

WORKSHOP REPORT

DISASTER RISK MANAGEMENT (DRM) IN AGRICULTURE AND FOOD SECURITY



Organized by
Food and Agriculture Organization (FAO)
of the United Nations
In collaboration with
National Disaster Management Authority (NDMA)
Islamabad



7-8 February, 2012



EXECUTIVE SUMMARY.....	02
1 INTRODUCTION AND BACKGROUND.....	05
2 WORKSHOP PROCEEDINGS.....	07
SESSION1: INTRODUCTORY SESSION.....	08
Opening remarks by the Senior Emergency Coordinator, FAO Pakistan.....	08
Significance of DRM in FAO’s mandate by FAO Representative.....	08
Key note address by the Chairman NDMA.....	08
Session 2: Scope of DRM in agriculture and food security-Presentation.....	09
Provincial level group work followed by Plenary presentations and discussion.....	09
Province wise key priority areas identified for DRM.....	10
Key priority areas for prioritized hazards.....	10
Session 3:FAO and DRM in Pakistan in Country Programme Framework, Plan of Action for.....	11
Emergency and Early Recovery and One UN Programme.....	11
Session 4: Concluding remarks by FAO Representative.....	11
Final remarks by Provincial Disaster Management Authority.....	11
3 Workshop Recommendations.....	12
4 Follow-up Actions.....	14
5 Workshop Evaluation (summary).....	16
6 Annexures.....	18
Annex 1 Agenda of the Workshop.....	20
Annex2: List of Participants.....	21
Annex 3: Group work Guidelines.....	23
Annex 4: Five prioritized DRM interventions (for all hazards).....	25
Annex 5:Prioritization of interventions (province-wise).....	27
Annex 6:Priritization of Hazards (major hazard wise).....	32
Annex 7: Presentations.....	41
Annex 8: Evaluation of the workshop by participants.....	58

EXECUTIVE SUMMARY

Pakistan has experienced a number of unprecedented natural and man-made calamities over a period of more than six years. The most devastating among these disasters was the earthquake of 2005 that followed three years continuous humanitarian crisis in Khyber Pakhtunkhwa in Malakand civil division and FATA and the 2010 flood hit the whole country affecting more than 20 million people. The agriculture and livestock sectors were severally affected as standing crops, agriculture lands, irrigation system, stored seed, livestock and agriculture related infrastructures were destroyed. These frequent disasters are attributed to the climate change that has resulted in variability in food production and increase risk to lives and livelihoods. Thus, the government and other developmental humanitarian organizations want to adopt a comprehensive and holistic approach to the DRM.

Food and Agriculture Organization (FAO) of the United Nations was instrumental in supporting and revival of post disaster scenarios in the field of agriculture, livestock, forestry and fisheries and also led the agriculture cluster collaborating closely with the National Disaster Management Authority (NDMA), Provincial Disaster Management Authority (PDMA), Ministry of Food and Agriculture and allied departments and National and International Non-governmental Organizations. Being the active partner of One UN DRM Programme, FAO has prepared Hazard, Livelihood and Vulnerability (HLV) Baseline and Contingency Plans for 15 districts to assist the district governments, UN agencies, NGOs and civil society for effective disaster response.

A Workshop on “Disaster Risk Management (DRM) in Agriculture and Food Security” was organized by the Food and Agriculture Organization (FAO) of the United Nations in collaboration with National Disaster Management Authority (NDMA) with the aim to reach a common understanding of the scope of Disaster Risk Management (DRM) in the context of agriculture and food security and to identify key priorities for enhancing DRM. A total of 47 persons (39 men, 8 women) participated in the workshop from various backgrounds including i.e. NDMA, PDMAs, DDMA, Agriculture and Livestock department (federal, provincial & district level), UNDP, National and Internal NGOs and the FAO.

The proceedings of the workshop started with the recitation from the Holy Quran followed by opening remarks by Mr. Rajendra Aryal, the Senior Emergency Coordinator. The major highlights of his remarks were; FAO's contribution during emergencies in early recovery and rehabilitation of farming based livelihoods. He highlighted Country Programme Framework 2012–2017 (CPF) in addition to FAO's strategy on DRM, the DRM plan of action and the Hazard, Livelihood and Vulnerability (HLV) baseline and contingency plan. He emphasized on mainstreaming gender in DRM as a priority action and involvement of women and children as key stakeholders.

Dr. Kevin Gallagher, FAO Representative in Pakistan briefed on significance of DRM and highlighted the importance of coordinated efforts in dealing emergencies especially in the areas of preparedness and mitigation, capacity building and cross-border coordination. He stressed on building economies better by providing the affected population with diversified economic options and improving sustainable livelihoods at the community level.

Dr. Zafar Iqbal Qadir, the Chairman NDMA highlighted major achievements of NDMA in the areas of policy, planning and implementation with regard to multifaceted hazards of the country. He also presented the idea of crop insurance to benefit the poor farmers in case of any future emergency.

Following the opening remarks, the second session started. There were two important elements of this session. The first one was to familiarize the participants about the scope of DRM in agriculture and food security and the second important element was the group work. After explaining the concept of DRM the group exercise was conducted by forming provincial groups.

The day-long group exercise consultation had two major tasks to achieve including 1) prioritization of major hazards affecting the province by district and 2) to identify priorities for support in DRM with respect to the two most important hazards affecting the province. As per the group work guidelines, the participants identified a minimum of three to maximum of ten hazard types which were presented in the plenary session for further improvement and also highlighted DRM support interventions. The major hazards identified in the first plenary included: Drought, Flash flood, Riverine Floods, Cyclone, Landslides/Land movements, Hailstorm, Earthquake, Strong winds, Heavy snow fall, GLOF: Glacial Lake Outburst Floods, Avalanches, Dam Break, Encroachment, Conflict and Tornado.

Similarly, based on the results of the first exercise, the provincial groups identified priorities for support in DRM with respect to the two most important hazards affecting the provinces. These hazards were drought, flash floods, riverine floods; Landslides/land movements and conflicts. For each priority hazard, five prioritized DRM interventions were proposed. Examples included the need for more and better pre-hazard risk and vulnerability assessment; improved overall coordination between Government, UN and NGOs in disaster response, and; contingency planning and Institutional support to re-establish government capacity. Full details of prioritized activities can be found in Annex 4.

In the third session, efforts were made to bring a common understanding among the participants with regard to One UN DRM work programme, Country Programme Framework (CPF) and the FAO Plan of Action for 2012-2013. In addition, the context, concept and history of Hazard Livelihood and Vulnerability Baseline and Contingency Plans (HLVs) were explained. A total of three presentations were given by the FAO representatives.

The main recommendations of the workshop included: improved knowledge sharing; replicating the workshops and special trainings on DRM at provincial and district level by involving community based organization and other interested stakeholders; on ground realization of the workshop deliberations; preparation of more HLVs in other hazard prone district with further improvement in the contents such as DRR measures and their dissemination to wider audiences. Hazard-based DRM planning was suggested and placement of DRM experts in agriculture at PDMA and NDMA came as a priority.

A key follow-up action of the workshop will be convening of Provincial DRM workshops for food security and agriculture which built on the findings of the current workshop. It is intended that these take place during March 2012.

INTRODUCTION AND BACKGROUND

Pakistan has seen many worst natural and manmade disasters in the history ranging from floods (sea/river and flash), droughts, earthquakes, cyclones and humanitarian crises affecting all geographic locations of the country. The country has witnessed nine major devastating floods across the country especially; the 2010 flood that hit the whole country affecting more than 20 million people. In addition, four major earthquakes in Balochistan, Kashmir, Khyber Pakhtunkhwa and parts of Karakorum belt created havoc in addition to four cyclones that triggered devastation in the parts of Sindh and coastal belt of Balochistan. The drought mostly affects the southern parts of Pakistan when there is no precipitation in the country. The drought spell of 1998-2002 is considered worst in 50 years in Pakistan. The three years long humanitarian crisis in Malakand civil division and FATA also disrupted the socio-economic fabric to a greater extent. The overall impact of these disasters is enormous in terms of loss of precious human lives in addition to severe losses and damages to major rural livelihoods including standing crops, agriculture lands, irrigation system, stored seed, livestock and agriculture related infrastructures.

Pakistan is one of the vulnerable countries to climate change being an agri-based economy. The agriculture sector continues to play a central role in Pakistan's economy. It is the 2nd largest sector, accounting for over 21% of GDP, and remains by far the largest employer, absorbing 45% of the country's total labor force. Nearly 62% of the country's population resides in rural areas, and is directly or indirectly linked with agriculture for their livelihood (Economic Survey of Pakistan, 2009-2010).

FAO has played a pivotal role in supporting and revival of post disaster scenarios in the field of agriculture, livestock, forestry and fisheries including initial damage assessments, immediate emergency response and relief in agriculture and food security. However, more efforts are needed in adaptation, mitigation, food security and development. A shift from a pure focus on emergency response to a more holistic disaster risk management approach is important for government and nongovernmental actors working in emergency and rehabilitation contexts in Pakistan. Disaster risk management covers three major elements such as risk assessment/reduction, preparedness and early warning and response and rehabilitation.

The Food and Agriculture Organization of the United Nations (FAO) is the lead UN agency for agriculture and co-leads the Food Security Cluster with WFP. FAO collaborates closely with the National Disaster Management Authority (NDMA), Provincial Disaster Management Authority (PDMA), Ministry of Food and Agriculture and allied departments and National and International Non-governmental Organizations. FAO is also active partner of One UN DRM Programme in Pakistan and has recognized DRM in Agriculture and Food Security as an important area. FAO has prepared Hazard, Livelihood and Vulnerability (HLV) Baseline and Contingency Plans for 15 districts to assist the district governments, UN agencies, NGOs and civil society for effective disaster response.

A Workshop on “Disaster Risk Management (DRM) in Agriculture and Food Security” was organized by the Food and Agriculture Organization (FAO) of the United Nations in collaboration with National Disaster Management Authority (NDMA) at Marriot hotel, Islamabad, on February 7- 8, 2012. The event was inaugurated by the Chairman NDMA and facilitated by Mr. Neil Marsland from FAO Headquarters in Rome along with the FAO Pakistan DRM team (Dr. Faizul Bari, Mr. Ali Gohar Khan and Ms. Zohra Khanum). The objectives of the workshop were to:

- reach to a common understanding of the scope of Disaster Risk Management (DRM) in the context of agriculture and food security;
- identify key priorities for enhancing DRM in Pakistan, and;
- identify, validate and prioritise the contribution that FAO should make to strengthened DRM in Pakistan.

A total of 47 persons (39 men, 8 women) participated in the workshop including from various agriculture

¹ <http://pakistanweatherportal.com/2011/07/16/worst-natural-disasters-of-pakistan/>

WORKSHOP PROCEEDINGS

Session 1: Inaugural Session

The Workshop on “Disaster Risk Management (DRM) in Agriculture and Food Security” held in Islamabad was facilitated by Mr. Neil Marsland, (Senior Technical Officer, Emergencies Division, FAO, Rome) along with the FAO Pakistan DRM team (Dr. Faizul Bari, Ali Gohar Khan and Zohra Khanum). The workshop was formally inaugurated with the recitation from the Holly Quran. This followed with welcome speech by Mr. Rajendra Aryal, the Senior Emergency Coordinator who welcomed the participants to the two days workshop on Disaster Risk Management (DRM) in Agriculture and Food Security. The welcome speech then led to briefing on significance of DRM in FAO's mandate by Dr. Kevin Gallagher, FAO Representative in Pakistan and followed by key note address by Dr. Zafar Iqbal Qadir, the Chairman NDMA. In the end of the session, Mr. Neil Marsland, explained the objectives and major outcomes of the workshop and presented the detailed workshop agenda for two days (annex-1). Following are the major excerpts from the first session:

Mr. Rajendra Aryal, the Senior Emergency Coordinator welcomed the participants. He elaborated on the mandate and the role of FAO in Pakistan being the lead agency in agriculture, livestock, fisheries and forestry and an active part of UN Team in Pakistan for more than six decades. He briefed on FAO's support to the Government of Pakistan after 2005 earthquake, conflict in 2009, food price crisis of 2008/09 and mega response during floods 2010 in the areas of needs and damages assessment, immediate response, early recovery and emergency rehabilitation in affected provinces. He also greatly appreciated the generous support from the donor community during floods 2010-2011.

He highlighted on organization's Country Programme Framework 2012-2017 (CPF), FAO's strategy on DRM, the DRM plan of action and the Hazard, Livelihood and Vulnerability (HLV) baseline and contingency plans and their relevance to overarching themes of mainstreaming gender and climate change in DRM as priority areas. In his concluding remarks, he highly appreciated and thanked Chairman NDMA for gracing the event and for his personal commitment for this emerging issue.

Dr. Kevin Gallagher, FAO Representative in Pakistan briefed the audience on the FAO's history as one of the pioneer partners of the government of Pakistan to combat emerging issues related to agriculture and food security in the country. He stressed the importance of coordinated efforts and collaborative ventures with NDMA/PDMA in emergencies especially in the areas of preparedness and mitigation. He commended NDMA's continues support to the work of FAO and emphasized on exploring ways of how best FAO can support capacity building of government in DRM.

He gave the example of Locust infestation along the bordering countries i.e. Afghanistan and China and marked it as priority area for cross-border coordination to tackle such biological emergencies by establishing good communication mechanisms among implementing agencies. Talking about the socio-economic disruption owing to multifaceted emergencies, he said emergencies have always created chaos, social disruption and economic instability due to down fall of markets and price hikes. Therefore, it is imperative to build economies better by providing the affected population with diversified economic options and improving sustainable livelihoods at the community level.

Dr. Zafar Iqbal Qadir, the Chairman NDMA briefed on the history of Early Recovery and Rehabilitation Authority (ERRA) and the National Disaster Management Authority (NDMA). He informed the audience about the major achievement of the organization such as preparation of National Disaster Management Framework, National Disaster Response Plan, and National Disaster Management Act, Contingency Planning on different disasters such

as industrial hazards, monsoon floods and cyclones in addition to Provincial and District DRM plans in consultation with One UN DRM. He informed the audience that the One-Un DRM program would be finalized after completion of provincial consultations which are under way. He emphasized on involvement and capacity building of target vulnerable communities through Disaster safety nets such as life saving, shelter, livelihoods and food security and insurance to pay for the insurgencies.

The Chairman applauded the role of FAO in Pakistan in general and during emergencies in particular. He said FAO is fully committed to integrate DRM component in food and agriculture sector and assured his support to this cause. He specifically appreciated the efforts of FAO in conducting Hazard Livelihoods and Vulnerability (HLV) assessment and contingency plans and its relevance to overall district DRM plans.



Session 2: DRM Concept and Group Work

The second session started after the tea-break. The main purpose of this session was to familiarize the participants about the scope of DRM in agriculture and food security. After a detailed presentation on the subject, few questions were taken from the audiences for more clarity. The second important part of this session was the group work. The main purpose of this important exercise was to 1) list and prioritize major hazards affecting the province by district and by type; 2) to identify priorities for support in DRM with respect to the two most important hazards affecting the province. Following is the brief summary of the major outcomes of the session:

Mr. Neil Marsland explained the concept of DRM in agriculture and food security. Climate related disasters have increased at an accelerating rate since 1950s, emphasizing the link between disasters and climate change. The main elements of DRM include 1) prevention, mitigation and preparedness, 2) response and rehabilitation and 3) transition to development. An enabling policy environment stable and strong institutions and sound coordination aspects are all important aspects of a well functioning DRM system.



After the presentation, Mr. Marsland explained to the participants the group exercise. For more clarity, he shared group work guidelines with clear objectives and instructions (annex-3). After clarity on group work, seven regional/provincial groups were formed having two facilitators in each group. Each group was given two major tasks including 1) prioritization of major hazards affecting the province by district and 2) to identify priorities for support in DRM with respect to the two most important hazards affecting the province. The facilitator asked each group to list all major hazards which mostly affect the concerned provinces as per the geographic location and identify most affected/exposed districts against each hazard. The participants then took considerable time to identify hazards affecting each province and came up with a list of different hazard types which were presented in the plenary session.

Group work 1: Identification and Prioritization of Hazards

During the group work the participants identified three to ten hazard types in each province with support interventions. These hazards included Drought, Flash flood, Riverine Floods, Cyclone, Landslides/Land movements, Hailstorm, Earthquake, Strong winds, Heavy snow fall, GLOF: Glacial Lake Outburst Floods, Avalanches, Dam Break, Encroachment, Conflict and Tornado (table 1). For detail analysis, please refer to annex-4, 5 and 6)

Table 1: List of hazards (All and prioritized)

Province	All listed hazards	Prioritized hazards
Balochistan	1. Drought, 2. Flash flood, 3. Riverine Floods, 4. Cyclone, 5. Landslide, 6. Hailstorm, 7. Earthquake, 8. Strong winds, 9. Conflict	Drought and Flash Floods
Sindh	1. Drought, 2. Riverine flood, 3. Flash flood, 4. Cyclone, 5. Hailstorm, 6. Earthquake, 7. Conflict, 8. Terrorism	Drought and Riverine flood and
Punjab	1. Riverine flood, 2. Drought, 3. Flash flood, 4. Landslide, 5. Hailstorm, 6. Earthquake, 7. Strong winds, 8. Conflict, 9. Tornado	Drought and Riverine flood
Khyber Pakhtunkhwa	1. Drought, 2. Riverine flood, 3. Flash flood, 4. Landslide, 5. Hailstorm, 6. Earthquake, 7. Conflict	Drought and Riverine/Flash flood
FATA	1 Flash flood, 2. Conflict, 3. Drought,	Drought and Conflict
AJ&K	1. Land slide, 2. Flash flood, 3. Hailstorm, 4. Heavy snow fall	Landslides and Flash Floods
Gilgit Baltistan	1 Flash flood/Land erosion (Cloud Out Burst), 2. Land movement/Landslide, 3. GLOF: Glacial Lake Outburst Floods, 5. Avalanches, Conflict, 6. Deforestation, 7. Change of Normal rout by Rivers Streams and Channels, 7. Riverine flood, 8. Earthquake, 9. Dam Break, 10. Encroachment	Landslides/Land movements and Flash Floods

The analysis shows that Drought prevails in all four provinces including FATA, while flash floods are common in Balochistan, Khyber Pakhtunkhwa, Azad Jammu and Kashmir and Gilgit Baltistan, riverine floods usually affect Punjab, Sindh and Khyber Pakhtunkhwa. Landslides are very frequent in both Azad Jammu and Kashmir and Gilgit Baltistan. In addition, underground tremors and periodic land movement has become a routine phenomenon in some parts of Gilgit Baltistan.

Group work 2: Priorities for Support

In the second provincial group exercise each group was asked to identify priorities for support in DRM with respect to the two most important hazards affecting the province. This group work was based on the results of the first exercise. For each priority hazard, five most-important DRM interventions were proposed by the participants. Table 2 presents the overall picture. This is broadly reflected at Province level with a few differences (see Annex 4 and 5 for details).

Table 2: List of five prioritized DRM interventions

Order of Priority	DRM element
Priority 1	Pre-hazard risk and vulnerability assessment
Priority 2	Federal and provincial legislation and policies related to DRM in agriculture and food security; Overall coordination between Govt, UN and NGOs in disaster response
Priority 3	Prevention and mitigation activities (Technical and Socio-economic)
Priority 4	Contingency planning and institutional support to re-establish Government capacity
Priority 5	Asset recovery interventions for livestock Livelihood rehabilitation interventions (e.g. seed fairs; cash for work; food for work; irrigation canal cleaning) Building DRM capacity of disaster management bodies

Session 3: FAO and DRM in Pakistan

The purpose of this session was to bring a common understanding among the participants with regard to One UN DRM work programme, Country Programme Framework (CPF) and two years FAO Plan of Action for 2012-2013 and context, concept and history of Hazard Livelihood and Vulnerability Baseline and Contingency Plans (HLVs). Main outcomes of this session included:

Dr. Faizul Bari presented detailed One UN DRM work plan for 2012. He said that DRM is one of the five priority areas for the joint programme. He further explained the overall strategy for integrating livelihood based DRM mechanisms into agricultural planning and development processes at all levels. In addition, support would be given for enabling policy framework for emergency response and early recovery in the mainstreaming of DRM in agriculture and food security interventions. He also provided other details on outcomes and implementation mechanism. (Annex-7.3)

Dr. Bari also presented the Country Programme Framework (CPF) and two years FAO Plan of Action for 2012-2013. He said the CPF aims to address the problems of conflict, earthquake and flood-affected areas that compliment federal and local government priorities and One UN OPII. The immediate emphasis of the programme remains on Poverty and Hunger Millennium Development Goal 1 by 2015 and building a more sustainable agriculture system. The CPF priority areas included; Food and Nutrition; Sustainable Agricultural Economic Growth, Capacity Development and DRM (annex-7.4)

Mr. Marsland explained the context, concept and history of Hazard Livelihood and Vulnerability Baseline and Contingency Plans (HLVs). He said these HLVs are developed in close partnership with district authorities (DDMAs; Agriculture Departments, Livestock Departments, local NGOs. The HLVs also contribute directly to the broader DDMA District Disaster Management Plans. Regarding the current status, five HLVs were completed as a pilot project in 200-09 while for the year 2011, additional ten HLVs are under review. The HLVs provide detailed information on Vulnerability,

Hazard, and Longer term trends, demographic information, Livelihood exposure, Seasonal impact and response calendar, response typologies and different annexes (annex-7.2)

Session 4: Concluding session

The final session of the workshop included evaluation, concluding remarks from representatives of FAO and NDMA. Dr. Kevin Gallagher thanked the workshop participants for their time and valuable suggestions for further improvement. He congratulated the management for taking the initiative to organize a national level workshop and concluded. The workshop saying “biggest room in the world is the room for improvement”.

On behalf of the NDMA, Mr. Muhammad Bakhtiar Khan, the Deputy Director (Relief), PDMA-KP thanked the FAO management for arranging a successful workshop. He acknowledged his enhanced knowledge regarding importance of DRR in agriculture sector and said the event provided an opportunity to interact with the experts from multiple backgrounds. He appreciated the event for being lively and interactive especially the provincial group work. He placed high priority to the idea of holding workshops at provincial level to get consensus from provincial DRR stakeholders as a foundation for devising a common DRR plan for agriculture and food security. In addition, he mentioned a few future challenges to realize these DRR plans into implementation such as allocation of funds for DRR activities. In spite the financial constraints, he assured FAO to extend all possible support by the provincial government for generating new and innovative ideas in the DRM field.



WORKSHOP RECOMMENDATIONS

1. WORKSHOP RECOMMENDATIONS

The participants rated the event as useful in terms of information regarding mainstreaming DRM in agriculture and food security. They highlighted the need for knowledge sharing through disseminating DRM material including HLVs to district level. They also proposed further improvement of HLV contents by including DRR measures as part of HLV process and supported the roll-out of the HLV approach in other disaster prone districts of Pakistan. The participants also suggested disseminating the workshop findings to the wider audience at provincial and district level and replicating the workshop followed by further DRM related trainings at the provincial and district level by involving community based organizations and other stakeholders.



Suggestion also came for Placement of Agriculture Advisors (experts) in PDMAs. Participants also stressed on ground realization of workshop deliberations and also appreciated the idea of the chairman NDMA regarding crop insurance.

FOLLOW-UP ACTIONS

2. FOLLOW-UP ACTIONS

The following follow-up actions were proposed:

- Preparation and dissemination of draft workshop report to all participants for further feedback and improvement
- Finalization of workshop report and distribution among the participants and other key stakeholders
- Planning for convening Provincial DRM workshops for food security and agriculture and resource mobilization
- Hold provincial workshops and disseminate workshop deliberations
- Ensure close coordination with NDMA/PDMAs and DDMAAs for DRM interventions
- Share the existing HLVs after finalization with all stakeholders and further improvement in the content
- Submission of One-UN DRM plan to NDMA for further action

EVALUATION OF THE WORKSHOP

3. EVALUATION OF THE WORKSHOP

The workshop evaluation was done by all participants and the major findings are as follows::

- At the end of the workshop, the concept of DRM in agriculture and food security was understood well by 36% of participants, while 38% understood it somewhat.
- The majority of participants (68%) found group work sessions useful, with need for further prioritization of interventions. 26% found it useful with no further prioritization, and 6% felt that some areas had been prioritized with large gaps which would need to be filled.
- The 52% of participants believed to have a good grasp of the logic of HLVs, while 42% felt to get some idea and need further sensitization.
- Majority (79%) considered expansion of HLVs to several more districts as a very high priority
- Majority (56%) urged the need of better sharing of the information at provincial and district level
- Regarding follow up steps, half of the participants suggested replicating the workshop at provincial level, while 26% urged the need of disseminating the workshop findings to a wider group of stakeholders at provincial level.
- Finally, 24% of participants prioritized a secondment of experts in DRM in agriculture and food security at provincial level (PDMAs).



LIST OF ANNEXURE

4. LIST OF ANNEXURE

Annex 1: Agenda of the Workshop

Annex 2: List of Participants

Annex 3: Group work guidelines

Annex 4: Prioritization of five DRM Interventions from DRM elements (for all prioritized hazards)

Annex 5: Five Province wise priorities for each hazard

5.1: Hazard 1.Flash Flood (Balochistan, Gilgit Baltistan, AJK, Sindh, Punjab, Khyber Pakhtunkhwa)

5.2: Hazard Drought (Baluchistan, Sindh, Punjab, KP, FATA)

5.3: Hazard 3.Land Slides/Land movements (Azad Jammu and Kashmir, Gilgit Baltistan)

5.4: Hazard 4.Conflict (complex) - FATA

Annex 6: Priorities Hazard Wise

6.1: Hazard 1.Flash Flood (Balochistan, Gilgit Baltistan, AJK, Sindh, Punjab, Khyber Pakhtunkhwa)

6.2: Hazard Drought (Baluchistan, Sindh, Punjab, KP, FATA)

6.3: Hazard 3.Land Slides/Land movements (Azad Jammu and Kashmir, Gilgit Baltistan)

6.4: Hazard 4.Conflict (complex) – FATA

Annex 7: Presentations

7.1: Disaster Risk Management in Agriculture and Food Security: Concepts and Application

7.2: Presentation Hazard Livelihood and Vulnerability Baseline and Contingency Plans in Pakistan

7.3: Presentation: One UN DRM Programme – FAO Work Plan 2012

7.4: Presentation Country Programme Framework

7.5: Presentation Plan of Action 2011 – 2012

Annex 8: Evaluation of the workshop by participants

Annex 1: Agenda of the Workshop

S#	Activity	Timeline
DAY ONE		
1	Registration of the participants	
2	Introductory Session <ul style="list-style-type: none"> • Recitation from the Holy Quran • Opening remarks by the Senior Emergency Coordinator, FAO Pakistan. • Significance of DRM in FAO • 's mandate by FAO Representative • Key note address by the Chairman NDMA • Timetable of the workshop 	10.00 – 10.30
3	Scope of DRM in agriculture and food security - Presentation followed by questions	10.30 – 11.15
4	Provincial level group work followed by Plenary presentations and discussion - TEA TAKEN IN GROUPS <ul style="list-style-type: none"> • Key hazards in provinces and districts • Key priorities for technical and institutional strengthening 	11:15 – 13.30
	Lunch and prayers break	13:30 – 14.30
5	FAO and DRM in Pakistan in Country Programme Framework, Plan of Action for Emergency and Early Recovery and One UN Programme - <i>Presentations and questions</i>	14.30 – 15.15
	Tea Break	15.15 – 15.45
6	DRR and Hazard, Livelihood and Vulnerability Baseline and Contingency Plans – <i>Presentation and questions</i>	15.45 – 16.30
7	Wrap – up of Day 1 and preparations for Day 2	16.30 – 17.00
DAY TWO		
8	Introduction: Recap on day 1, purpose of the session and timetable (Results from day 1 Group work; key points from presentations; objectives for the morning)	09:00 – 09.30
9.	Provincial level group work <ul style="list-style-type: none"> • Validation and discussion of CPF, Plan of Action, One UN workplan: Validation of scope, objectives, outputs and focus; missing elements; and key priorities for partnerships. 	09.30 – 11.00
	Tea Break	11.00 – 11.15
10.	Plenary	11.15 – 12.15
11.	Next steps, Wrap-up and Closure <ul style="list-style-type: none"> • Next steps in relation to DRM activities and partnerships for FAO and partners. • Distribution of attendance certificates • Participant workshop evaluation • Concluding remarks by FAO Representative • Final remarks by National Disaster Management Authority 	12:15 – 13:00
	Lunch and prayers break	13:00 – 14.00
	Departure	14.00

Annex 2: List of Participants

S#	Name	Designation	Organization	Phone/Cell No	E-mail Addresses
1	Dr. Zafar Iqbal Qadir	Chairman	NDMA	051-9222373, 051-9212444	chairman@ndma.gov.pk
2	Dr. Kevin D. Gallagher	FAO Representative	FAO	0300-5003365	Kevin.Gallagher@fao.org
3	Rajendra Aryal	Senior Emergency & Rehabilitation Coordinator	FAO	0346 8544155	rajendra.aryal@fao.org
4	Dr. Cristina Graziani	Operations Manager	FAO	0345 501 4499	cristina.graziani@fao.org
5	Dr. Faizul Bari	National DRM Advisor	FAO	0345-8544116	faizul.bari@fao.org
6	Zahid Ahmad Mengal	CEO	AZAT Foundation	0345-8396676	afzalfarddin@ymail.com
7	Damon Briston	Head of Humanitarian/Conflict Reduction	DFID		d-britishow@dsid.gov.uk
8	Amy Keith	Early Recovery Programme Coordinator	Malteser International	0345-8558431	amy.keith@malteser-international.org
9	Shakaib Ahmed	Sector Coordinator	DIAKONIE KATASTROPHENHILFE - Pakistan	0345-5003260	Shakaib122@gmail.com
10	Syed Tassadaq Hussain Shah	Advisor DRR	Plan International	0300-5522551	Tassadaq.shah@plan-international.org
11	Hamad Ullah	DRM Coordinator	UNDP/NDMA	0333-570953	drmdikhan@gmail.com
12	Rashid Kamal Ur Rehamn	Director	PDMA Punjab	0300-6666111	Rashid_kamal@hotmail.com
13	Mohammad Nawaz Mehrabpuri	System Analyst	PDMA Sindh	0300-3651399	it@pdmagov.pk
14	Mohammad Bakhtiar	Deputy Director Research	PDMA-KPK	0345-9410290	bakhtiar@pdma.gov.pk
15	Shahid Hussain Malik	Director	SDMA	0332-4455415	Shahidmalikcm01@gmail.com
16	Rasheed-Ud-Din	Deputy Director	GBDMA	0344-943047	rsanan@yahoo.com
17	Mr. Ikram Ullah Maznani	District DRM Coordinator	DDMA Dadu	03332668942	maz_ikram@hotmail.com , ikramullah.maznani@undppartners.org.pk
18	Omer Zaman Malik	District DRM Coordinator	DDMA Jhang	03339569999	omer.zamqn@undppartners.org.pk
19	Tamkeena Mansoor	District DRM Coordinator	DDMA Nowshera	0345-989797	tamkeenamansoor@yahoo.com
20	Mohammad Bakhtiar	Deputy Director Research	District Agriculture Department, Nowshera	0345-9410290	bakhtiar@pdma.gov.pk

LIST OF ANNEXURE

21	Amir Khan	Executive District Officer Agriculture	District Agriculture Department, Nowshera	0923-9220091, 0336-9067567	Nil
22	Dr. Wazahat Hussain	District Livestock Officer	District Livestock Department, Nowshera	0333-9615164	drwazahat@yahoo.com
23	Dr. Karim Bux Laghari	Additional Director , Agriculture	District Agriculture Department, Badin	03322210774	lagharikb@yahoo.com
24	Dr. Habib Ullah Jamali	Deputy Director , Livestock	District Livestock Department, Dadu	0312-4660129	dr.habibjamali@gmail.com
25	Dr. Behzad Ahmad Durrani	DDO Livestock	Livestock and Dairy Development, Muzaffargarh	0300-8086658	dlomgarh@livestockpunjab.gov.pk
26	Ghulam Mustafa	Deputy Director, Agriculture	District Agriculture Department, Gilgit	0343-5024234	mustafaglt@yahoo.com
27	Abdul Hamid	Deputy Director , Agriculture	District Agriculture Department ,Bagh	03006597972	0
28	Fakhre Alam	International Information Manager	FAO	0346-8544184	Fakhre.Alam@fao.org
29	Ali Gohar Khan	Deputy Project Manager	FAO	0346-8544176	ali.gohar@fao.org
30	Zohra Khanum	DRM Officer	FAO	0346-8544171	zohra.khanum@fao.org
31	Tahir Masood	Monitoring Officer	FAO	0346-8544226	tahir.masood@fao.org
32	Banaras Khan	Agronomist	FAO	0346-8544169	Banaras.Khan@fao.org
33	Mahjabeen Qazi	Provincial Coordinator KP	FAO	0345-8544125	Mahjabeen.Qazi@fao.org
34	Hina Ambreen	Regional Coordinator	FAO	0346-8544182	hina.ambreen@fao.org
35	Tariq Khalil	Irrigation Engineer	FAO	0345-8544127	Tariq.khalil@fao.org
36	Rehmatullah Khan	Irrigation Engineer	FAO	0346-8544148	rahatullah.khan@fao.org
37	Zia u Din	Irrigation Engineer	FAO	0345-8544130	Mian.Ziauddin@fao.org
38	Dr. Nomeena	National Nutrition Specialist	FAO	0346-8544210	Nomeena.Anis@fao.org
39	Abida Begum	Gender Specialist	FAO	0345-8544126	abida.begum@fao.org
40	Imtiaz Ahmed	Programme Officer/TS	FAO	0345-8544117	imtiaz.ahmed@fao.org
41	Azhar Mahmood	Provincial Coordinator KP	FAO	0345-8544115	azhar.mehmood@fao.org
42	Muhammad Akram Awan	Statistician	FAO	0334-5005168	akramawan53@hotmail.com

Annex 3: Group work guidelines

**Handout 1: DRM, agriculture and food security in Pakistan
Instructions for Group Work**

Timing of group work: 90 minutes followed by 60 minute plenary

Objectives:

- (a) List and prioritize major hazards affecting the province by district and by type (15 minutes)
- (b) Identify priorities for support in DRM with respect to the two most important hazards affecting the province (60 minutes).

Instructions

- (a) List and prioritize major hazards affecting the province by district and by type (15 minutes)
Ask participants to list all the major hazards which affect their province. Including: drought, riverine flood, flash flood, cyclone, landslide, hailstorm, snowstorm, earthquake, strong winds, and conflict.
For each hazard, which parts of the province (districts) are more exposed?
What are the two most important hazards in terms of losses and damage?

Hazard type	Districts most exposed / affected
Drought	
Riverine flood	
Flash flood	
Cyclone	
Landslide	
Hailstorm	
Earthquake	
Strong winds	
Conflict	
Other	

* Show the two most important hazards by putting a * next to them in the above table

(b) Identify priorities for support in DRM with respect to the two most important hazards affecting the province (60 minutes).

For each of the two most important hazards, what are the priorities for support in DRM for agriculture and food security? List all the aspects requiring support and indicate the **three most important elements** using the following tables:

LIST OF ANNEXURE

Hazard 1.....

DRM element	How well is it being covered (by Govt and/or UN and/or NGOs?*)	Is it a top priority for additional support? Y/N (3 elements ONLY)
Federal and provincial legislation and policies related to DRM in agriculture and food security		
Pre-hazard		
Pre-hazard risk and vulnerability assessment		
Prevention and mitigation activities: Technical (see presentation handout pp 8- 9)		
Prevention and mitigation activities: Socio-economic (see presentation handout pp 8 -9)		
Early warning systems		
Contingency planning		
Community and household preparedness		
Emergency Response and Rehabilitation		
Overall coordination between Govt, UN and NGOs in disaster response.		
Asset recovery interventions crops (see p14 of presentation handout)		
Asset recovery interventions livestock (see p14 of presentation handout)		
Livelihood rehabilitation interventions (e.g. seed fairs; cash for work; food for work; irrigation canal cleaning)		
Institutional support to re-establish government capacity		
Transition		
Building DRM capacity of disaster management bodies		
Building DRM capacity of agriculture bodies		

* Key: Very well covered = 5; well covered = 4; partly covered = 3; slightly covered = 2; poorly covered = 1.

Annex 4: Prioritization of five DRM Interventions from DRM elements (for all prioritized hazards)¹

Column (a) DRM element	Order of Priority (overall scoring)	Column (c) Issues and areas to be addressed (maximum 3 per element).
Pre-hazard		
Pre-hazard risk and vulnerability assessment	(Priority 1)	<ul style="list-style-type: none"> • Up gradation of hazard mapping • Requires base line data and more HLVs focusing on slides and land movement • Lack of planning and technical expertise • Lack of proper study regarding impact of drought on local communities • Need range land development authority • Donors commitment toward pre-hazard assessment • Disaster Risk Assessment (HLVs and HVCRA) done in three districts Astore Gilgit and Bagh • Studies for Attaabad, Khataro, Nailoi, Nalter Payeen, Hussain abad Hunza, Miyachar and Dain land slips • Dissemination of information
Federal and provincial legislation and policies related to DRM in agriculture and food security	(Priority 2)	<ul style="list-style-type: none"> • Need appropriate drought policy at provincial and National level • Lack of information on drought related technologies • Requires proper implementation strategy • Development of linkages between relevant stakeholders • No watershed/ Land Management policy • Non existence of policies and procedures and its enforcement at GB level • DRM not mainstreamed in agriculture and there is requirement of financial and other resources for its integration. • GBDMA recently established and needs to be strengthened • GBDMA DRM Plan not reviewed since 2008
Emergency Response and Rehabilitation		

²Flash floods: Balochistan, KP, AJK and GB, Riverine floods: KP, Punjab, Sindh, Drought: KP, Punjab, Balochistan, Sindh, FATA Landslides/Land movements: AJ&K and GB and conflict: FATA

LIST OF ANNEXURE

Overall coordination between Govt, UN and NGOs in disaster response.	(Priority 2)	<ul style="list-style-type: none"> • The coordination mechanism was developed on many levels, including policy, strategic and operational level through OCHA, UNDP, and cluster approach involving NGOs with FDMA, NDMA at federal and provincial levels. • Mechanisms to be developed to avoid duplications and identify right stakeholder for the right activity on the basis of technical expertise.
Pre-hazard		
Prevention and mitigation activities: Technical	(Priority 3)	<ul style="list-style-type: none"> • Needs water re-charging and soil /water conservation mechanism • Allocation of resources for resilient infrastructure development (water reservoirs, water harvesting structures and SPAT irrigation system) especially in areas prone of drought • Introduction of drought resistant crops, conservation agriculture like zero tillage and other technologies • Crop diversification and adaptation of best technologies like High efficiency irrigation technology (drip, sprinkler) • Introduction of alternate livelihoods resources • Capacity building of communities and relevant stakeholders Flood protection infrastructure, delay action dams and their maintenance • Flood protection infrastructure and their maintenance • A forestation/reforestation and soil conservation
Prevention and mitigation activities: Socio-economic	(Priority 3)	<ul style="list-style-type: none"> • Interest free credits the targeted group to generate resources for mitigation measures • Capacity building • Formation Business Marketing collectives • Creation of compensation funds by Government • Crop Insurance <p>Revival of forest/watershed management communities</p>
Contingency planning	(Priority 4)	<ul style="list-style-type: none"> • Livelihood vulnerability assessment and response strategies to be developed through HLVs. • Evacuation and management strategies and mechanisms to be developed for livestock in case of population displacement. • Develop strategic approach to address key issue on sustainable basis. • Policy level advocacy is required to include agriculture among priority relief response needs under the overall context of complex emergency situation • Development of separate contingency plans on drought • Allocation of resources • Ensure food security though stock piling • Preparation of Hazard Livelihoods vulnerability baselines at district level • No proper contingency planning with less focus on gender • No mitigation plan operative
Emergency Response and Rehabilitation		
Institutional support to re-establish government	(Priority	<ul style="list-style-type: none"> • Limited funding for agriculture sector recovery • Successful examples to be set at the local level for self replication.

Annex 5: Gaps and Priorities for DRM with respect to Hazards

5.1: Hazard 1. Flash Flood (Balochistan, Gilgit Baltistan, AJK, Sindh, Punjab, Khyber Pakhtunkhwa)

Column (a) DRM element	Order of Priority (overall scoring) ¹	Column (b) How well is it being covered (by Govt and/or UN and/or NGOs?*)	Column (c) Issues and areas to be addressed
Federal and provincial legislation and policies related to DRM in agriculture and food security	(Priority 1)	Balochistan-2 Sindh-2 Punjab-2, KP-2 AJ&K 2, GB 1	<ul style="list-style-type: none"> • Non existence of policies and procedures and its enforcement at national and provincial level • Lack of information regarding policies/procedures to various stakeholders • Absence/Enforcement of policies • Political/Bureaucratic Influence • DRM not mainstreamed in agriculture and there is requirement of financial and other resources for its integration.
Pre-hazard			
Pre-hazard risk and vulnerability assessment	(Priority 2)	Balochistan-1 Sindh 3 Punjab-2 KP-3 AJ&K-2, GB-2	<ul style="list-style-type: none"> • HLVs not conducted for all hazard prone districts • Joint assessments and regular information sharing • Proper DRM Planning and capacity issues • Secondary data is not reliable and also out of date • Donors commitment toward pre-hazard assessment
Prevention and mitigation activities: Socio-economic (see presentation handout pp 8 -9)	(Priority 3)	Balochistan-2 Sindh-3 Punjab-3 KP-3 AJ&K-2, GB-3	<ul style="list-style-type: none"> • Crop insurance • Cash grants and calamities funds allocation • Diversified livelihood opportunities • Capacity building of farmers • Financial assistance for conversion of barren lands to agricultural lands • Allocation of funds for rehabilitation and re construction of productive infrastructure related to agriculture
Contingency planning	(Priority 4)	Balochistan-2 Sindh-3 Punjab-4 KP-4 AJ&K-3, GB-3	<ul style="list-style-type: none"> • HLVs coverage in all districts which embeds contingency planning as an integral part • Capacity building of various stakeholders in performing the assigned responsibilities in contingency plans • Donors' commitment for contingency planning exercises. • Sector specific detailed contingency plans

³Overall score is the aggregate score of each province priority

LIST OF ANNEXURE

Emergency Response and Rehabilitation			
Institutional support to re-establish government capacity	(Priority 5)	Balochistan-2, Sindh-3 Punjab-4, KP-2, AJ&K-1 GB-1	<ul style="list-style-type: none"> • Technical capacity building • Technical HR support • Lack of funds/infrastructure • Absence of Nationwide ICT components • Inter departmental issues

* Key: Very well covered = 5; well covered = 4; partly covered = 3; slightly covered = 2; poorly covered = 1.

5.2: Hazard Drought (Baluchistan, Sindh, Punjab, KP, FATA)

Column (a) DRM element	Order of Priority (overall scoring)	Column (b) How well is it being covered (by Govt and/or UN and/or NGOs?*)	Column (c) Issues and areas to be addressed (maximum 3 per element).
Pre-hazard			
Pre-hazard risk and vulnerability assessment	(Priority 1)	Balochistan-2 Sindh-1 Punjab 1, KPK-1, FATA 3	<ul style="list-style-type: none"> • Need hazard mapping • Requires base line data • Lack of planning and technical expertise • Lack of proper study regarding impact of drought on local communities • Need range land development authority • Donors commitment toward pre-hazard assessment
Federal and provincial legislation and policies related to DRM in agriculture and food security	(Priority 2)	Balochistan-2 Sindh-1 Punjab= 1, KPK-2, FATA -4	<ul style="list-style-type: none"> • Need appropriate drought policy at provincial and National level • Lack of information on drought related technologies • Requires proper implementation strategy • Development of linkages between relevant stakeholders
Pre-hazard			
Prevention and mitigation activities: Technical (see presentation handout pp 8- 9)	(Priority 3)	Balochistan-2 Sindh-1 Punjab= 1, KPK-2, FATA -2	<ul style="list-style-type: none"> • Needs water re-charging and soil /water conservation mechanism • Allocation of resources for resilient infrastructure development (water reservoirs, water harvesting structures and SPAT irrigation system) especially in areas prone of drought • Introduction of drought resistant crops, conservation agriculture like zero tillage and other technologies • Crop diversification and adaptation of best technologies like High efficiency irrigation technology (drip, sprinkler) • Introduction of alternate livelihoods resources • Capacity building of communities and relevant stakeholders Flood protection infrastructure, delay action dams and their maintenance • Flood protection infrastructure and their maintenance • A forestation/reforestation and soil conservation
Contingency planning	(Priority 4)	Balochistan-2 Sindh-1 Punjab= 1,	<ul style="list-style-type: none"> • Development of separate contingency plans on drought • Allocation of resources

5.3: Hazard 3.Land Slides/Land movements (Azad Jammu and Kashmir, Gilgit Baltistan)

Column (a) DRM element	Order of Priority (overall scoring)	Column (b) How well is it being covered (by Govt and/or UN and/or NGOs?*)	Column (c) Issues and areas to be addressed (maximum 3 per element).
Pre-hazard			
Pre-hazard risk and vulnerability assessment	(Priority 1)	AJ&K 2 GB 2	<ul style="list-style-type: none"> • Disaster Risk Assessment (HLVs and HVCRA) done in three districts Astore Gilgit and Bagh • Up gradation of hazard mapping • More HLVs focusing on slides and land movement • Studies for Attaabad, Khataro, Nailoi, Nalter Payeen, Hussain abad Hunza, Miyachar and Dain land slips • Dissemination of information
Federal and provincial legislation and policies related to DRM in agriculture and food security	(Priority 2)	AJ&K-4 GB -1	<ul style="list-style-type: none"> • No watershed/ Land Management policy • Non existence of policies and procedures and its enforcement at GB level • DRM not mainstreamed in agriculture and there is requirement of financial and other resources for its integration. • GBDMA recently established and needs to be strengthened • GBDMA DRM Plan not reviewed since 2008
Pre-hazard			
Prevention and mitigation activities: Socio-economic (see presentation handout pp 8 -9)	(Priority 3)	AJ&K 2 GB 1	<ul style="list-style-type: none"> • Interest free credits the targeted group to generate resources for mitigation measures • Capacity building • Formation Business Marketing collectives • Creation of compensation funds by Government • Crop Insurance • Revival of forest/watershed management communities
Contingency planning	(Priority 4)	AJ&K 4 GB 1	<ul style="list-style-type: none"> • .No proper contingency planning with less focus on gender • No mitigation plan operative • Allocation of resource
Emergency Response and Rehabilitation			
Livelihood rehabilitation interventions (e.g. seed fairs; cash for work; food for work; irrigation canal cleaning)	(Priority 5)	AJ&K-2 GB-2	<ul style="list-style-type: none"> • Allocation of alternate land in case of sudden disaster situation • Seed and Fertilizer provision • Irrigation channels rehabilitation

5.4: Hazard 4.Conflict (complex) - FATA

Column (a) DRM element	Order of Priority (overall scoring)	Column (b) How well is it being covered (by Govt and/or UN and/or NGOs?*)	Column (c) Issues and areas to be addressed (maximum 3 per element).
Pre-hazard			
Contingency planning	01	01	<ul style="list-style-type: none"> • Livelihood vulnerability assessment and response strategies to be developed through HLVs. • Evacuation and management strategies and mechanisms to be developed for livestock in case of population displacement. • Develop strategic approach to address key issue on sustainable basis. • Policy level advocacy is required to include agriculture among priority relief response needs under the overall context of complex emergency situation
Emergency Response and rehabilitation			•
Overall coordination between Govt, UN and NGOs in disaster response.	02	04	<ul style="list-style-type: none"> • The coordination mechanism was developed on many levels, including policy, strategic and operational level through OCHA, UNDP, and cluster approach involving NGOs with FDMA, NDMA at federal and provincial levels. • Mechanisms to be developed to avoid duplications and identify right stakeholder for the right activity on the basis of technical expertise.
Livelihood rehabilitation interventions (e.g. seed fairs; cash for work; food for work; irrigation canal cleaning)	03	02	<ul style="list-style-type: none"> • Limited funding for agriculture sector recovery. • Successful examples to be set at the local level for self replication.
Institutional support to re-establish government capacity	04	02	<ul style="list-style-type: none"> • Limited funding for agriculture sector recovery • Successful examples to be set at the local level for self replication. • Building communities resilience capacities through CBDRM • Prioritization of support to be extended to government institutions in the presence of FATA secretariat, FDMA, NDMA.
Transition			•
Building DRM capacity of disaster management bodies	05	02	<ul style="list-style-type: none"> • Limited funding • Limited technical capacities in the sector among key stakeholders

Annex 6: Priorities Hazard Wise

6.1: Hazard 1. Flash Flood (Balochistan, Gilgit Baltistan, AJK, Sindh, Punjab, Khyber Pakhtunkhwa)

Column (a) DRM element	Column (b) How well is it being covered (by Govt and/or UN and/or NGOs?*)	Column (c) Issues and areas to be addressed (maximum 3 per element).
Federal and provincial legislation and policies related to DRM in agriculture and food security	Balochistan-2 Sindh-2 Punjab-2, KP-2 AJ&K 2, GB 1	<ul style="list-style-type: none"> • Non existence of policies and procedures and its enforcement at national and provincial level • Lack of information regarding policies/procedures to various stakeholders • Absence/Enforcement of policies • Political/Bureaucratic Influence • DRM not mainstreamed in agriculture and there is requirement of financial and other resources for its integration.
Pre-hazard		
Pre-hazard risk and vulnerability assessment	Balochistan-1 Sindh 3 Punjab-2 KP-3 AJ&K-2 GB-2	<ul style="list-style-type: none"> • HLVs not conducted for all hazard prone districts • Joint assessments and regular information sharing • Proper DRM Planning and capacity issues • Secondary data is not reliable and also out of date • Donors commitment toward pre-hazard assessment
Prevention and mitigation activities: Technical (see presentation handout pp 8- 9)	Balochistan-2 Sindh-2 Punjab-3 KP-2 AJ&K-2, GB-3	<ul style="list-style-type: none"> • Flood protection infrastructure, delay action dams and their maintenance • Rehabilitation of water ways • Deforestation and soil conservation • Capacity building of communities and relevant stakeholders • Removal of encroachments from natural water ways
Prevention and mitigation activities: Socio-economic (see presentation handout pp 8 -9)	Balochistan-2 Sindh-3 Punjab-3 KP-3 AJ&K-2, GB-3	<ul style="list-style-type: none"> • Crop insurance • Cash grants and calamities funds allocation • Diversified livelihood opportunities • Capacity building of farmers • Financial assistance for conversion of barren lands to agricultural lands • Allocation of funds for rehabilitation and re construction of productive infrastructure related to agriculture
Early warning system	Balochistan-1 Sindh-3 Punjab-4 KP-2 AJ&K-3 GB-3	<ul style="list-style-type: none"> • Technical and material support to the relevant departments • Absence of EWS at community level • Effective weather forecasting on regional basis • System of disseminating the information to general masses. • Lack of trusted data/information • Lack of coordination among various stakeholders including communities, government

LIST OF ANNEXURE

Contingency planning	Balochistan-2 Sindh-3 Punjab-4 KP-4 AJ&K-3, GB-3	<ul style="list-style-type: none"> • HLVs coverage in all districts which embeds contingency planning as an integral part • Capacity building of various stakeholders in performing the assigned responsibilities in contingency plans • Donors' commitment for contingency planning exercises. • Sector specific detailed contingency plans
Emergency Response and Rehabilitation		
Overall coordination between Govt, UN and NGOs in disaster response.	Balochistan-3 Sindh-4 Punjab-4 KP-4 AJ&K-3, GB-2	<ul style="list-style-type: none"> • Coordination between various stakeholders is limited to information sharing only, it should be planning till implementation • Joint operations • Continuity of coordination from relief to development should continue • Coordination gap between provincial and district level
Asset recovery interventions crops (see p14 of presentation handout)	Balochistan-2 Sindh-1 Punjab-2 KP-5 AJ&K-2 GB-2	<ul style="list-style-type: none"> • Seeds and other related agri inputs • Land preparation • Support for horticulture sector • Procedure for payments of compensation too complicated. • No system for verification of wrong beneficiaries selection or missing potential beneficiaries • Overlapping and duplication • Procedure for payments of compensation too complicated. • Support for rehabilitation of horticulture sector(pome and stone fruits, off-season vegetables, peas, tomato and capsicum) • Provision of potato certified seed and seed sellers
Asset recovery interventions livestock (see p14 of presentation handout)	Balochistan-1 Sindh-1 Punjab-2 KP-2 AJ&K-2, GB-2	<ul style="list-style-type: none"> • Livestock restocking • Cash grants • Evacuation of livestock • Availability of vaccines, dewormers and medicines • Provision of livestock feed and trainings by line departments
Livelihood rehabilitation interventions (e.g. seed fairs; cash for work; food for work; irrigation canal cleaning)	Balochistan-1 Sindh-1 Punjab-3 KP-3 AJ&K-2, GB-2	<ul style="list-style-type: none"> • Cash for work • Irrigation infrastructure • Diversified livelihood opportunities • Breeds improvement • Best practices should be replicated • No Beneficiaries data • Improper & mismanaged distribution

LIST OF ANNEXURE

Institutional support to re-establish government capacity	Balochistan-2, Sindh-3, Punjab-4, KP-2, AJ&K-1, GB-1	<ul style="list-style-type: none"> • Technical capacity building • Technical HR support • Lack of funds/infrastructure • Absence of Nationwide ICT components • Inter departmental issues
Transition		
Building DRM capacity of disaster management bodies	Balochistan-2, Sindh-3, Punjab-3, KP-3, AJ&K-1, GB-1	<ul style="list-style-type: none"> • Capacity (HR, material, financial) • Weak institutional arrangements/structures • Special unit of DRM in agriculture
Building DRM capacity of agriculture bodies	Balochistan-1, Sindh-1, Punjab-1, KP-1, AJ&K-3, GB-1	<ul style="list-style-type: none"> • Capacity (HR, material, financial) • DRM not part of ADP • Capacity of NRM department • Donors commitment for agricultural DRM

* Key: Very well covered = 5; well covered = 4; partly covered = 3; slightly covered = 2; poorly covered = 1.

6.2: Hazard Drought (Baluchistan, Sindh, Punjab, KP, FATA)

Column (a) DRM element	Column (b) How well is it being covered (by Govt and/or UN and/or NGOs?*)	Column (c) Issues and areas to be addressed (maximum 3 per element).
Federal and provincial legislation and policies related to DRM in agriculture and food security	Balochistan-2 Sindh-1 Punjab= 1, KPK-2, FATA -4	<ul style="list-style-type: none"> • Need appropriate drought policy at provincial and National level • Lack of information on drought related technologies • Requires proper implementation strategy • Development of linkages between relevant stakeholders
Pre-hazard		
Pre-hazard risk and vulnerability assessment	Balochistan-2 Sindh-1 Punjab 1, KPK-1, FATA 3	<ul style="list-style-type: none"> • Need hazard mapping • Requires base line data • Lack of planning and technical expertise • Lack of proper study regarding impact of drought on local communities • Need range land development authority • Donors commitment toward pre-hazard assessment
Prevention and mitigation activities: Technical (see presentation handout pp 8- 9)	Balochistan-2 Sindh-1 Punjab= 1, KPK-2, FATA -2	<ul style="list-style-type: none"> • Needs water re-charging and soil /water conservation mechanism • Allocation of resources for resilient infrastructure development (water reservoirs, water harvesting structures and SPAT irrigation system) especially in areas prone of drought • Introduction of drought resistant crops, conservation agriculture like zero tillage and other technologies • Crop diversification and adaptation of best technologies like High efficiency irrigation technology (drip, sprinkler) • Introduction of alternate livelihoods resources • Capacity building of communities and relevant stakeholders Flood protection infrastructure, delay action dams and their maintenance • Flood protection infrastructure and their maintenance • A forestation/reforestation and soil conservation
Early warning systems	Balochistan-1 Sindh-1 Punjab= 1, KPK-1, FATA -4	<ul style="list-style-type: none"> • Strengthening of Metrological Dept. • Establishment of drought early warning systems • Dissemination of information amongst relevant stakeholders • Awareness raising amongst communities and CBDRM • Capacity building of relevant stakeholders
Contingency planning	Balochistan-2 Sindh-1 Punjab= 1, KPK-1 , FATA -3	<ul style="list-style-type: none"> • Development of separate contingency plans on drought • Allocation of resources • Ensure food security though stock piling • Preparation of Hazard Livelihoods vulnerability baselines at district level

LIST OF ANNEXURE

Community and household preparedness	Balochistan-2 Sindh-1 Punjab= 1 KPK-1 FATA -1	<ul style="list-style-type: none"> • Awareness raising on preparedness at HH and community level, • Introduction of diversified livelihoods opportunities and capacity building of communities in kitchen gardening, backyard poultry farming, dairy and honey bee keeping etc. • Capacity building of communities on effective utilization of water and other non renewable resources • Introduction of Gender focused water/ soil conservation technologies
Emergency Response and Rehabilitation		
Asset recovery interventions crops (see p14 of presentation handout)	Balochistan-1 Sindh-1, Punjab- 1 KPK-1, FATA -2	<ul style="list-style-type: none"> • Introduction of new crop/ vegetable/ plant varieties having drought resistance traits • Crop diversification and conservation • Introduction of new water saving technologies for crops • Provision of livestock feed as its life saving activities • Restocking of livestock
Asset recovery interventions livestock (see p14 of presentation handout)	Balochistan-1 Sindh-1 Punjab= 1 KPK-2, FATA -2	<ul style="list-style-type: none"> • Provision of livestock feed, fodder, medicines and trainings to the communities • Improvement of rangelands through introduction of new varieties adoptable to local climatic conditions • Restocking of small ruminants with appropriate breeds adoptable to local area
Livelihood rehabilitation interventions (e.g. seed fairs; cash for work; food for work; irrigation canal cleaning)	Balochistan-2 Sindh-1 Punjab-1, KPK-1 FATA -2	<ul style="list-style-type: none"> • Capacity building on alternate livelihoods opportunities • CFW/FFW programme for Tree plantation/range management /soil and water conservation activities • Improvement of irrigation / on farm water management system
Transition		
Building DRM capacity of agriculture bodies	Balochistan-1 Sindh-1, Punjab-1 KPK-1, FATA -2	<ul style="list-style-type: none"> • Coordination needs to be strengthened • DRM concept is new and need capacity building of all actors • Needs proper preparedness interventions before drought gets happened • Special unit of DRM in agriculture at Provincial level and district level • Agricultural DRM should be in the ADP • Capacity (HR, material, financial) • Strengthening of institutional arrangements/structures

* Key: Very well covered = 5; well covered = 4; partly covered = 3; slightly covered = 2; poorly covered = 1.

6.3: Hazard 3.Land Slides/Land movements¹ (Azad Jammu and Kashmir, Gilgit Baltistan)

Column (a) DRM element	Column (b) How well is it being covered (by Govt and/or UN and/or NGOs?*)	Column (c) Issues and areas to be addressed (maximum 3 per element).
Federal and provincial legislation and policies related to DRM in agriculture and food security	AJ&K-4 GB -1	<ul style="list-style-type: none"> • No watershed/ Land Management policy • Non existence of policies and procedures and its enforcement at GB level • DRM not mainstreamed in agriculture and there is requirement of financial and other resources for its integration. • GBDMA recently established and needs to be strengthened • GBDMA DRM Plan not reviewed since 2008
Pre-hazard		
Pre-hazard risk and vulnerability assessment	AJ&K 2 GB 2	<ul style="list-style-type: none"> • Disaster Risk Assessment (HLVs and HVCRA) done in three districts Astore Gilgit and Bagh • Up gradation of hazard mapping • More HLVs focusing on slides and land movement • Studies for Attaabad, Khataro, Nailoi, Nalter Payeen, Hussain abad Hunza, Miyachar and Dain land slips • Dissemination of information
Prevention and mitigation activities: Technical (see presentation handout pp 8- 9)	AJ&K 2 GB 1	<ul style="list-style-type: none"> • More soil conservation works need (Check dams, Gabion structures, Plantations, Water Harvesting Structures) • Provision of fast growing seedlings for land stabilization • Capacity building of the targeted communities for landslips and slides stabilization

⁴Only in Gilgit Baltistan

LIST OF ANNEXURE

Prevention and mitigation activities: Socio-economic (see presentation handout pp 8 -9)	AJ&K 2 GB 1	<ul style="list-style-type: none"> • Interest free credits the targeted group to generate resources for mitigation measures • Capacity building • Formation Business Marketing collectives • Creation of compensation funds by Government • Crop Insurance • Revival of forest/watershed management communities
Contingency planning	AJ&K 4 GB 1	<ul style="list-style-type: none"> • .No proper contingency planning with less focus on gender • No mitigation plan operative • Allocation of resource
Community and household preparedness	AJ&K 3 GB 1	<ul style="list-style-type: none"> • Awareness campaign regarding the hazard • Training for preparedness • Evacuation of vulnerable population • Strengthening of CBDRM component of DRM
Emergency Response and Rehabilitation		
Overall coordination between Govt, UN and NGOs in disaster response.	AJ&K 3 GB 1	<ul style="list-style-type: none"> • Lack of coordination amongst the key stakeholders and services provide • Lack of proper implementation strategy
Livelihood rehabilitation interventions (e.g. seed fairs; cash for work; food for work; irrigation canal cleaning)	AJ&K-2 GB-2	<ul style="list-style-type: none"> • Allocation of alternate land in case of sudden disaster situation • Seed and Fertilizer provision • Irrigation channels rehabilitation • Restocking of livestock • Promotion of new livelihood options
Institutional support to re-establish government capacity	AJ&K-3 GB-1	<ul style="list-style-type: none"> • Training on control of Land slides • Provision of human and financial resources • Training need identification • Technical support to departments
Transition		
Building DRM capacity of disaster management bodies	AJ&K-2 GB -1	<ul style="list-style-type: none"> • DRM preparedness • Capacity building at all level starting from community level • Trained DRM Team with the GBDMA and DDMA is required.
Building DRM capacity of agriculture bodies	AJ&K-2 GB -1	<ul style="list-style-type: none"> • DRM preparedness • Capacity building of NRM related departments.

* Key: Very well covered = 5; well covered = 4; partly covered = 3; slightly covered = 2; poorly covered = 1.

6.4: Hazard 4.Conflict (complex) - FATA

Column (a) DRM element	Column (b) How well is it being covered (by Govt and/or UN and/or NGOs?*)	Column (c) Issues and areas to be addressed (maximum 3 per element).
Federal and provincial legislation and policies related to DRM in agriculture and food security	03	<ul style="list-style-type: none"> • Policy covering some partial aspect is available. • Support in comprehensive policy formulation is required involving FDMA and FATA secretariat. • Clear Implementation guidelines are also required to be elaborated.
Pre-hazard		
Pre-hazard risk and vulnerability assessment	01	<ul style="list-style-type: none"> • No assessment was carried out. • The secondary data outdated and incomplete. • Post Conflict Need Assessment was carried out after the hazard.
Prevention and mitigation activities: Technical (see presentation handout pp 8-9)	01	<ul style="list-style-type: none"> • Security was an ongoing issue, thus hindering systematic response approach. • Lack of systematic coordination among various stakeholders (military, government, humanitarian, affected communities). • Lack of technical knowledge on response approach to DRM.
Prevention and mitigation activities: Socio-economic (see presentation handout pp 8 -9)	01	<ul style="list-style-type: none"> • Limited opportunities at local level for diversification of livelihood opportunities. • Limited external support extended to FATA to expand their social and economic opportunities and skills. • There is good potential/opportunity for diversifying farming activities and enterprise development, but not properly exploited.
Early warning systems	01	<ul style="list-style-type: none"> • There is no proper formal or informal system prevailing.
Contingency planning	01	<ul style="list-style-type: none"> • Livelihood vulnerability assessment and response strategies to be developed through HLVs. • Evacuation and management strategies and mechanisms to be developed for livestock in case of population displacement. • Develop strategic approach to address key issue on sustainable basis. • Policy level advocacy is required to include agriculture among priority relief response needs under the overall context of complex emergency situation
Community and household preparedness	01	<ul style="list-style-type: none"> • Communities were not prepared and lost their very valuable assets. • Weak social and economic coping mechanisms.

LIST OF ANNEXURE

Emergency Response and rehabilitation		
Overall coordination between Govt, UN and NGOs in disaster response.	04	<ul style="list-style-type: none"> • The coordination mechanism was developed on many levels, including policy, strategic and operational level through OCHA, UNDP, and cluster approach involving NGOs with FDMA, NDMA at federal and provincial levels. • Mechanisms to be developed to avoid duplications and identify right stakeholder for the right activity on the basis of technical expertise.
Asset recovery interventions crops (see p14 of presentation handout)	02	<ul style="list-style-type: none"> • Limited funding for agriculture as it is not identified as an important relief and response activity. • Develop strategic approach to address key issue on sustainable basis. • Policy level advocacy is required to include agriculture among priority relief response needs under the overall context of complex emergency situation.
Asset recovery interventions livestock (see p14 of presentation handout)	02	<ul style="list-style-type: none"> • Evacuation and management mechanisms and strategies to be developed for managing livestock in case of population displacement. • Develop strategic approach to address key issue on sustainable basis in recovery stage. • Policy level advocacy is required to identify agriculture (livestock) as an important relief and response activity
Livelihood rehabilitation interventions (e.g. seed fairs; cash for work; food for work; irrigation canal cleaning)	02	<ul style="list-style-type: none"> • Limited funding for agriculture sector recovery. • Successful examples to be set at the local level for self replication.
Institutional support to re-establish government capacity	02	<ul style="list-style-type: none"> • Limited funding for agriculture sector recovery • Successful examples to be set at the local level for self replication. • Building communities resilience capacities through CBDRM • Prioritization of support to be extended to government institutions in the presence of FATA secretariat, FDMA, NDMA.
Transition		
Building DRM capacity of disaster management bodies	02	<ul style="list-style-type: none"> • Limited funding • Limited technical capacities in the sector among key stakeholders
Building DRM capacity of agriculture bodies	01	<ul style="list-style-type: none"> • Limited funding • Limited technical capacities in the sector stakeholders. • Lack of agriculture sector analysis on the basis of DRM

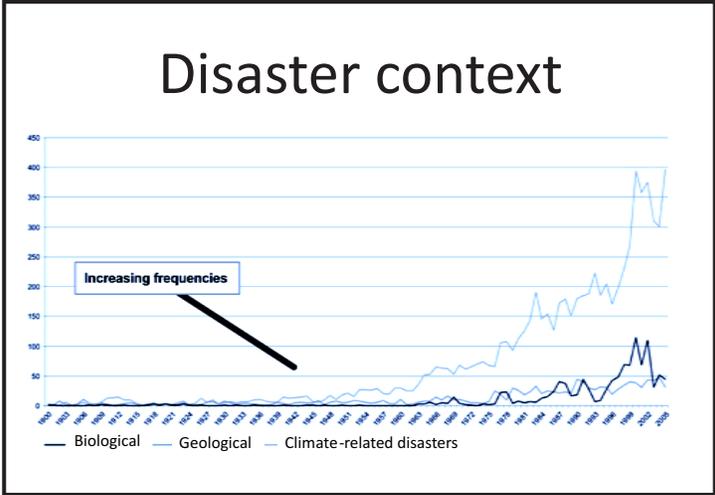
* Key: Very well covered = 5; well covered = 4; partly covered = 3; slightly covered = 2; poorly covered = 1.

Annex 7: Presentations

7.1: Disaster Risk Management in Agriculture and Food Security: Concepts and Application

Disaster Risk Management in Agriculture and Food Security: Concepts and Applications

Workshop on Disaster Risk Management in Agriculture and Food Security: Marriot Hotel, Islamabad
07 – 08 February 2012



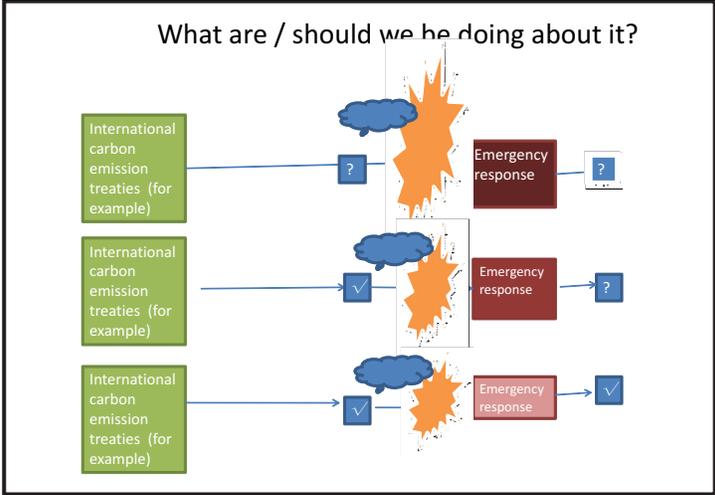
Agriculture, food security and livelihoods are affected by multiple threats

Natural disasters

Complex and Protracted

Social and economic crisis

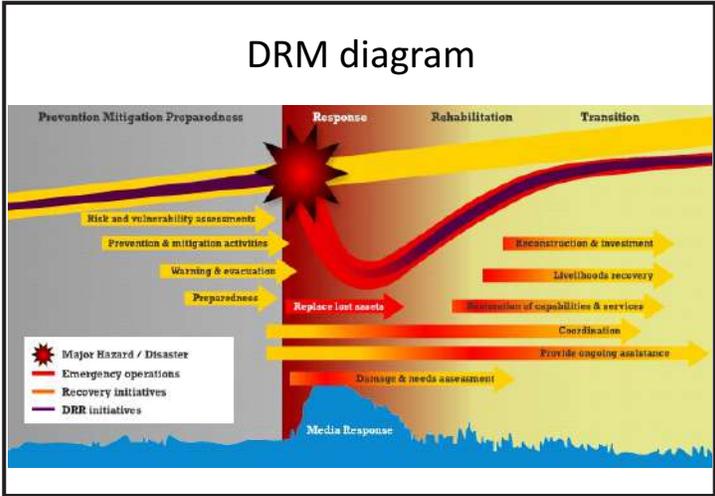
Food chain emergencies



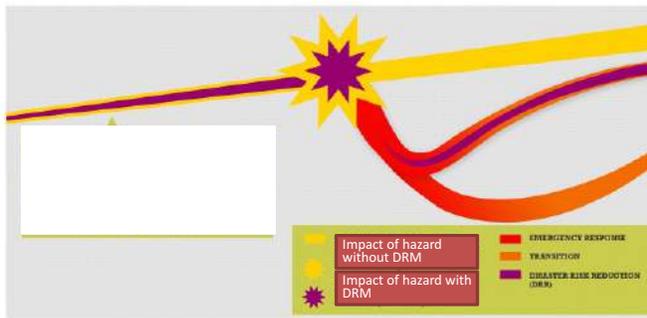
Definitions

- What is DRM?
- The scope of DRM is contested...
- 1) prevention, mitigation and preparedness,
- 2) response and rehabilitation and
- 3) transition to development.

What is DRM in the context of agriculture and food security?



The benefits of DRM



Architectural issues

- **Policy aspects:** “the rules of the game”
- **Institutional and coordination aspects:** “the officiating bodies, the match officials, the players”
- **Technical and operational aspects:** “the quality of play” (focus of the diagram).

Policy aspects

- International treaties and agreements
- Transboundary agreements for watershed management and control of animal and plant diseases
- National legislations and policies related to agriculture:
 - Frameworks to control land degradation and desertification
 - Voluntary instruments for sustainable forestry, water and coastal management

Institutional and coordination aspects

- National, Provincial and District level government bodies (e.g. NDMA, PDMAs, DDMA; Ministry of Food Security and Research, Agriculture departments at Provincial and District levels).
- Non-state actors: UN, Food security cluster, INGOs, NGOs.

Technical and operational aspects

- The “what” of the DRM spectrum, with a focus on the before, during and after disaster phases (i.e. in reasonably close proximity to the disaster) – main focus of the rest of the presentation.

Main Pre-Hazard activities in DRM for Food Security and Agriculture

Pre – Hazard Activities: Assessment, Prevention, Mitigation and Preparedness

- **Risk and vulnerability assessment:** foundation for all DRR activities at local level. 3 elements:
- Hazard assessment and mapping;
- Livelihood assessment;
- Exposure and vulnerability assessment (including coping capacities and strategies).

Pre-Hazard Activities: Assessment, Prevention, Mitigation and Preparedness

- **Prevention and Mitigation**
- Take place pre and post-disaster – thus on-going “way of doing things”.
- Planning is essential.
- Activities for prevention can be drastic: planned (and unplanned) relocation of populations.
- Other activities can be mitigatory or preventative (depending on success / coverage).

Prevention and Mitigation (cont.)

Examples:

A. Technical: Crops, Fisheries, Forestry, Livestock

- Drought/saline/flood tolerant crops;
- Cropping system and cultivation method changes (adjust crops and cropping calendars, soil conservation);
- Raised storage facilities ; raised seed beds; windbreaks; firebreaks.
- Erosion control structures; check dams; clearing of drainage systems and canals.
- Strategic fodder reserves; seed reserves
- Afforestation, reforestation

Prevention and Mitigation (cont.)

Examples:

B. Socio-economic

- Risk sharing and transfer instruments;
- Crop/livestock/aquaculture insurance
- Compensation and calamity funds
- Micro-credit and cash transfers

Prevention and Mitigation (cont.)

Examples:

B. Socio-economic (cont.)

- Livelihood diversification;
- Small-scale enterprise development
- Diversifying farming activities

4/ BUILD RESILIENCE

Mitigation, prevention and building resilience with technologies, approaches and practices in agricultural sectors

Agriculture	Livestock	Fisheries
<ul style="list-style-type: none"> • Conservation agriculture • Crop diversification • Appropriate crop selection (drought/saline/flood tolerant) • Adjust cropping calendars • Local seed multiplication systems 	<ul style="list-style-type: none"> • Fodder conservation • Proofing of storage facilities and livestock shelters. • Resilient animal breeding • Pest management to cope with threats 	<ul style="list-style-type: none"> • Adoption of ecosystem-based approach • Implementation of the Code of conduct for responsible fisheries • Sustainable livelihoods approaches/diversification • Support to the development of financial mechanisms, such as insurance
Water	Land	Forests
<ul style="list-style-type: none"> • Rainwater harvesting, conservation & storage • Water reserves to buffer droughts 	<ul style="list-style-type: none"> • Restoration of degraded lands • Land use/access, tenure & territorial planning • Land and soil management 	<ul style="list-style-type: none"> • Forest pests prevention • Agro-forestry • Integrated Fire Management • Afforestation / reforestation • Catchment area Mgt

Preparedness

- Preparedness measures taken in advance of an expected hazard to prepare for and reduce the potential adverse impacts of the hazard
- Three key components:
 - 1. Early Warning Systems**
 - 2. Contingency Planning**
 - 3. Community and Household Preparedness**

Early Warning Systems

- May be specific to the type of hazard – examples;
- *International and National Weather based for climatic hazards* – e.g. FEWSNet, NASA, SUPARCO hydrological and climate forecasts;
- *Transboundary animal pests and disease* (the Emergency System for Transboundary Animal and Plant Pests).
- Tsunami warning systems

Contingency Planning

- *A process, in anticipation of potential crises, of developing strategies, arrangements and procedures to address the needs of those adversely affected by crises.*
- Choulerton R. “Contingency Planning and Humanitarian Action: A review of practice” – HPN Network Paper 59, March 2007.
- **“Supply side”**: Capacities, procedures, SOPs, lines of command etc.
- **“Demand side”**: An estimate of likely need based on scenarios, assumptions, populations at risk, livelihoods and vulnerabilities

Community and Household Preparedness

- Village level contingency planning
- Information and procedures for evacuation of people and animals to safe places
- Stockpiling of food, water and feed.

FAO DRR Framework Programme



Key elements of DRM sensitive Response and Rehabilitation programming in food security and agriculture

“Building Back Better”

- " ...throughout the world, we must work harder in the recovery stage to avoid reinstating unnecessary vulnerability to hazards. As I have often said, "building back better" means making sure that, as you rebuild, you leave communities safer than they were before disaster struck."
- - Bill Clinton, UN Secretary-General's Special Envoy for Tsunami Recovery, Dec 26 2006.

Key elements of Response and Rehabilitation

- Focus on the rapid protection and restoration of the food security, nutrition and livelihoods of vulnerable households.
- Foundation for all programming = agricultural and livelihood recovery needs assessments– in partnership with government: rapid and immediate (cluster); Rehabilitation focus (eg PDNA).
- For large emergencies, other major assessments required– e.g. Detailed Livelihood Assessment– 1 year after floods.

Key elements of Response and Rehabilitation

- Two basic elements for programming:
- (a) Asset recovery (livelihood protection): through either direct distribution of seeds, fertilisers, livestock, pumps, fodder, fishing gear etc or through indirect asset recovery via voucher schemes or cash.
- (b) Livelihood rehabilitation: Generally following (a) but not always. More complex interventions e.g. seed fairs; seed multiplication

Key elements of Response and Rehabilitation (cont.)

- Institutional strengthening can be a part of the rehabilitation – transition continuum e.g re-establishment of technical and organizational capacity of extension services for livestock, crops and fisheries.

Programming for DRM-sensitive Transition and Linkages to Development

Transition and Linkages to Development

- “Building Back Better ” moves from a focus on technical and socio-economic interventions to a focus on institutional strengthening and building capacity of government and non-government institutions.
- EXAMPLES:
- Post-tsunami programming in coastal areas aiming at strengthening traditional community institutions for resource and conflict– management and co-management with government (3 year funding horizon).
- EU Food Facility in Afghanistan focusing on strengthening domestic seed industry– seed production; certification and distribution.

Transition programming (cont.)

- Iraq: supporting development of legislation, infrastructure and marketing to enable inland fisheries to meet domestic demand.
- Southern Sudan: strengthening governments human and organisational capacities to generate and use data for food security related policies and programmes.
- Sahel: support to management of locust early warning systems

Summary and Key Questions

- DRM in agriculture and food security has a broad spectrum of activities.
- Three key elements:
 - Pre-hazard activities: prevention, mitigation, preparedness
 - Post – hazard response and rehabilitation
 - Transition
- Each element should be preceded by robust evidence base derived from assessments (pre-disaster risk assessment; post disaster needs and recovery assessments)

Summary and Key Questions

- DRR and “Building Back Better” in technical and institutional senses are core cross-cutting themes which need to be engineered into all actions.
- In many cases, urgency of emergency response “crowds out” sustainability and BBB.
- Institutional strengthening may be left behind..

Summary and Key Questions

- What aspects of DRR are working well in Pakistan?
- Where are the weaknesses?
- Looking forward, what are the key priorities at National, Provincial, District and Community levels?

THANK YOU

Hazard Livelihood and Vulnerability Baseline and Contingency Plans in Pakistan

Workshop on Disaster Risk Management in Agriculture and Food Security: Marriot Hotel, Islamabad
07 – 08 February 2012

BACKGROUND

1. Background to HLVs

- Started as a pilot project in 2007/08. Five districts, each prone to different kinds of hazards:

Province	District	Main natural hazards
Sindh	Badin	Monsoon flood and cyclone
Sindh	Tharparkar	Drought
Punjab	Rajanpur	Riverine flood, flash flood
AJK	Bagh	Earthquake, landslide, flash flood, snow, windstorm
Northern Areas	Astore	Glacial outburst, landslide, flash flood, snow, windstorm

1. Background to HLVs

- Since then a number of other districts have been covered with several more planned during 2012.
- Districts covered:**
- Districts planned (minimum):**

What are HLVs?

- District level, livelihood based, disaster contingency plans.
- Part of preparedness, combining risk and vulnerability assessment with contingency planning.
- Districts selected through consultations with NDMA

What are HLVs?

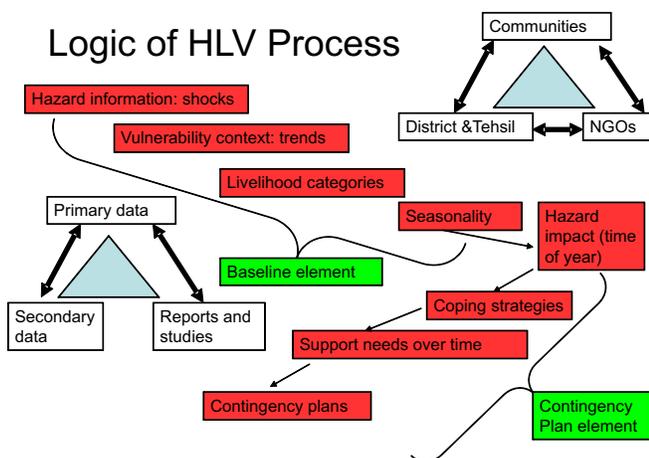
- Developed in close partnership with district authorities (DDMAs; Agriculture Departments, Livestock Departments, local NGOs.**
- A direct input into DDMA District Disaster Management Plans**

HLVS IN PRACTICE: LOGIC AND EXAMPLES

What is in a HLV?

- General description of the district
- Vulnerability context
 - (i) Hazard information
 - (ii) Longer term trends
- Demographic information
- Livelihood exposure and vulnerability profiling
- Seasonal impact and response calendar
- Response typologies
- Annexes

Logic of HLV Process



PROCESS: District > Tehsil > community > and back
(concurrent with secondary data collection)



District context – secondary data

Indicator	Classification	National ranking	Provincial ranking
1. Indicator of Availability of food at district level ⁹	Low deficit (1)	65	5
2. Indicators of Access to food by rural population ¹⁰	Extremely Low(2)	5	1
3. Indicators of Absorption of food by the rural population ¹¹	Extremely low(3)	10	1
4. Overall food insecurity of the rural population ¹²	Extremely insecure (4)	9	1
5. Proportion of population below food poverty line ¹³	46.2%	24	1
6. Per capita income	Extremely low(2)	37	5

Vulnerability context: trends

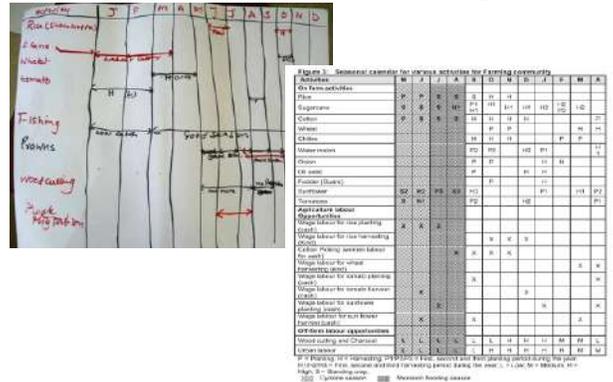


Badin: vulnerable major drainage canal. Man made disasters?

Wealth groups Fishing Community (22% of total pop. in 2 coastal UCs)

Livelihood group	Characteristics	Wealth and vulnerability status	Proportion in overall population
Boat owners/ large net owners (225 boat and 200 net owners)	<ul style="list-style-type: none"> Hire 2-3 labors for fishing. 5% of the HH own livestock 2% HH own/cultivate land (16-20 acres farm size, about 3 acres cultivated). Motorbike 1 – 2 pick-ups in the whole area. 	Better off	15%
Small net owners (Bhan)	<ul style="list-style-type: none"> 2-3 Bhans / HH on average Wage labour (agriculture) and some wood cutting. 10% HH own livestock 10% HH own and cultivate land (partly cultivated) Motor bike with almost every HH. Do some migrant labour in off season (10%), go to Golarch for rice harvesting. 	Medium	60%
No net, no boat (Mari)	<ul style="list-style-type: none"> Daily wage labour for fishing (hired by boat owners) Labour in cities (during off season) 5% HH keep small livestock Wood cutter/charcoal labour 	Poor	25%

Livelihood seasonal calendars per geographical area / livelihood group



Seasonal activities – Fishing Community

Activities	J	F	M	A	M	J	J	A	S	O	N	D
Fishing for fish	L	L	L	M	M	M	M	H	H	H	M	M
Prawn fishing	L				Ban	Ban	H	H	H	H	M	M
Planting rice labour (for cash)				X	X	X						
Rice harvest labour (in kind/food)										X		
Wheat harvest (for grain)			X									

Callouts: Cyclone Period (March to June), Flood period (July to September).

Impact of Cyclone on Fishing Community

Activities	M	J	J	A	S	O	N	D	J	F	M	A
Cyclone effects on fishing families												
Damage to small nets	X	X	3									
Damage to boats/large nets	X	X	4									
Damage to housing	X	X	5									
Damage to food storage	1											
Damage to rice crop		2										
Livestock deaths	X	X										
Livestock fodder shortage/diseases				6								
Livestock restocking					7							

Response strategy for fishing community

Sequence of response interventions to fishing communities after cyclone

1. Food relief .
2. Rice seedlings
3. Small nets (cash, material)
4. Repairing / replacing boats and nets
5. Repair of housing
6. Livestock nutrition and veterinary care
7. Support to livestock restocking

Response Matrix Cyclone, Fishing Communities, Badin

Type of response	Tehsil/ Taluka/ UCs	# of HH likely to be affected	Required quantity	Duration	Responsibility
1. Food support (\$ 31)	2 Ucs: Bhugra Memon (Badin) Ahmad Raju (Golarch)	2874 other 9803	Food package* USD 392,987	1 month	WFP/ NGOs/ Government
2. Support for rice seed for 1 acre/HH (assuming 50% hh involved in rice farming)	-do-	- 4901	Rice seed for direct broadcastin g @ 50Kg/acre 245 tons (USD 113,077) Urea bag= 4901 (USD 98,10) DAP bag = 4910 (USD 211130) Total = 412,425	1 time only	FAO/Government / NGOs/bilateral donors
3. Support for repairing/ replacing boats and large nets (repair of 50% nets and boats @ \$ 231 per boat) (replacement of 50% boats and nets @ \$1231)	2 Ucs: Bhugra Memon (Badin) Ahmad Raju (Golarch)	Boats = 225 Nets = 200	Grant/Loan Repair USD 49038 Replacement 1 USD 261,538	1 time only	FAO/Government / NGOs/bilateral donors

Type of response	Tehsil/ Taluka/ UCs	# of HH likely to be affected	Required quantity	Duration	Responsibility	
4. Support in provision of small nets (1 Bhan/ hh) (@ \$ 77per net)	-do-	1700	-	(USD77/net) USD 130,900	1 time only	FAO/NGOs/ bilateral donors
5. Support for repairing of 50% houses @ \$ 154 and construction of 50% houses @ \$ 308 (one room houses)	-do-	1437	4901	Repairing USD 976,052 Constructio n USD 19,52104	1 time only	UN Habitat, Government, NGOs and bilateral donors
6. Veterinary support for livestock diseases (2 goats/HH @ \$ 0.15 per animal)	-do-	350	4900	USD 2423	Three months after cyclone	FAO/NGOs/ bilateral donors
7. Restocking of small ruminants (2 goats per HH) @ \$ 62/hh	-do-	350	4900	10500 goats (USD 646,153)	September/ October	FAO/NGOs/ bilateral donors

Longer-term risk reduction priorities

- Housing: Improved construction – raised platforms, re-location onto higher ground.
- Build capacities for livelihood diversification e.g. micro-credit and training for agricultural diversification
- Improved maintenance of LBOD – to reduce flooding and salinisation of soil
- Improved irrigation practices in areas further north – to reduce salinisation of soil.

How Useful are HLVs?

Feedback from District Representatives:

- Genuine and reliable multi sectoral data from the field and other sources – very useful as all in one place
- A good tool for hazard analysis
- A useful tool for implementing assessment
- A good for contingency planning
- A useful tool for project planning and proposal writing

How Useful are HLVs?

Rajanpur experience

- HLV report used to plan response to 2008 floods
- Data proved very useful and predictions very accurate:

Table B2: Population of different UCs likely to be affected by Flash Flood in District Rajanpur (based on historical analysis and consultations)

Name of Tehsil/UC	Total	Population		# of HH
		Male	Female	
A. High risk UCs(1)				
Harrand, Jampur	25,711	13,615	12,096	3,522
Tibi Lundan, Jampur	23,608	12,336	11,272	3,234
Dhajal, Jampur	9,675	5,091	4,584	1,325
Wah Lashari, Jampur	24,636	12,804	11,832	3,375
Noor Pur Manghu Wala, Jampur	22,150	11,671	10,479	3,034
Bukhara, Jampur	25,999	13,695	12,304	3,562
Mohammad pur, Jampur	29,971	15,626	14,345	4,106
Jehanpur Rajanpur	32,287	16,881	15,406	4,423
Falhepur Rajanpur	24,863	13,215	11,448	3,379
Shah Wali Rojahn	30,175	16,104	14,072	4,134
Total	248,876	131,039	117,838	34,093
B: Medium Risk UCs(2)				
Hajipur, Jampur	13,384	7,041	6,343	1,833
Burery Wala, Jampur	14,923	7,869	7,054	2,044
Rojhan sharqi, Rojahn	12,794	6,880	5,914	1,753
Total	41,101	21,790	19,311	5,630
C: Low Risk UCs(3)				
Kotla Mughlan, Jampur (30% Low)	11,402	5,926	5,477	1,562
Thal Shumali, Jampur (20% Low)	7,357	3,805	3,551	1,008
Nowshetra Gharabi, Jampur (Low)	8,142	4,257	3,885	1,115
Kotla Issan, Rajanpur (Low)	8,112	4,245	3,867	1,111
Rakh Fazal pur Rajanpur (low)	8,541	4,482	4,058	1,170
Umerkot Rajanpur (Low)	8,615	4,623	3,991	1,180
Total	52,168	27,338	24,829	7,146
All Total	342,145	180,167	161,978	46,869

(1), (2), (3), (4) as for table B1 above

The following table shows what actually occurred in the flash flooding of August 2008. By comparing this table with the one above we can see that all of the UCs predicted by the HLV baseline were actually affected²⁹ and that the overall numbers of persons affected were similar (342,145 predicted vs 330,295 actual). There were some differences in the numbers of high, medium and low affected UCs. The baseline predicted 6 of the 9 highly affected UCs correctly, 1 of the 5 medium affected correctly and 3 of the 5 low affected correctly.

Table B3: Population of different UCs actually affected by Flash Flood in District Rajanpur (In August 2008 flash flood)

Name of Tehsil/UC	Total	Population		# of HH
		Male	Female	
A. Highly affect UCs(1)				
Dhajal , Jampur	9,675	5,091	4,584	1,325
Wah Lashari , Jampur	24,636	12,804	11,832	3,375
Nook Pur Manghu Wala, Jampur	22,150	11,071	10,479	3,034
Thal Shumali , Jampur	22,070	11,415	10,654	3,053
Jampur Rajanpur	22,287	10,281	10,406	4,423
Pathepur Rajanpur	24,563	13,215	11,448	4,279
Umberkot Rajanpur	25,554	13,899	11,574	3,555
Rogan chand, Rajanpur	23,920	12,901	11,080	3,295
Shah Wali Rajanpur	20,175	10,104	14,079	4,124
Total	215,460	112,952	101,528	29,519
B. Medium affected UCs(2)				
Far Lashari, Jampur	12,291	6,279	6,012	1,725
Hajipur, Jampur	13,354	7,051	6,343	1,833
Buchana, Jampur	13,656	7,304	6,762	1,899
Kowathra Gharaudi, Jampur	13,927	6,811	6,210	1,785
Mohammadpur, Jampur	13,954	6,334	7,251	2,187
De-allocated - Uzman (High risk)	-	-	-	-
Total	68,882	36,069	32,784	9,439
C. Low affected UCs(3)				
Hattori, Jampur	6,570	4,500	4,032	1,174
Kolia Mughlan, Jampur	11,402	5,920	5,477	1,592
Burety Wala, Jampur	3,327	4,818	4,409	1,272
Kolia Kisan, Rajanpur	8,112	4,255	3,867	1,111
Khan Fazal pur Rajanpur	2,541	4,502	4,088	1,170
Total	48,952	24,110	21,842	6,298
All Total	330,295	174,131	166,164	45,246

(1), (2), (3), (4) as per table B1 above

Next Steps

- Capacity building of HLV team
- Training of HLV practitioners
- Roll-out to more districts
- Expansion into costing of DRR activities and comparing with Response activities: **HLVs move from response tool to a true DRM tool.**
- Interactive website development and training

THANK YOU

Drought coping strategies

	J	A	S	O	N	D	J	F	M	A	M	J
Increasing indebtedness:												
Loans (mainly for food consumption)			X	X	X							
Distress loan for migration and family support			X									
Following year consumption credit								X*	X*	X*		
Seed on credit												P*
Livestock sales:												
Livestock sales			X	X								
Livestock-restocking			X*									
Migration:												
Migration to barrage areas (for sugar cane/wheat harvest/ city wage labour)			X	X	X	X	X*	X*	X*	X*		
Consumption of wheat grain earned from irrigated areas (seasonal migrants)			X*	X*								X*
Cultivation (if rains)	P*	P*			H*	H*						

Intervention sequencing

	J	A	S	O	N	D	J	F	M	A	M	J
Food Package @ USD 60/HH			1	1	1							
Cash to reduce distress loans for migration (@ USD 50/HH)			2									
Supplementary feed for small ruminants			3	3	3							
Veterinary support for livestock diseases			4	4	4							
Agriculture seed package												5
Restocking of small ruminants	6											

Intervention Costing

Type of response	Affected UCs (#)	HH in affected UCs (#)	Proportion of HH in affected UCs (%)	Intervention Period		Estimated Cost (million USD)
				Period		
1. Food Support*	21.5	39,541	80	Sept-Nov		7.12
2. Distress grants	21.5	19,770	40	Sept		1.19
3. Feed for small ruminants	21.5	39,541	80	Oct		2.67
4.Feed for cattle	21.5	24,713	50	Oct		2.78
5. Veterinary support	21.5	49,426	100	Aug-Oct		0.06
6a. Agriculture seed package	21.5	24,713	50	Jan (next year)		0.44
6b. Fertilizer (Urea)	21.5	24,713	50	do		0.62
6c. Fertilizer (DAP)	21.5	24,713	50	do		1.24
7. Restocking of small ruminants	21.5	24,713	50	Aug (Next year)		1.73
Total million USD						17.84

In addition to the above the Government is also recommended to provide subsidized wheat grain. If, for example the subsidy was 10 rupees per kg for 3 months, and half of the households in affected UCs are assumed to purchase on the market (i.e. the 50% not receiving food aid) then the total subsidy could be in the order of between US\$1 - 1.5 million.

Disaster Risk Management One UN DRM Programme FAO Work Plan 2012

Priority Areas of One UN Joint Program

- 1: Agriculture, Rural Development and Poverty Reduction (ARP)
- 2: Disaster Risk Management (DRM)
- 3: Education
- 4: Environment Joint Programme
- 5: Health and Population Joint Programme

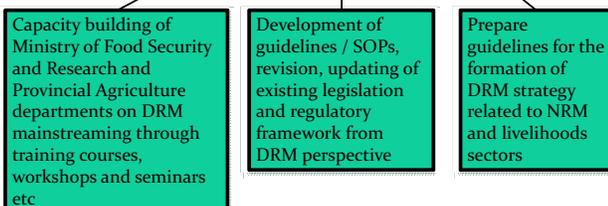
The four cross cutting issues are:

Civil Society
Gender
Human Rights
Refugees

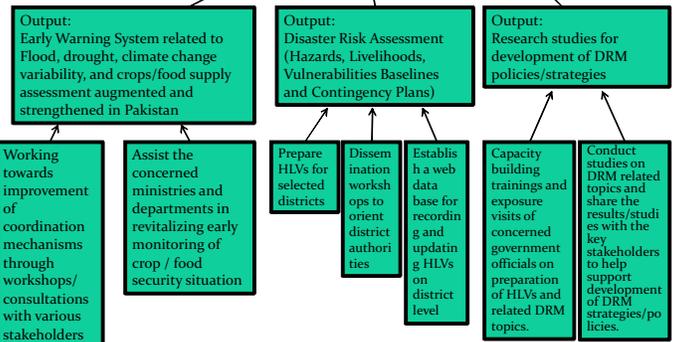
FAO' DRM Activities 2012

JP Outcome 1:
Strengthened policies, norms (gender/rights based), institutional and coordination mechanisms (UN, CSO forum) for disaster risk management with particular emphasis upon preparedness and response

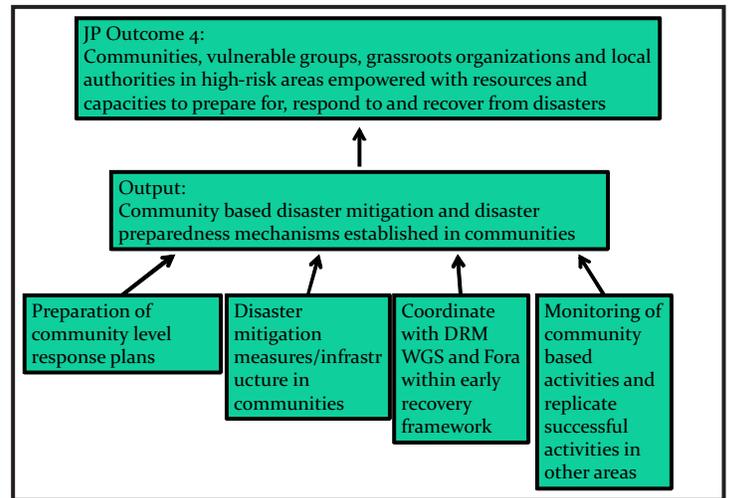
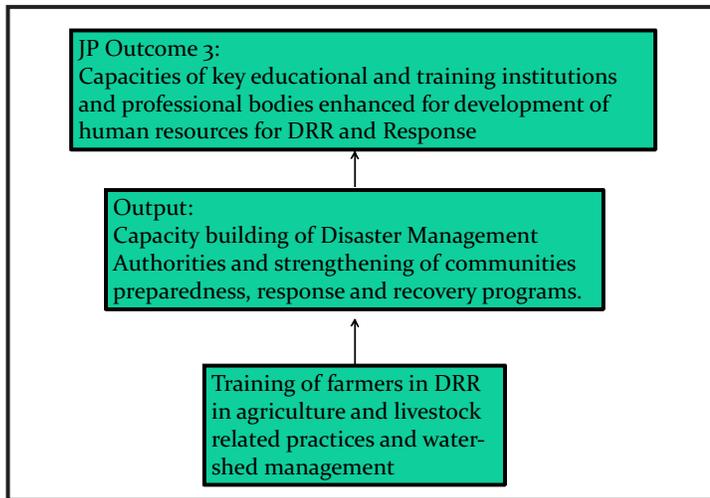
Output:
Mainstreaming DRM into Priority Sectors with the objective of making DRM and Climate Change adaptations an Integral part of Sectoral Programmes



JP Outcome 2:
Reliable integrated multi-sectoral knowledge, information and communication system for disaster risk management that reaches out to the grassroots level developed.



LIST OF ANNEXURE



Country Programme Framework (CPF)

- An FAO Planning document (2012 -2017) and includes the FAO Plan of Action 2011 – 2013 for Conflict, earthquake and flood-affected areas
- Compliments federal and local government priorities
- Closely Linked with OneUN OPII
- Immediate emphasis is on;
 - Contributing to Poverty and Hunger Millennium Development Goal 1 by 2015
 - Building a more sustainable agriculture system

CPF Priority Areas

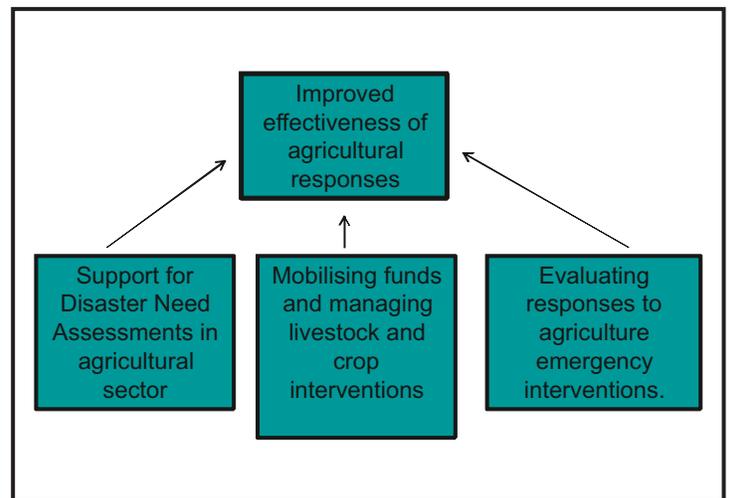
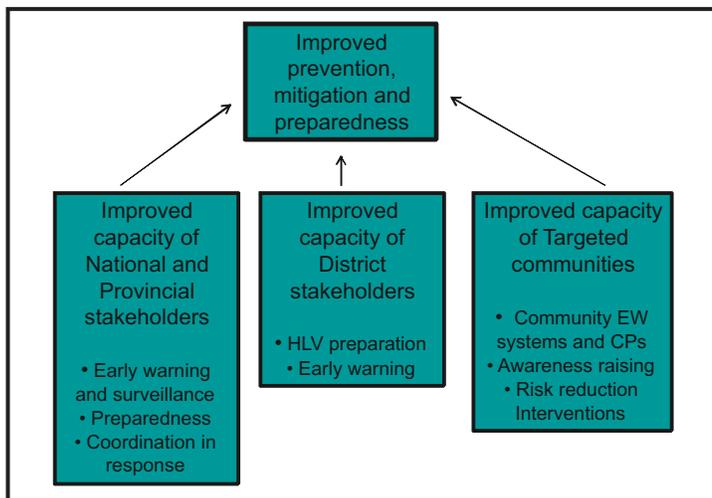
- **Enhanced Food and Nutrition Security**
- **Sustainable Agricultural Economic Growth**
- **Capacity Development for Agriculture Sector Management**
- **Disaster Risk Reduction and Emergency Response**

Disaster Risk Reduction and Emergency Response

- South Asia, including Pakistan, has in increasing number of natural disasters and crisis.
- Main reasons for crisis include:
 - Climate change with warming of Arabian Sea and glacial melt
 - Mismanagement of natural resources
 - Global economic crisis
- Impacts of the recent disasters on Food Security and Livelihoods
 - High vulnerability and low resilience
 - Resulted in high losses to the agriculture sector

Goal of the DRM and Emergency Response Programme

- To reduce the impact of disasters on vulnerable populations
- Through
- Building the capacity of the key stakeholders to enable them to:
 - Mitigate and prepare for crisis, and;
 - Respond to emergency situations in the agricultural sector



Summary

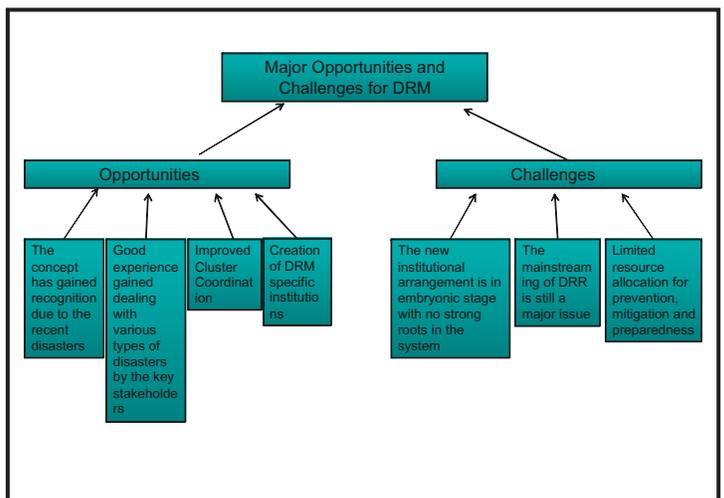
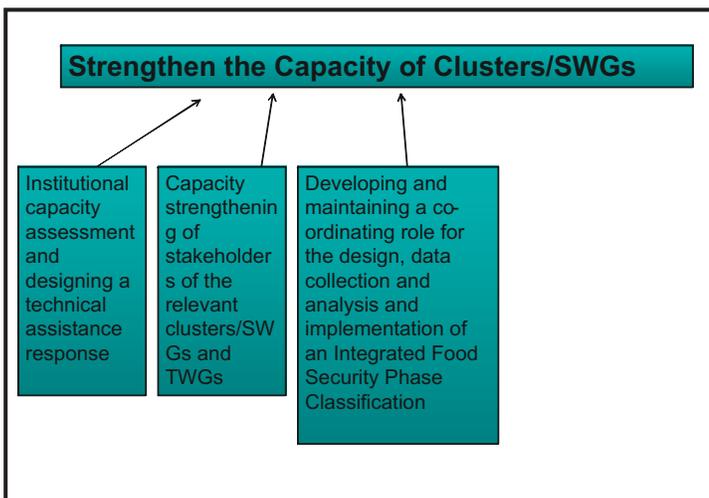
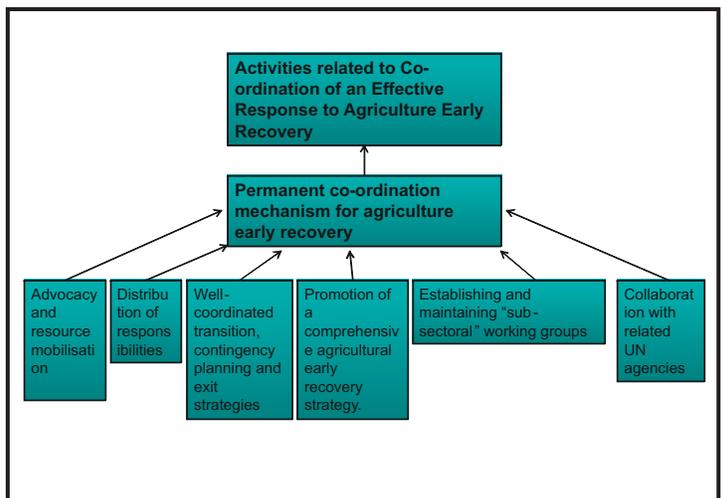
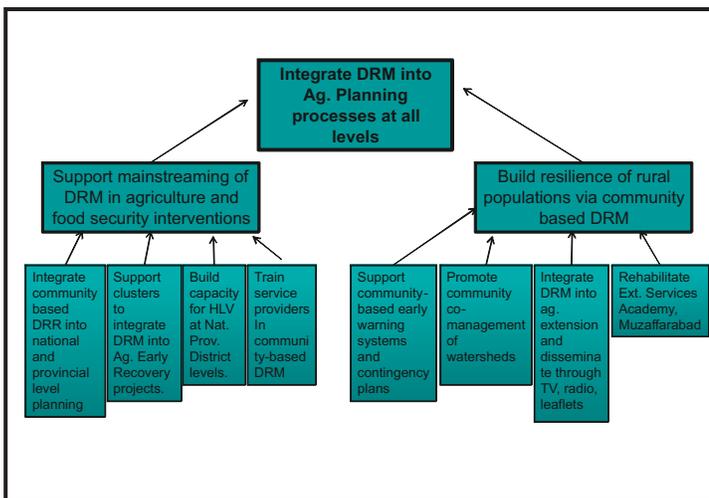
- CPF focuses on building capacity of stakeholders in DRR phase as well as response phase (with more emphasis on capacity building in the DRR phase).
- CPF moves beyond short term interventions to support for government capacity long term for crisis management.
- Many stakeholders involved and therefore good coordination is critical for success.
- Focus has to be multi-leveled – national, provincial, district, community. Weakness in any level will have negative impact on other levels
- Community level DRM is critical but cannot exist in isolation.
- HLVs are a core tool for preparing and planning response at district level and below.

FAO PLAN OF ACTION 2011 – 2013 CONFLICT, EARTHQUAKE AND FLOOD- AFFECTED AREAS (PoA)

- Two years plan dealing mainly with emergency response
- Closely linked with CPF
- Programmatic approach
- Implementation mainly based on lessons learnt and good practices
- Emphasis on coordination, capacity building and mainstreaming

DRM Related Components of PoA

- Integration of Livelihood-oriented DRM Mechanisms into Agricultural Planning and Development Processes at all levels
- Co-ordination of an Effective Response to Agriculture Early Recovery



Annex 8: Evaluation of the workshop by participants

1. Compared to your level of understanding of the concept of DRM in agriculture and food security before the workshop, would you say that:
 - a. My level of understanding has increased very significantly. (63%)
 - b. My level of understanding has increased somewhat. (38%)

2. Do you feel that the group work sessions were useful for helping to prioritize the most important areas for support in the Province in terms of DRM in agriculture and food security?
 - a. Yes they were extremely helpful and there is no further need for prioritization. (26%)
 - b. They were useful, and now need to be followed up with further discussions. (68%)
 - c. Some areas have been prioritized but there remain large gaps which would need to be filled (6%)

3. Do you feel that you now understand the logic of the HLV process?
 - a. Yes, I feel that I now have a good grasp of the HLV process at district level. (52%)
 - b. I now have some idea but would need further sensitization to really grasp. (42%)
 - c. I understood some aspects but not all (6%)

4. What level of priority would you put on conducting more HLVs in your Province?
 - a. Very high priority – they should definitely be expanded to several more districts. (79%)
 - b. It would be useful to do more (21%)

5. What is the most important improvement that could be made to the HLV process?
 - a. Better sharing of the information at province and district levels. (56%)
 - b. More focus on community level participation (12%)
 - c. More emphasis on disaster risk reduction measures in the actual exercise – just a short term response plan is not enough. (27%)
 - d. Capacity building in HLV at Province and district level (5%)

6. What in your opinion should be the next steps for this process?
 - a. Replicating the workshop at Provincial level to validate and further develop the priorities to give a clear direction and mandate for DRM in agriculture in the Province. (50%)
 - b. Secondment of experts in DRM in agriculture and food security at Provincial level –PDMAAs. (24%)
 - c. Dissemination of the workshop findings to wide group of stakeholders at provincial level (26%)

7. Other remarks: Observations, suggestions, questions on the workshop is given as under:
 - Useful information regarding mainstreaming DRM in agriculture
 - Information useful, need knowledge sharing regarding DRM in Agriculture and food security
 - disseminating the workshop findings to the wide group of stakeholders at provincial level
 - Replicating the workshop at provincial and district level
 - Placement of Agriculture Advisors in PDMA
 - More trainings with increased workshop duration on provincial and district level
 - CBOs should be included in follow up trainings

- Participation of more stakeholders should be ensured
- Share soft copies of presentations with the participants
- All the inputs received in the workshop should be implemented on ground
- Try disaster wise group instead of provincial groups for group work
- DRR measures should be mentioned in HLV reports
- Disseminate DRM material including HLVs to district level
- HLVs should be prepared for all hazard prone districts in all provinces
- Idea of chairman NDMA regarding crop insurance is not possible as farmers cannot afford premium
- Drought and Livestock concerns should be given focus in DRM

