordinate with the forum chair/co- chair and the working committee
- ✓ Design the specific outcomes of the workshop and share with the participants
- ✓ Venue supervision, selection, decoration and all
- ✓ Share the themes with the participants and help them prepare the presentations
- ✓ Responsible for arranging Photographer
- ✓ Responsible for arranging Graphic designer
- ✓ Responsible for arranging Report Writer
- ✓ Responsible for preparing the list of participants.
- ✓ Responsible for arranging the co-facilitator and the stage secretary.(Whether to arrange it locally or internationally)
- ✓ Responsible for preparing and sending invitations

It was agreed that the Participants should be nominated by the 4th of November max.

- **Information Sharing:**

JD will share the updates with DRR forum members and request DRR forum members to nominate their focal persons for Workshop Management group. 3 Persons were already nominated by the organizations. They are as

Zohaib Omer- Immap

Aisha Batool- HOPE`87

Mubshir – Redr Uk

It was agreed that the group will meet weekly preferably keeping in view the shortage of time.

Venue:

JD informed that Marriott will be the venue for this workshop.

1ST NDRRW
National Disaster Risk Reduction
Workshop 2012

1st National Disaster Reduction Workshop

2012

Picture from the workshop

1. **Executive Summary**
   Purpose of the Report
   Key Players (DRR Forum)
   Key Recommendations
2. **DRR**
   i. Basics of Disaster Risk Reduction (DRR)
   - Definitions, latest research, main tools used, the Hyogo Framework for Action, MDGs, issues and challenges, way ahead (etc).

   ii. DRR in a Pakistani context
   - Definitions, hazard profile of Pakistan, DRM System in Pakistan including Ministry of CC National DRR Policy, major players (Government, Donors, UN, INGOs, NGOs etc), natural disasters in Pakistan and their frequency, hazardous areas, issues and challenges to DRR, lessons learned, etc.

3. **1st NDDR Workshop**
   - Purpose of workshop, agenda, participants, venue, etc.
   - Proceedings of day 1- theme-wise
   - Proceedings of Day 2- theme wise
   - Suggestions/recommendations

4. **Conclusion**
   Summarizing the findings of the NDDR workshop
   With a way forward
   Roll out plan for DRR forum (with indicator of achievements, timeline and responsibilities

Abbreviations and Acronyms

CBDRM	Community Based Disaster Risk Management
DMA	Disaster Management Authority
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
EWS	Early Warning Systems
HFA	Hyogo Framework for Action (2005 – 2015)
MDG	Millennium Development Goals
NDMA	National Disaster Management Authority
NDMC	National Disaster Management Committee
PDMA	Provincial Disaster Management Authority
UNISDR	United Nations International Strategy for Disaster Reduction
UCDMC	Union Council Disaster Management Committees
UCERT	Union Council Emergency Response Teams

Executive Summary

Purpose of Report

The main purpose of this report is to provide the Essentials of a Community Based Disaster Risk Management (CBDRM) based on participant learning's and best practices.

Key Players & Target Users

This report is primarily intended for the overall disaster risk management (DRM) community, including national, provisional and district level disaster management structures, local and international NGOs, community based organizations, trainers and facilitators and others interested to practice the best practices of CBDRM in the context of Pakistan.

Key Recommendations

Disaster risk reduction has to be an all-inclusive

Methodology

The following steps were adopted while preparing this report:

- Review of training manuals and literature on disaster risk management and community based disaster risk management.
- Discussions among the core-working group about the contents of the report.
- Inclusion of the findings of the 2-day workshop in the report.
- Revision on the basis of feedback from the core-working group.

Reference Materials

The following publications were consulted while preparing this report:

- Hyogo Framework for Action (HFA)
- CBDRM Manual by ADPC
- Best Practice Manual on CBDRM from Turkey
- Disaster Preparedness Manual, Vietnam Red Cross Society, September 2000.
- Sustainable Community-based Disaster Management Practices in Asia, A User's Guide, UNCRD, Kobe, Japan, December 2004.

Part 1

Disaster Risk Reduction

Key Terms and Concepts Used in Disaster Risk Reduction

Hazard	Hazard can trigger into a disaster. If you are prepared, you can prevent a hazard from turning into a disaster. Disasters can be averted if the hazard component is taken care of. Hazards are the forerunners of disasters.
Disaster	Rapidly or suddenly developing events that disrupt life and cause losses, both human and infrastructural. UNISDR defines a disaster as, "A serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources."
Natural Disaster	The effect of a natural hazard (flood, tornado, earthquake, hurricane, etc).
Risk	The probability of harmful consequences, or expected losses resulting from hazards and vulnerable conditions.
Mitigation	The actions taken to reduce the seriousness or severity of hazards.
Preparedness	The knowledge and capacities developed by governments, professional response and recovery organizations, communities and individuals to effectively anticipate, response to, and recover from the impacts of likely, imminent or current hazard events or conditions.
Response	The provision of emergency services and public assistance during or immediately after a disaster in order to save lives, reduce health impacts, ensure public safety and meet the basic subsistence needs of the people affected.
Recovery	The restoration, and improvement where appropriate, of facilities, livelihoods and living conditions of disaster-affected communities, including efforts to reduce disaster risk factors.
Capacity	A combination of all the strengths and resources available within a community, society or organization that can reduce the level of risk, or the effects of a disaster.
Capacity Development	The process by which people, organizations and societies stimulate and develop their capacities over time.
Vulnerability	The characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard.

Adaptation The adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.

Resilience The ability of a community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions.

Basics of Disaster Risk Reduction

The Current Disaster Context

The world is a dangerous place and becoming more so by the day. There has been a significant rise in the intensity and frequency of natural disasters across the globe. According to one report, the period between January 1996 and December 1999 saw no less than 2,096 disasters, affecting 754,047,232 people (Battros and Stubbs, 2005, p. 256). The year 2005 witnessed the loss of nearly 100,000 people, owing to natural disasters, and affected nearly 160 million more people. Oxfam states that natural disasters have quadrupled over the last 2 decades (Reuters, 2007).

Natural disasters have quadrupled over the last 2 decades (Reuters, 2007).

Type	Hazards	
Geological Hazards	1. Earthquake 2. Tsunami 3. Volcanic eruption	4. Landslide 5. Dam burst 6. Mine Fire
Water & Climatic Hazards	1. Tropical Cyclone 2. Tornado and Hurricane 3. Floods 4. Drought 5. Hailstorm	6. Cloudburst 7. Landslide 8. Heat & Cold wave 9. Snow Avalanche 10.Sea erosion
Environmental Hazards Biological	1. Environmental pollutions 2. Deforestation 1. Human / Animal Epidemics 2. Pest attacks	3. Desertification 4. Pest Infection 3. Food poisoning 4. Weapons of Mass Destruction
Chemical, Industrial and Nuclear Accidents	1. Chemical disasters 2. Industrial disasters	3. Oil spills/Fires 4. Nuclear
Accident related	1. Boat / Road / Train accidents / air crash Rural / Urban fires Bomb /serial bomb disasters blasts 2. Forest fires	3. Building collapse 4. Electric Accidents 5. Festival related 6. Mine flooding

Figure: Types of Hazards

The causes for this alarming trend are complex. Some natural disaster researchers blame the growing human population for this shift. Others maintain that industrialization, rapid development, lack of maintenance and water abstraction exacerbates the risk of natural

disasters. Global warming and carbon emissions (greenhouse gases) are also blamed for this unprecedented increase in natural disasters (Hardoy et.al, 2001, p.122).

Top 10

Natural disasters by number of deaths[2] - 2011

Earthquake/Tsunami, March	Japan	19 846
Tropical storm 'Sendong' (Washi), December	Philippines	1 430
Flood, January	Brazil	900
Flood, August-December	Thailand	813
Earthquake, October	Turkey	604
Flood, August-November	Pakistan	509
Storm, April	United States	350
Flood, August-November	Cambodia	247
Flood, June	China, P Rep	239
Flood, August-October	India	204

(2): Includes the reported missing persons

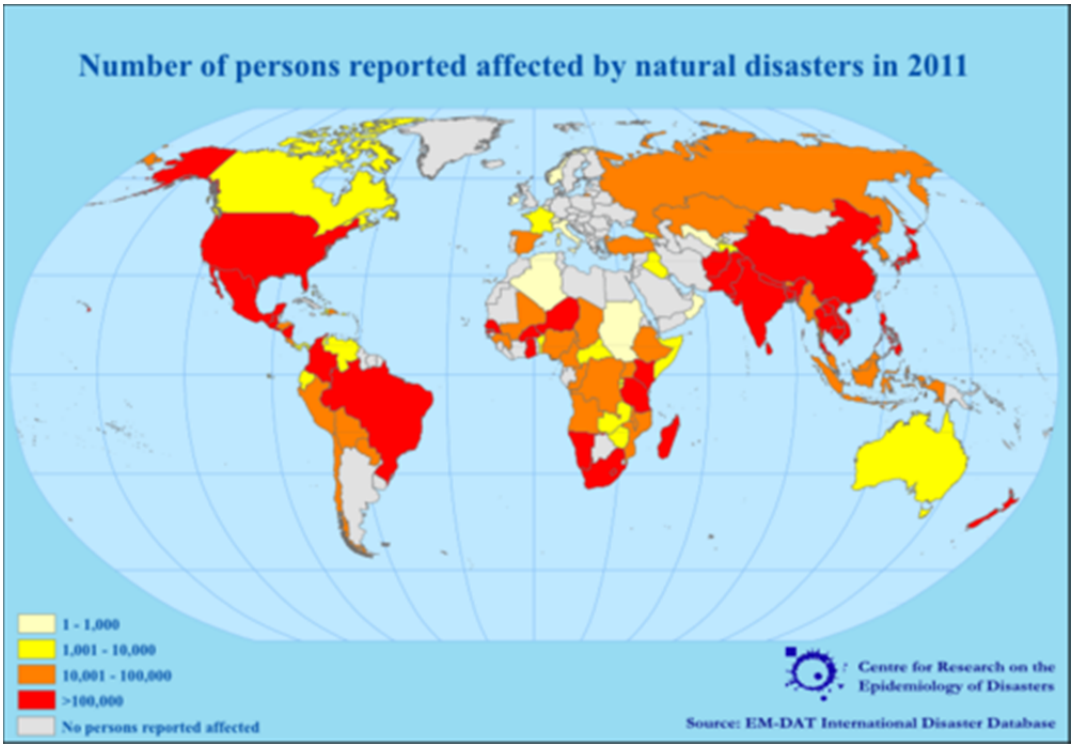
Number of reported natural disasters by country - 2011

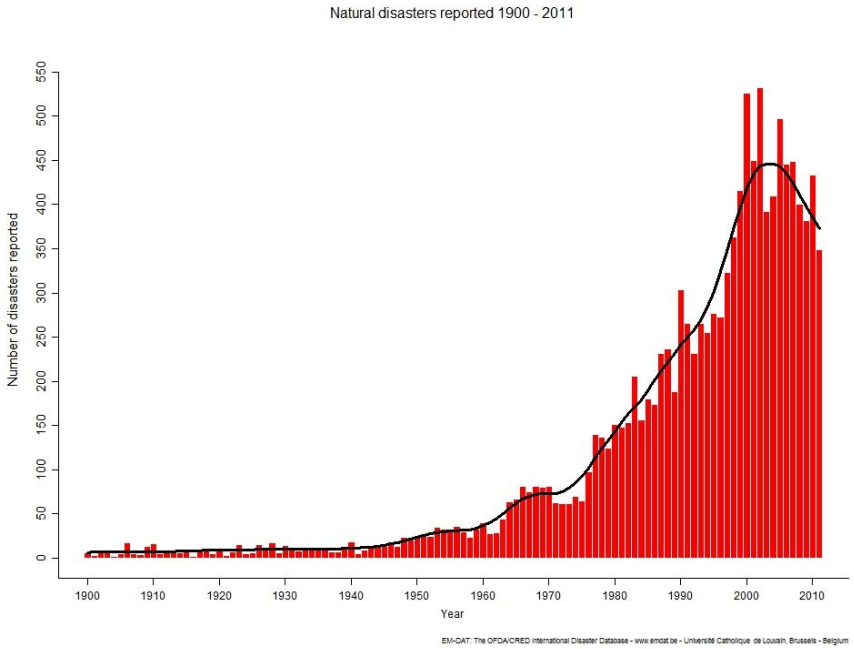
Philippines	33
China, P Rep	21
United States	19
India	11
Indonesia	11
Mexico	10
Guatemala	7
Japan	7
Brazil	6
Bangladesh, Nigeria, Peru, Thailand, Viet Nam	5

Total killed and affected people by natural disasters per 100,000 inhabitants - 2011

Somalia	42 868
Cambodia	23 202
Djibouti	22 533
Niger	19 605
Thailand	16 228
Philippines	12 568
Burkina Faso	12 144
Namibia	11 390
Kenya	10 850
China, P Rep	9 276

What exactly are natural disasters? According to Dilley (2005, p.19), "*Natural disasters happen when large numbers of people or economic assets are damaged or destroyed during a natural hazard event*." According to Smith (2006), "*a natural disaster event is one that causes a greater than 100 human casualties, or economic damage greater than 1 percent of the GNP, or harm to more than 1 percent of an affected country's population*".


Number of persons reported affected by natural disasters in 2011
1 - 1,000
1,001 - 10,000
10,001 - 100,000
>100,000
No persons reported affected
Centre for Research on the Epidemiology of Disasters
Source: EM-DAT International Disaster Database


Natural disasters reported 1900 - 2011
Number of disasters reported
0
50
100
150
200
250
300
350
400
450
500
550
1900
1910
1920
1930
1940
1950
1960
1970
1980
1990
2000
2010
Year
EM-DAT: The OFDA/CRED International Disaster Database - www.emdat.be - Université Catholique de Louvain, Brussels - Belgium

The future of our planet looks bleak unless a united effort is undertaken to explore and address the root causes of the increase in natural disasters. In mankind's obsessive technological and scientific advancement, he seems to have forgotten that he is merely a part of a larger whole, which is Nature, and unless he takes necessary remedial actions to bestow upon Nature the consideration and respect she deserves, the severity and regularity of natural disasters will continue unabated, causing widespread destruction and loss.

Effects of Disasters, Including Natural Disasters

Disasters cause phenomenal *ecological*, *economic* and *humanitarian* impacts. Ecological impacts result in the loss or destruction of ecosystems, forests and arable land. **Humanitarian** effects of a natural disaster cause the loss of human lives, injuries and the risk of diseases. **Economic effects** due to natural disasters can be one of three: macroeconomic, indirect and direct.

- **Macroeconomic losses** affect the GDP (gross domestic product) and other economic variables (inflation and consumption) of a nation affected by a natural disaster.
- **Indirect economic losses** are due to the direct effects of the natural disaster. They impact households and organizations and include the loss of wages, interruption of business/work and the like.
- **Direct economic losses** affect infrastructure (water, energy, transport), agricultural assets, machinery and buildings. They can result due to the impact of the natural disaster itself or the destruction that ensues in its course, such as a fire proceeding an earthquake.

Hazards, Disasters and Disaster Risk

Hazards

A hazard is an event or occurrence that provokes disasters or serves as a potential threat to public safety. Hazards are grouped into two main types:

a. **Natural**

- **Hydro-meteorological:**

  Process or phenomenon of atmospheric, hydrological or oceanographic nature that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage (UNSIDR).

- **Geological**

  Geological process or phenomenon that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage. (UNSIDR)

b. **Human Induced**

Human induced hazards are those environmental degradations caused by man. These include chemical hazards, biological hazards and physical hazards.

Disasters

Disasters are disruptions of the functioning of a "*society, causing widespread human, material or environmental losses which exceeds the ability of the effected society to cope using only its own resources*" (Hope '87).

Disaster Risk

Disaster risk is the "*probability of meeting danger or suffering*" (Hope '87). It is the chance of damage and loss due to a hazard. **Disaster risk : Chance (C) x Loss (L)**

Elements at Risk

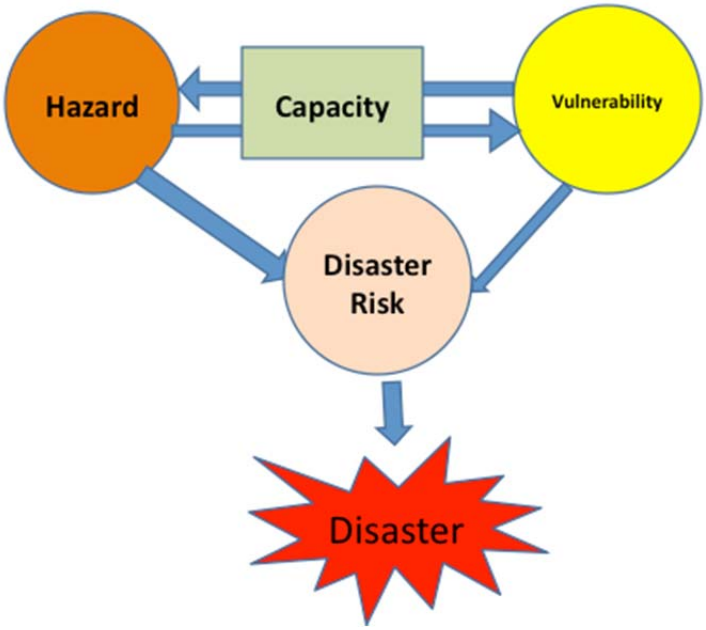
Societal elements at 'risk' are those that are exposed to hazards and most likely to be impacted by the occurrence of those hazards. Elements most at risk of disasters include people (their

health and lives, community structures, homes, services and facilities (bridges, roads, hospitals, schools, shops) and economic and livelihood activities.

Disaster Risk Reduction

Disaster risk reduction includes all those activities that aim of minimize the loss of property, life and assets by either **reducing the vulnerability** of the various elements or **mitigating the hazard (by increasing capacity).**

Disaster risk reduction lies at the foundation of disaster risk management.



Source: Hope '87

Disaster Risk Reduction Framework

The disaster risk reduction framework comprises the following fields of action (according to ISDR 2002):

- Risk awareness and assessment including hazard analysis and vulnerability/capacity analysis

- Knowledge development including education, training, research and information
- Public commitment and institutional frameworks, including organizational, policy, legislation, and community action
- Application of measures including environmental management, land-use and urban planning, protection of critical facilities, application of science and technology, partnership and networking, and financial instruments
- Early warning systems including forecasting, dissemination of warnings, preparedness measures and reaction capacities

Categories of Disaster Risk Reduction Measures

Disaster risk reduction measures are of **five** categories. These include:

Physical	*Structural and non- structural measures that are undertaken to help avoid or alleviate the damage and losses that result from hazards.* For example, construction of flood control structures, wind proofing, elevation, etc (structural) and public education, development regulations (building codes), etc. (non-structural).
Socio-economic	Ordinances and regulations controlling the design, construction, materials, alteration, and occupancy of any structure to insure human safety and welfare. Building codes include both technical and functional standards (ISDR, 2004).
Environmental	These are those measures that are designed to "protect existing, or rehabilitate degraded environmental systems that have the capacity to reduce the impact of natural hazards."
Management and Institutional	These are those organizational and procedural measures that "guide the mitigation processes and have to be sustained over a large number of years."
Post Disaster	These involve reconstruction and rehabilitation work after a disaster to increase resilience.

Disaster Risk Management vs. Disaster Risk Reduction

The terms disaster risk reduction and disaster risk management are often erroneously used interchangeably. Disaster risk management is defined as, " The systematic process of using administrative decisions, organization, operational skills and capacities to implement policies, strategies and coping capacities of the society and communities to lessen the impacts of natural hazards and related environmental and technological disasters" (Hope '87).

Disaster risk management is the application of processes, operational skills and capacities developed at the disaster risk reduction stage. Its objective is to reduce the impacts of hazards.

DRM Framework	DRR Framework[1]
Risk Identification - Hazard and Vulnerability Studies	**Risk awareness and assessment** hazard analysis and vulnerability/capacity analysis
Risk Reduction - Prevention and Mitigation	**Knowledge development** education, training, research and information
Risk Transfer - Insurance and Risk Financing	**Public commitment and institutional frameworks**, organizational, policy, legislation and community action
Preparedness, Response - Forecasting, dissemination of warnings, implementing preparedness measures	**Application of measures** environmental management, land-use and urban planning, protection of critical facilities, application of science and technology, partnership and networking, financial instruments

[1] Source: Hope '87

Recovery - Rehabilitation and Reconstruction	**Early warning systems** forecasting, dissemination of warnings, preparedness measures and reaction capacities

Hyogo Framework for Action

The Hyogo Framework for Action (HFA) is a 10-year plan that aims to make the world safer from natural disasters. The plan was derived from the World Conference held in Kobe, Hyogo, Japan (18 – 22 January 2005) and was adopted by 168 Member States of the United Nations. The plan lays down the efforts required from various actors to reduce the losses of disasters. The HFA outlines **five main priorities for action** and offers practical means and guiding principles to achieve disaster resilience. Its primary purpose is to increase the resilience of communities and natures of disasters by reducing the loss of environmental, economic, social assets and valuable lives.

HFA Priority Action 1	Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation.
HFA Priority Action 2	Identify, assess and monitor disaster risks and enhance early warning.
HFA Priority Action 3	Use knowledge, innovation and education to build a culture of safety and resilience at all levels.
HFA Priority Action 4	Reduce the underlying risk factors.
HFA Priority Action 5	Strengthen disaster preparedness for effective response at all levels.

Pakistan is also a signatory of the Hyogo Framework of Action.

Millennium Development Goals (MDGs) and Disaster Risk Reduction

The UN Millennium Declaration was adopted by 189 world leaders in New York in 2000 at the UN Millennium Summit. The purpose of the MDGs was to promise to "free people from extreme poverty and deprivations." Eight Millennium Development Goals were identified for 2015, including:

The existing global hazard context makes the world an increasing unsafe place, and therefore, proves an addition challenge to the achievement of the MDGs. The UN Millennium Declaration also addressed the link between the MDGs and hazards and declared, under "Protecting our common environment" that:

> "adopt in all our environmental action a new ethic of conservation and stewardship and, as first steps, resolves...to intensify cooperation to reduce the number and effects of natural and man-made disasters" [paragraph 23]."

Disaster risk reduction is important for achieving Millennium Development Goals since disasters can significantly derail progress towards MDGs.

"Reducing disaster risk and increasing resilience to natural hazards in different development sectors can have multiplier effects and accelerate achievement of the Millennium Development Goals."

Ban Ki-moon

Secretary Genderal of the United Nations

Hazards and Disasters in Pakistan

Pakistan, owing to its versatility in terrain, is susceptible to a number of hazards, both natural and human induced. Other hazards the nation is vulnerable to include glacial surges, epidemics, landslides, river erosion and pest attacks. Man-made or human induced hazards that threaten the nation include terrorism, civil conflicts, forest fires, urban fires, industrial oil spills, transport, oil spills and community displacements.

- **Land Movement**

Earthquakes

Earthquakes are among the most destructive of natural disasters and have resulted in the greatest loss of life over history (Skipper and Kwon, 2007, pg. 114). Earthquakes are caused due to the movement of tectonic plates and primarily originate at plate boundaries (also called faults). Earthquakes are impossible to predict despite the enormous amount of research that has been conducted in this regard.

Some major earthquakes include the October 2005 earthquake in Kashmir, Pakistan, which claimed more than 80,000 lives; the 2003 earthquake in Bam, Iran, which claimed 41,000 lives; 1995 earthquake in Kobe, Japan, which claimed 5,000 lives; and the 1976 earthquake in Beijing, China, which claimed 240,000 lives.

Earthquakes in Pakistan

Pakistan lies within the seismic belt and is prone to frequent earthquakes. A list of the largest earthquakes from 1945 include:

- **1945 Baluchistan Earthquake**

  7.8 magnitude earthquake in Baluchistan; 4,000 fatalities.

- **1974 Hunza Earthquake**

  6.2 magnitude earthquake that hit the Hunza, Hazard and Swat districts, causing 5,300 deaths and 17,000 injuries.

- **2005 Kashmir Earthquake**

  7.6 magnitude earthquake that affected the Muzaffarabad District of Kashmir causing 80,000 deaths and leaving 3.5 million homeless.

- **2008 Pakistan Earthquake**

  6.4 magnitude earthquake that affected the Ziarat District of Quetta, leaving 215 dead and another 120,000 homeless.

- **2011 Pakistan Earthquake**

  7.2 magnitude earthquake that hit Dalbandin in Baluchistan. No casualties but multiple homes damaged.

- **Water Disasters**

Tsunamis

Tsunamis are rapidly moving ocean waves that are generated due to the movement of water caused by volcanic eruptions, landslides and earthquakes. The deadliest recorded tsunami in history came to pass in December 2004, when an earthquake generated large waves that causes the loss of more than 200,000 people across several countries (Maldives, India, Sri Lanka, Malaysia and Indonesia). The tsunami obliterated thousands of towns and villages across the region.

Tsunamis in Pakistan

While tsunamis in the Indian Ocean are rare, the southern, coastal areas of Pakistan are at still at risk of tsunamis. Pakistan's coastline length is 1050 kilometers, which includes 800 kilometers of Baluchistan area and 250 kilometers of the Sindh province. This region is susceptible to tsunamis trigged by earthquakes. The 1945 earthquake of Baluchistan generated a tsunami that hit the Baluchistan coastline 2 to 3 hours after the quake. The tsunami generated sea waves ranging between 12 and 15 meters in height, which contributed to the death toll.

Floods

Floods are overflows of lake water, rivers or tides that inundate otherwise dry land. They are caused by thunderstorms or hurricanes or can occur due to exposure to extensive rainfall. The 2010 floods in Pakistan claimed more than 2,000 lives and affected approximately 20 million individuals by destroying infrastructure, livelihood and property.

- **Weather Disasters**

Storms

Storms are fast gusts of winds that cause significant damage. Storms are classified into *blizzards* and *cyclonic storms* (also called typhoon, hurricane or tropical cyclone. One of the most intense and catastrophic storms was the Hurricane Katrina (2005), which wiped out much of the Mississippi and Louisiana Gulf coasts and flooded New Orleans.

- **Tornadoes**

Tornadoes, also called twisters, are strong, rotating columns of air that contact the earths surface at approximate speeds of 110 mph (miles per hour) and widths of greater than 200 feet. They can wipe out everything in their paths, including buildings, bridges and other infrastructure. There are many types of tornadoes, including *landspout, multiple vortex, similar circulations* (dust devil, gustnado, steam devils and fire whirls) and *waterspout*.

- **Fire**

Wildfires are natural disasters that result in damaging large areas of land and cause large human losses. The Kalimantan and Sumatra fires in Indonesia (1997) caused a loss of 240 individuals.

Disaster	Date	No Killed
Earthquake (seismic activity)	8/10/05	73338
Earthquake	31/05/1935	60000

(seismic activity)		
Storm	15/12/1965	10000
Earthquake (seismic activity)	28/12/1974	4700
Earthquake (seismic activity)	27/11/1945	4000
Flood	1950	2900
Flood	28/07/2010	1985
Flood	8/9/92	1334
Flood	2/3/98	1000
Flood	Jun-77	848

Table: Top Ten Natural Disasters of Pakistan (1990 to 2012[2])

Factors that Increase Pakistan's Vulnerability to Disasters

A number of factors make Pakistan vulnerable to hazards and disasters including the nation's explosive population growth, fragile natural environment, lack of education and awareness, deforestation, environmental degradation due to poorly managed industrial and urban development processes, poor construction processes, weak disaster management systems, weak early warning systems, poverty and poor agricultural and livestock management.

The mountainous areas of Pakistan are even more susceptible to disasters owing to the non-availability of safer land for construction, scattered settlement patterns and harsh climate conditions.

[2] [2] Source: "EM-DAT: The OFDA/CRED International Disaster Database

Other factors that further increase the nations vulnerability to disasters include:

- Population Size and Growth
- Industrialization, Environmental Degradation and Urbanization
- Climate Change
- Gender Power Imbalances

Pakistan Hazard Map

Type	Hazards	
Geological Hazards	1. Earthquake 2. Tsunami 3. Volcanic eruption	4. Landslide 5. Dam burst 6. Mine Fire
Water & Climatic Hazards	1. Tropical Cyclone 2. Tornado and Hurricane 3. Floods 4. Drought 5. Hailstorm	6. Cloudburst 7. Landslide 8. Heat & Cold wave 9. Snow Avalanche 10.Sea erosion
Environmental Hazards Biological	1. Environmental pollutions 2. Deforestation 1. Human / Animal Epidemics 2. Pest attacks	3. Desertification 4. Pest Infection 3. Food poisoning 4. Weapons of Mass Destruction
Chemical, Industrial and Nuclear Accidents	1. Chemical disasters 2. Industrial disasters	3. Oil spills/Fires 4. Nuclear
Accident related	1. Boat / Road / Train accidents / air crash Rural / Urban fires Bomb /serial bomb disasters blasts 2. Forest fires	3. Building collapse 4. Electric Accidents 5. Festival related 6. Mine flooding

Current Disaster Risk Reduction Bodies in Pakistan

Ministry of Climate Change

The Ministry of Climate Change, according to its website, is "*This Division is the focal point for National Policy, Legislation, Plans, Strategies and programmes with regard to Disaster Management, Climate Change including Environmental Protection and preservation. The Division also deals with other countries, international Agencies and Forums for coordination, Monitoring and Implementation of Environmental Agreements.*"

The Ministry was established by renaming the Ministry of National Disaster Management.

The Ministry works with and through the National Disaster Management Authority (NDMA), Pakistan Environmental Protection Agency, Pakistan Environmental Planning & Architectural Consultants Ltd., Pakistan Environmental Protection Council and the Zoological Survey Department.

NDMA

The National Disaster Management Authority (NDMA) was established with the promulgation of the National Disaster Management Ordinance in 2006. The National Disaster Management Commission (NDMC) is currently bestowed as the highest policy making body in Pakistan in the context of disaster management. The NDMA is the executive arm of the NDMC and it functions to implement, coordinate and monitor disaster management policies and strategies.

The NDMA works closely with other bodies, including:

- Provincial Disaster Management Commissions (PDMCs)
- Provincial Disaster Management Authorities (PDMAs)
- District Disaster Management Authorities (DDMAs)

The NDMA formulated the **National Disaster Risk Management Framework** that lists its main postulates as:

1. Institutional and legal arrangements for DRM
2. Hazard and vulnerability assessment.
3. Training, education and awareness.
4. Disaster risk management planning.
5. Community and local level programming.
6. Multi-hazard early warning system.
7. Mainstreaming disaster risk reduction into development.
8. Emergency response system, and
9. Capacity development for post disaster recovery.

The NDMA conducts trainings and information sharing on disaster relief and management on a regular basis.

Relief and Rescue Agencies

The National Crisis Management Cell, which operates under the Ministry of Interior, is responsible for monitoring emergencies, including natural hazard caused, on a round the clock basis. This body is in close coordination with Provincial Crisis Management Cells. The National Crisis Management Cell plans and assesses the relief requirements of disasters; stockpiles necessities and creates inventories of resources; establishes emergency funds; coordinates activities of different bodies (governments, aid agencies, NGOs, communities) in carrying out relief activities; and establishes links with other aid agencies and responds to their disaster needs.

The Pakistan army also has a disaster management system. The Civil Defense Department assists the army and local administration in implementing relief measures.

Risk Analysis and Risk Reduction Agencies

Risk analysis and reduction agencies provide expertise on risks and hazards and inputs on how to mitigate them. These include the Pakistan Meteorological Department (PMD), Flood Forecasting Division, Water and Power Development Authority, the Federal Flood Commission of Pakistan and the Indus River Commission.

Current Disaster Risk Reduction and Management Models Used in Pakistan

Various organizations and bodies working in the field of disaster risk reduction use different models. Some of the most commonly used models include those listed in the table below.

Model/Guideline	Description
ERRA DRM Model (2008)	Endorsed jointly by NDMA and ERRA
JICA Guidelines	The Japan International Cooperation Agency (JICA)'s "Guidelines on Environmental and Social Considerations."
Swiss Agency for Development and Cooperation Guidelines	SDC's Guidelines on Disaster Risk Reduction
International Strategy for Disaster Reduction (ISDR)	United Nations Office for Disaster Risk Reduction

It is important to note that there is no one single model used across the board of DRR practitioners.

NDM Act of 2010

The National Disaster Management (NDM) Act of 2010 was promulgated by the parliament of Pakistan in December 2010. This institutionalized the disaster management mechanism in the country and allowed for the expansion of disaster management bodies, both at district and provincial levels, to enable better preparedness and response.

The NDM Act of 2010 "envisages working in nine priority areas, enshrined in Hyogo Framework for Action (HFA) 2005. The Act provides for administratively autonomous institutional arrangements at all tiers of governance, i.e. federal, provincial and district levels" (Reference).

Text of the Act is at Annex [number].

National DRR Policy

The National Disaster Risk Reduction (DRR) Policy outlines Pakistan's "objectives, priorities and directions for reducing risks from the upcoming challenges of disaster management" (Chairman NDMA).

Disaster Risk Reduction Issues and Challenges in Pakistan

Pakistan is plagued with a bevy of issues and challenges that undermine its risk reduction practices. Some of these include:

- No repository of disaster related laws and terms exists, due to which there is a lot of confusion regarding different terms. Annex [number – Action Aid "final flood"] compares key disaster related laws as proposed by the NDM Act 2010, Punjab Emergency Service Act of 2006, Local Government Ordinance 2001 and others.
- The lack of stronger legal and policy framework for disaster risk reduction and management. Furthermore, there is no centralized body that supervises and provides support to other DRR bodies.

- There are multiple agencies and institutions dealing with different aspects of disaster risk reduction and management. There is no framework that addresses the issues of conflicting and overlapping jurisdictions.
- Coordination issues (between different bodies) and not enough linkages between the various bodies working in the realm of DRR and DRM for more harmonized response strategy.
- There are sustainability issues (policy, program and financial) of DRR activities.

Way Ahead

Disaster risk reduction has to be intricately embed within the overall developmental context of Pakistan. It has to be understood that disaster risk reduction is not an individual effort that a single body is to undertake. Owing to the sheer expanse of Pakistan and the multitude of hazards that pose significant risk, disaster risk reduction has to be a synergized, concerted effort involving multiple players who are synchronized and coordinated amongst each other.

Resources and Staff: More resources and staff required by the NDMA, PDMAs and the DDMAs to effectively responds to hazards.

Centralized Oversight Agency: Pakistan must establish a centralized oversight body which can supervise overall DRR activities and ensure synergy among all other bodies.

Improve Linkages and Coordination : Efforts must be made to improve linkages between the various government agencies so they can coordinate various DRR activities, including mitigation, avoidance, early warning and response.

Improving Knowledge Awareness: Capacity building and awareness raising sessions must be conducted on DRR and how to mainstream DRR in the regular developmental context.

Community Based Disaster Risk Reduction

"Community-based Disaster Risk Management (CBDRM) is a process in which at-risk communities are actively engaged in the identification, analysis, treatment, monitoring and evaluation of disaster risks in order to reduce their vulnerabilities and enhance their capacities (ADPC 2003). This means that people are at the heart of decision-making and implementation of disaster risk management activities. The involvement of most vulnerable social groups is considered as paramount in this process, while the support of the least vulnerable groups is necessary for successful implementation."

Abarquez and Murshed, 2004

Community Based Disaster Risk Management

Community based disaster risk management (CBDRM) involves the active participation of communities at the heart of disasters in decision making and the implementation of disaster risk management activities (Reference). Their capacities are developed and they are trained to accurate assess situations, identify risk reduction measures (mitigation and preparedness activities before a disaster and response and recovery activities during and after a disaster) and implement them (Reference).

Figure: Disaster Management Cycle

The CBDRM approach focuses on involving the communities at each stage of the disaster management cycle – from disaster mitigation to preparedness, to during disaster activities, disaster response and disaster recovery. The process is also inclusive of vulnerable and marginalized groups for successful implementation. For a CBDRM process to be successful, it must have the support and involvement of district, local and national governments.

"Community level initiatives that are low cost, locally appropriate, technically sound, in sync with the local government, and rooted in indigenous knowledge and practices have proved most successful. Integrated programmes that address local water resource management, livelihood security, savings, education, health, and participatory development planning have been successful in a number of locations and are fairly replicable and scalable. Unfortunately they remain as isolated pilot projects, and have never been documented, disseminated and advocated in an effective manner, and have only begun to scratch the surface of the policy influencing domain." (India)

Why is Community Based Disaster Risk Management Important?

CBDRM makes communities not only the key beneficiaries but also the primary actors (planners, implementers, partners and leaders) in each step of the disaster risk management process. Their involvement is paramount because:

CBDRM is a process in which people from the communities are fully involved in decision making pertaining to disaster risk reduction and management activities.

"Community Based Disaster Risk Management is a process, which leads to a locally appropriate and locally "owned" strategy for disaster risk reduction. Disaster risk mitigation refers to measures taken to prepare for and reduce the effects of disasters. That is, to predict and—where possible—prevent them, mitigate their impact on vulnerable populations, and respond to and effectively cope with their consequences."

Redr[3]

Why CBDRM

CBDRM was suggested as an alternative to the traditional top-down approach in the 1980s and 1990s (reference), when it became apparent that top-down approached failed to fully understand, and therefore address, the needs of communities at risk and typically ignored indigenous resources and capacities. It was also realized that the top-down approach undermined resiliency, security and the quality of life (reference).

The main goal of CBDRM is to transform disaster risk communities to "disaster resilient communities" (reference).

3 http://www.hpsl.lk/ViewFile.aspx?Item=Files%5CResources%5CTrainings%5CLKT0034_CBDRM2-COL-2011.pdf.

Community Based Disaster Risk Management Process

The community based disaster risk management process

a. Community Identification and Disaster Risk Assessment
b. Participatory Disaster Risk Reduction Planning
c. Participatory Implementation
d. Participatory Monitoring and Evaluation

Proceedings of the

1st National Disaster Risk Reduction Workshop

Workshop Objectives

a. To provide an opportunity to the DRR community (DRR practitioners, donors, policy makers, researchers/ academics, etc.) to interact, share and learn from each others experiences – DRR stakeholders & partners networking.

b. To initiate theme-based discussion/ dialogue among the larger DRR community on essentials of CBDRM Model for Pakistan.

c. To make an agreement on (essentials) integral components of a CBDRM Model.

Workshop Outcome

The DRR community's agreement on essentials of a CBDRM Model keeping in Pakistani context.

a. Why the Workshop and the DRR Forum

The 1st National Disaster Risk Reduction Workshop (NDRRW), held on the 27th and 28th of November 2012, was envisaged by the DRR Forum. Its purpose was:

> "To enhance communication, coordination and information sharing on DRR and CCA between all relevant stakeholders in order to promote, improve and integrate DRR and CCA in emergency and development programs in Pakistan."
>
> Arshad Khan Khalafzai
>
> Lead Facilitator

The DRR forum is "*an informal group of civil society organizations voluntarily coming together on issues of common interest in the field of Disaster Risk Reduction and Management and Climate Change Adaptation, at the national level in Pakistan*" (Arshad Khan Khalafzai, Lead Facilitator, NDRRW).

The DRR forum comprises of a total of 57 members, including 35 international NGOs, 19 national/local NGOs and 3 Red Cross/Red Crescent Organization. It has formal terms of reference and elected Co-Chairs and Coordinating Committee. The DRR forum meets regularly on a monthly basis and includes a total of 112 individuals in its email contact list (as of November 29, 2012).

Objectives of the DRR Forum

- Advocacy on DRR issues with a common/coordinated civil society voice
- Facilitate regular knowledge and information sharing on DRR activities, policies, global and regional initiatives, resources, and strategies
- Facilitate the development and sharing of lessons learnt, best practices, research, and models for all phases (emergency, early recovery and development)
- Enhance coordination and communication among DRR stakeholders and scientific organizations and academic institutions at all levels
- Promote inclusion of vulnerable and marginalized groups in DRR and CCA
- Raise awareness and encourage learning around the linkages between CCA and DRR

Accomplishments of the DRR Forum

- Common contact list of CSO DRR practitioners.
- Created the only DRR 3W matrix in Pakistan, sharing who-what-where information from over 30 organizations (now passed on to UNDP and the DRR Working Group).
- Successfully advocated for the (re)establishment of a formal, multi-stakeholder DRR coordination mechanism.
- Provided consolidated civil society comments of the Government of Pakistan's Draft National DRR Policy.
- Organized successful joint training on Meteorological Early Warning Systems with the Pakistan Meteorological Department, attended by 49 representatives from civil society, UN, government and academia.
- Connected with the Global Network of Civil Society Organizations for Disaster Reduction
- Provided feedback on key DRR issues and priorities in Pakistan to major donors and advocacy groups, including:
    - ISDR
    - DFID
    - USAID
    - ECHO
    - InterAction
    - ACT Alliance

Way Forward (in General)

- Improving sharing of DRR best practices, models, evaluations, and lessons learned among civil society
- Increase and improve advocacy on DRR issues with government, donors, UN and wider public
- Improve knowledge/information management among the DRR community in Pakistan

- Initiate/improve DRR coordination at the Provincial and District levels
- Develop common understanding on terms, CBDRM, CCA, risk management, and other themes
- Connect with other civil society DRR Networks in South Asia (Nepal, Bangladesh, Afghanistan).

Way Forward (in Specific)

- Co-Chairing DRR Working Group
- Presence at October 8th and October 13th events
- Circulating, presenting and comparing existing CBDRM Models in Pakistan
- Seeking mechanisms to improve practical field-level coordination among I/NGOs on DRR
- Pursue dedicated human resource support

b. Workshop Discussion Methodology/ Process

The workshop took a unique approach to ensure that it met its overall outcome. It was decided that a lead facilitator would facilitate the discussion and dialogue process. The lead facilitator will introduce the participants to the discussion and provide an overview of the purpose of the workshop and the essential constituents of DRR.

> *"The facilitators' role is not to direct, but rather to facilitate the discourse and dialogue process."*
>
> Arshad Khan Khalafzai,

Lead Facilitator, 1st NDRRW

Three additional facilitators would facilitate the lead facilitators with the dialogue process. It was decided that the two day workshop would cover 6 different themes, with 3 themes covered on day 1 (each facilitator covering one theme) and 3 themes on day 2 (each facilitator covering one theme). The facilitators briefed the participants on the themes, subthemes and their points.

Each facilitator would conduct his/her session in a separate space. Each larger theme would be divided into sub-themes and distributed amongst the participants, who would be grouped accordingly. Each group would go on to suggest "Action Points" pertaining to their themes. Facilitators would finalize the agreed theme based components for the model.

A professional report writer would be taking down notes, which will be used to produce a final workshop report. That report (this current report) will then be shared with all participating organizations, the DRR community and all stakeholders and partners.

Group Formation

3 different larger groups to be formed (themes-based) for discussions facilitated by the facilitators. The groups will be balanced groups in terms of numbers and participants background – each group should ideally have more or less same number of participants. Groups will be composed of female members, NGO/ INGO staff (project planning/ design & implementation), donor agency representatives, representatives from UN agencies, officials of government authorities/ departments, academics/researchers and provincial representatives.

Sub-Group Formation

Each larger group will be divided into smaller subgroups based on number of subthemes. The subgroups will be formed by the facilitators randomly. Subgroups will discuss the subthemes and their points separately.

Pre-Workshop Preparation

Series of in-depth consultations and discussions were held among core members of the working group (that was responsible for preparing the workshop) a week prior to the workshop. The purpose was to come up with a methodology that would ensure that each participant

representing different organizations (INGOs, academia, NGOs, DRR practitioners, government officials at different levels and disaster management authorities) be fully engaged in the consultative process.

It was decided that the eventual methodology be one that would be fully owned by the participants. The ultimate goal was to devise a methodology that the larger DRR community, including stakeholders and partners, imbibe the eventual result of the workshop and consider it as an essential of CBDRM model.

It was decided that instead of discussing already pre-existing CBDRM models, irrespective of what level they were at, a fresh approach would be taken: one that starts from scratch and includes inputs from all participating organizations. The purpose of this was:

- To ensure that there was no controversy
- To ensure that all organizations contribute and therefore, accept and project the model;

After extensive discussions among the core working group and a comprehensive literature review undertaken by the lead facilitator, six themes were identified. These themes provided a comprehensive overview of the entire CBDRM process.

These include:

1. Organization and Planning of Community Based DRM
2. Community Based Disaster Preparedness and Emergency Response
3. Community Based Structural/Non Structural Measures
4. Implementation and Sustainability of CBDRM Model
5. Cross Cutting Themes in DRM Models
6. Replicibility of DRM Models

Topics & Themes

Workshop Themes

27 November 2012

1. Organization and planning of community based DRM
2. Community based disaster preparedness and emergency response
3. Community based structural/non- structural measures

28 November 2012

4. Implementation and sustainability of CBDRM model
5. Cross cutting themes in DRM models
6. Replicibility of DRM models

Theme 1

Organization and Planning of Community Based DRM

Picture from the Event

Organization and Planning of Community Based DRM

Community based disaster risk management needs to be carefully organized and comprehensively planed. One of the most important points is to fully engage the community so it can effectively mobilize to respond to disasters. That can only be done once a thorough understanding of the community is conducted and its beneficiaries identified. Further to that, rapport building ensues.

Key Points

1. Identification of community/beneficiaries
2. Rapport building/understanding the community
3. Organization building of a representative community group (UCDMC, CBDRMO, DMC, VCDMC, Task Forces)
4. Training/capacity building on DRM, identification monitoring and evaluation tools for DRM
5. Risk assessment (using tools such as; HVCA/COVACA/VCA/CA/GIS)
6. CBDRM planning
7. Development, implementation and Evaluation of CBDRM

Identification of Community/Beneficiaries

Who comprises the disaster prone community? What is its communal setup (village elders, groups, etc.)? What is its demographic mix? What is its socio-economic status? What are their sources of livelihood? Who are the most vulnerable in the community? Which social groups were most affected by disasters in the past? What kind of impacts did those disasters have on the people? What resources and capacities did the communities use to deal with and recover from disasters?

Rapport Building/Understanding the Community

Once the community has been identified it is important to build rapport and further understand the community. This is the step wherein the power structures and social relationships, and key economic groups are identified. Informal relationships are then build with the local people. This is imperative because it will ensure their participation and involvement in the CBDRM process. This step also involves close interaction with the communities to determine their needs.

Below are some of the ways local authorities can build trust and rapport with a community (Chambers, 1997):

- Living in the community

- Being transparent and open about their purpose
- Participating in daily life activities in the community, and cultural events
- Listening to the issues and problems of local people
- Learning new skills from local people
- Performing local tasks

Organization building of a representative community group (UCDMC, CBDRMO, DMC, VCDMC, Task Forces)

After trust has been established with the local communities, authorities can go on to arrange community members and build community groups. These can include:

- ***UCDMC***: Union Council Disaster Management Committee
- ***CBDRMO:*** Community Based Disaster Risk Management Organization
- ***DMC:*** Disaster Management Committee
- ***VCMC:*** Village Council Disaster Management Committee
- ***Task Forces:*** Early warning teams, search and rescue teams, shelter and food management team, health and hygiene team, water and sanitation team, disaster mitigation team, etc.

Training/capacity building on DRM, identification of monitoring and evaluation tools for DRM

Once the teams have been made, they can be trained and their capacities built on the disaster risk management and its monitoring and evaluation tools. Monitoring is important because it periodically reviews activities to ensure that schedules are met and actions are proceeding according to plans. Evaluation assesses the results of an activity and determines the outputs, impacts and outcomes of an activity. Monitoring and evaluation tools that can be used include surveys, direct observation, focus group discussions or semi-structured interviews and case studies.

Risk assessment (using tools such as; HVCA/COVACA/VCA/CA/GIS)

Community risk assessments of vulnerable communities using various tools are conducted. These include:

- Hazard, Vulnerability and Capacity Assessment Matrix (HVCA)
- Community Owned Vulnerability and Capacity Assessment (COVACA)
- Vulnerability and Capacity Assessment (VCA)
- Capacity Assessment (CA)
- Geographic Information Systems (GIS)

Community Based Disaster Risk Management (CBDRM) Planning

Once the communities have been identified, rapport has been build, they have been trained, organized and risk assessment tools have been used to map their area, the CBDRM planning phase ensues. This is the stage wherein a comprehensive disaster risk management plan is made which serves as a guide or blueprint in charting the communities "progression to safety, disaster resilience and community development" (Reference).

The plan will contain a mix of structural and non-structural interventions or measures to ensure the communities safety and protection and strengthening the reliance of the community and individual, household and communal levels.

The CBDRM plan will also identify activities and measures (immediate short term, medium term and long term) and supporting mechanisms. The plan will be fully comprehensive and inclusive of measures on how the community can avoid loss, protect its assets, protect the communities safety nets and ensure that all vulnerable people are supported.

Steps in CBDRM Plan

- Risk Assessment (Hazard, Vulnerability Capacity Assessment)
- Identify the objectives and targets of the CDRRP
- Identify the Disaster Risk Reduction Measures (Strategies and activities in the pre-, emergency phase, post disaster periods)
- Determine the Resources Needed (manpower/labor, materials, money, etc. for particular risk reduction measures)
- 5. Assign responsibilities for activities (who will implement the pre-, emergency phase, post-disaster phase activities at the various stages of plan implementation?)
- Determine Schedules and Deadlines (when will the particular activities be initiated and complete?)
- Lay down operational procedures and policies
- Determine critical elements and barriers for plan implementation (project what can go wrong, what can delay or derail plan implementation, or who will likely oppose the implementation of the plan and identify ways to address these issues)
- Discuss with community members
- Implementation, periodic improvement

Development, Implementation and Evaluation of CBDRM

Once the CBDRM plan/framework has been developed, it must be implemented and evaluated. The implementation of CBDRM activities must be participatory and involve

Theme 2

Community Based Disaster Preparedness for Emergency Response

Picture from Event

Community Based Disaster Preparedness for Emergency Response

Community Preparedness

Community preparedness involves the strengthening of capacities and skills of communities so they can be better prepared for future potential disasters. It aims to empower local communities with the necessary know-how to deal with future disasters; to ensure that communities have efficient plans or activities, which they will follow to prevent a disaster; and, each community member is aware of his/her role/responsibilities in a disaster.

Communities must be fully prepared to deal with disasters. This preparation would involve physical preparation, the formation of teams, stockpiling food, trainings and the like.

1. 5-day preparedness (stockpiling for survival till external help arrives)
2. Formation/ constitution of task forces:
    - Community disaster management committees/sub-committees)
    - Community emergency response teams

3. Early warning information dissemination mechanisms
4. Evacuation plans: evacuation routes & sites (shelters) identification & preparation, evacuation of vulnerable groups (women, children & disabled) /people at risk
5. Community training:
    - Early warning, search & rescue, evacuation, first aid, fire;
    - Community drills (hazard-specific (reverse) evacuation) on a regular basis
6. Community level basic hazard profiling:
    - Mapping of available resources
    - Assessing immediate needs
    - Developing a community level emergency response plan
    - Testing the plans while conducting mock drills and simulations
7. Community response equipment (PPE) arranged keeping in local needs.

Community Response

Community response involves the plethora of activities undertaken during a disaster. If a community is well prepared to an

Community Based Disaster Preparedness for Emergency Response

impending disaster, it will be able to respond in a timely, efficient and effective manner.

Response

1. Information management by relevant community disaster management (CDM) subcommittees
2. Coordination with:
    a. Local authorities such as district administration/ government
    b. Local PMD office
    c. Local emergency response organization
    d. NGOs/ INGOs/ Humanitarian organizations
    e. Implementation of response plan including community needs assessment
3. Dissemination of early warning released by authorities
4. Evacuation/ Reverse evacuation
    - Search and rescue,
    - First Aid
    - Provision of relief (clean drinking water, food, community NFIs, etc.)

5. Identification of secondary hazards and hazard control and/ or mitigation.

Theme 3

Community Based Structural and Non-Structural Measures

Picture from Event

Community Based Structural and Non-Structural Measures

Community based structural and non structural measures involve the measures taken prior to the impact of a disaster to mitigate or minimize its effects. Both structural and non-structural measures are elements of risk reduction.

Structural Measures or Structural Mitigation

Structural measures are the "*risk reduction efforts performed through the construction and altering of the physical environment through application of engineering solutions. Structural mitigation measures are those that involve or dictate the necessity for some form of construction, engineering or other mechanical changes or improvements aimed at reducing hazard risk likelihood or consequence*."[4]

Structural measures are also referred to as micro-mitigation. Following are the main components of structural mitigation.

1. Structural needs assessment based on localized hazards/ risks
2. Structural measures planning
3. Resources required for the required structural measures
4. Pooling in physical (cash & in-kind resources)
5. Structural development using local tools, techniques and manpower.

[4] Draft CBDRM Manual

Structural needs assessment based on localized hazards/ risks

Assessing the needs of structures (homes, schools, buildings, health centers, mosques and other community centers) and their resilience of hazards/risks. Assessing the risk resilience of community assets.

Structural measures planning

Planning structural measures for disaster risk reduction. Structural measures that can be planned for include designing transportation and/or electrical power systems that can withstand disasters; building dams and levees to minimize floods; and planting trees to reduce risk of severe storms.

Resources required for the required structural measures & pooling in physical (cash & in-kind resources)

Once the most appropriate structural measures have been identified keeping in mind a communities risk profile and its existing risk resilience, resources need to be pooled to make risk reduction investments. These resource include physical, human and cash.

Structural development using local tools, techniques and manpower

Once structural measures have been identified and resources pooled, structural

development takes place, using local tools, techniques and manpower.

Community Based Structural and Non-Structural Measures

Non-Structural Measures

Community based non structural measures are those that modify natural processes without the use of engineered solutions. These are defined as: "measure that reduces risk through modification in human behavior or natural processes without requiring use of engineered structures."

1. Increasing risk perception of a community about hazards and risks it is prone to
2. Community hazard risk awareness and education.
3. Community hazard assessment
    - Natural hazards (Primary hazards, secondary hazards)
    - Human-induced hazards including conflicts (CHEs) (primary hazards, secondary hazards)
4. Community vulnerability (to hazards/ risks) assessment
    - Vulnerability of populations.
    - Vulnerability of built environment/ human-made structures.
    - Vulnerability of the natural environment.
5. Community capacity assessment
    - Physical capacity
    - Non-tangible (such as social, political, cultural, economic)

Increasing Risk Perception of Community & Community Hazard Risk Awareness and Education

Empowering the community with information is fundamental to the risk reduction process. Risk perception is the judgment that people make about the severity and characteristics of risk. It is important that the community be informed about the perceived risks of a disaster. Prior to this, the community has to be made aware of the events and sources of risks that can have an adverse impact on them. All possible risks must be identified and the information must be shared with the community. Risks must be prioritized and their potential consequences must be clearly identified. Existing risk perceptions must be challenged and their accurate basis be

identified. This step involves increasing the awareness of the community about what is at stake and why they should be vigilant and leave nothing to chance.

This step will challenge communities old way of thinking and learning and show them that hazards and disasters are a reality.

Community Hazard Assessment & Community Vulnerability (to hazards/ risks) Assessment

A community vulnerability assessment be conducted which will identify and prioritize hazards that threaten the community; analyze hazards; analyze critical facilities; conduct a social analysis; conduct an economic analysis; conduct an environmental analysis; and analyze mitigation opportunities.

The community vulnerability assessment can be conducted by gathering information from local residents, state and local emergency management offices, local government bodies, NGOs, faith based groups and maps. The vulnerability assessment will be based on how vulnerable the community is to the effects of a particular hazard.

A hazard ranking should be prepared which will list a hazard or event, its frequency, severity and overall ranking (high, medium or low).

This step will also involve gauging the vulnerability of populations, built structures and the natural environment.

Community Capacity Assessment

This step will involve assessing the capacity of the community, both in physical and non physical (intangible) terms. It will identify the resources (human, physical, financial and knowledge) and intangible assets (governance, networks and relationships, leadership, values and beliefs and engagement) of the community.

Theme 4

Implementation and Sustainability of CBDRM Model

Implementation and Sustainability of a CBDRM Model

Implementation and sustainability of CBDRM models are critical to disaster risk management. While it is relatively easier to implement CBDRM models, their sustainability is more difficult. Keeping this in mind, it is essential that those models be designed, which can be sustained and replicated.

Implementation of CBDRM Models

- Local resource mobilization
- Community/stakeholder participation
- Capacity building (empowerment meetings) of community
- Roles and responsibilities of stakeholders (TORs) execution for smooth implementation/ sustainability
- Develop project plan
- Coordination/networking (participatory amongst stakeholders)
- Participatory M&E
- Reporting
- Complaint response and mechanism
- Financial reconciliations (community /project /donor)

Implementation of CBDRM Models

CBDRM models can be implemented after local resources are mobilized. Full and complete acceptance and involvement of the community is imperative for successful CBDRM model implementation. Stakeholder participation is also of pivotal importance. Capacity building of the community must be ensued on periodic basis, after an assessment of the gaps is conducted. Roles and responsibilities of stakeholders and community members is delineated, terms of reference drafted and shared so that models are smoothly implemented. The model must be implemented/rolled out keeping in mind a project plan, which stipulates its process.

Coordination and networking is important to ensure that everyone works collectively and in harmony. A participatory monitoring and evaluation system must be in place in which the community can monitor all on-going activities and evaluate their effectiveness. A reporting mechanism must also be implemented, together with a complaint response and mechanism system. Finally, financial reconciliations must be ensured so that cash reach the community effectively and in a timely manner.

Recommendations

- Respect cultural norms of the community.
- Active participation of community in project beginning / mplementation
- Clarify and establish memorandum of understanding (MOU) on roles and responsibility.
- Execution plans should be taken into consideration the DMC cycle (preparedness/mitigation /response/recovery)
- Follow the agreed standards/ local/ international /sphere/NDMF)
- Mid-term review
- Project exit strategy
- Project visibility looking to local situations.

Sustainability of a CBDRM Models

- Identification of stakeholders
  - Community (a. CBOs/VCs/ sectoral subcommittees, influential people
  - Government (a.NDMA, PDMA, DDMA. B. Administrative tiers .C. Line dept. D. Social welfare dept. E. Red crescent)
  - Humanitarian actors (a. NGO.B.INGOs. C. Donors)
  - Media
  - Financial institutions
  - Army
  - Law enforcement agencies

Sustainability of CBDRM Models

CBDRM models must be made sustainable by the active participation and acceptance of all stakeholders and community (local and larger) representatives. To ensure sustainability, it is important that first all stakeholders be identified. According to discussions, the following stakeholder groups were identified: community (community based organizations, village centers, sectoral subcommittees and influential people); the government (National Disaster Management Authority, Provincial Disaster Management Authorities, District Disaster Management Authorities, administrative tiers, line departments, social welfare departments and the red crescent; humanitarian actors, including NGOs, international NGOs, and donors; media (including television, print, radio and electronic); financial institutions (including banks, credit unions, mutual fund companies, insurance companies and retailers; army; and law enforcement agencies (including the police, rangers, FC and other local law enforcement authorities).

Recommendations

- Resources
- Linkages
- Communication/ Visibility projection
- Communication, coordination and collaboration
- Stake holder belief and ownership
- Participatory needs based analysis
- Capacity building follow-up persuasion

Lessons Learned

- Communication sharing
- Need based community participated planning process
- Sustainability of M&E
- Capacity building management
- Ownership of community
- Organization and government
- Effective social mobilization
- Qualitative and quantitative data analysis of community
- Cultural and social adoptability
- Socio-economic conditions of community
- LRRD Approach- Linking Relief, Rehabilitation and Development
- Coordination between partners
- CBOS (Men& Women)

Theme 5

Cross Cutting Themes in DRM Models

Picture from Event

Cross cutting themes in disaster risk management models include all those factors and themes that are common to various DRM models. These include vulnerable and marginalized groups, information management and post project information management. These themes are important as they cut across several DRM models

Cross Cutting Theme 1: Vulnerable Groups

- Women (including those with disabilities)
- Children (including those with disabilities)
- Old people (including those with disabilities)
- PWDs (people with disabilities)
- Minorities
- Others (those suffering discrimination due to ethnicity, caste or beliefs)

The first cross cutting theme identified by discussions was vulnerable groups and how to effectively mainstream them into the CBDRM process. Vulnerable and marginalized groups are those that are the most vulnerable victims of disasters and whose participation is typically negligible in community setups.

Women, children, old people, minorities and people with disabilities are those that are most vulnerable to disasters. These groups are particularly vulnerable as they typically have less access to decision making power, knowlesge, education and livelihood. They may also be specifically targeted in times of conflict and have restricted mobility. The result is that their involvement is not considered in DRM iniativites, before, during and after disasters.

Other obstacles to vulnerable group participation includes power relations within communities and social systems, lack of public awareness and individual capacity levels.

Mainstream these vulnerable groups in the CBDRM process involves transferring knowledge to the community, planning for the needs of the vulnerable groups (based on their risk assessment), capacity building and finally, monitoring and evaluating their inclusion.

Cross Cutting Theme 2: Information Management (IM) of Project Related Activities

1. Inclusion of IM in Project launching activities e.g.
    a. EWS: Hydrological /Met data to the community information center (Emergency operating Center)
    b. Relating Preparedness with all IM components e.g collection/documentation of information about committee members
    c. Information about stock piling (DRR Tool kits distributed in that particular community)
2. Collection of information about
    - Inclusive capacity building (First Aid, mock exercises).
    - Search and Rescue Team committee information
    - Evacuation routes and designated safe places information.
3. Coordination/registration of information center with all stakeholders
4. Need Assessment at initial phase of project
    a. Interviews from key Informants, FGD, participatory observation, mapping(including resource and hazard mapping)
    b. Secondary data collection for example Govt. data, NGOs/INGOs, Met dept. surveys
5. Satellite Images HVRA (Risk Mapping)
6. Inclusion of IM in Project launching activities e.g.
    a. EWS: This includes hydrological /Met data to the community information center (Emergency operating Center)
    b. Relating Preparedness with all IM components e.g collection/documentation of information about committee members
    c. Information about stock piling (DRR Tool kits distributed in that particular community)
7. Collection of information about Inclusive capacity Building (First Aid, mock exercises). Search and Rescue Team committee information, evacuation routes and designated safe places information.
8. Coordination/registration of information center with all stakeholders

Cross Cutting Theme 3: Post Project IM of community based DRR activities

- DMC/CBO registration and recognition from DDMA/UCs LG&RD
- Availability, Access to lessons learnt, Best Practices, Failures, Gaps to all stake holders (Govt, local community, NGO/INGO, Donors)
- EWS based on indigenous and scientific knowledge
- Updating information on regular basis
    - Practices By the community
    - Profiling
    - Demographic data (sex and age disaggregated data)
    - Hazard mitigation by DMC

Recommendations

Mainstreaming Vulnerable Groups into the CBDRM Process

Ensure that marginalized and vulnerable groups are not left out of the CBDRM process. This should be done by:

- Doing a high risk vulnerable group profile
- Conducting a risk assessment of vulnerable groups
- Mobilization

Record Keeping & Dissemination

- Maps to be shared with all stakeholders (Govt. and community, including local and international NGOs)
- Public awareness sessions for community (on map reading)
- Lessons learnt workshops/ sharing limitations of the project
- All M&E data will be shared with all stakeholders Govt., NGOs, Community, UN Agencies etc.
- Sources of EWS at community level
- Radio, SMS, loud speakers, siren (civil defense), posters, community centers (*hujra*), cable networks for hazard prone cities and towns.
- Essential documents be routinely updated and shared.

Theme 6

Replicability of CBDRM Models

Picture from Event

Community based disaster relief management is an evolving and dynamic framework. In order to ensure sustainability of models, disaster Relief Management models must be replicable. Replicability of DRM models to design models such that they imbibe best practices and can be sustained. They must include individual and collective knowledge, best practices and global emerging issues.

Defining Replicability

"Designing, planning and implementation of a pre conceived/adapted/implemented CBDRM project according to the needs of the community/organization/area that had achieved the desired outcomes as exhibited by the Model Project."

A replicable CBDRM model is one that has been modified and adapted according to the needs of a community or area and has been successful in achieving desired outcomes. These are those models that imbibe best practices and adapt to community/area disaster needs. Replicable CBDRM models are iterations/innovations of existing popular CBDRM models, modified to a particular community/area/hazard profile.

Levels of Replication

- Replication levels of any project should be set right at the inception stage of the project.
- During the decision of the replication levels community and the relevant government departments should be involved so that replication leads to a sustainable outcome.

Importance of Replicability for Donors

- Donors should allow innovation in the preferred replicable models adopted by the organizations.
- The model project which would be replicated should have all and well integrated approach to ensure sustainability.
- There should be a sustainability time frame of a Model project, which may be considered for replication.

Replication in the Contexts of Pakistan, South Asia and Global

- Projects that have a larger replication scope should be considered and designed keeping the topographical and geographic make up of Pakistan.

Conclusion & Recommendations

Summarizing the findings of the NDDR workshop
With a way forward
Roll out plan for DRR forum (with indicator of achievements, timeline and responsibilities
Roll out plan could be that how better we can use this report for lobbying, advocacy with DM Authorities, Donors and Regional organizations.

Recommendations

Disaster risk reduction strategies must be incorporated within the context of larger scale development programs in Pakistan. Similarly, development programs must be designed keeping in mind the location and type of hazard it is susceptible to.

Disaster risk reduction must ensure long-term sustainable benefits.

Communities are fundamental to disaster risk reduction as they are often the first responders of a disaster and also its primary victims. They must be engaged and involved in the disaster risk reduction process and be empowered to plan and manage their own defenses.

Communities must be provided the essential knowledge about disasters and how hazards pose risks to them, their families and their communities. Their capacities must be built in the various domains of effective disaster risk reduction.