

Annex

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Annex 1

Baseline Survey / Vulnerability and Capacity Assessment

Baseline Survey Report is attached as one of the example.

DISTRICT PROFILE

*Hazard, Risk, Vulnerability, Capacity
And
Development
Situation Analysis*

◆Location◆

The District of Rawalpindi is located between 73° 4' 0 E, N33° 36' 0 N and 70° 47', 72° E with an area of 3,134 square miles (8,120 km²).

The District of Rawalpindi is bounded on the northeast by Paksitani administered Kashmir, on the northwest by Khyber Pakhtunkhwa. On the north, Rawalpindi is bounded by Islamabad, and on the south by Districts Jehlum and Chakwal, while on the west by District Attock.

Accessibility

Being the twin of Pakistan's Capital, Islamabad, Rawalpindi is a bustling town strategically located between Punjab and Kashmir and is easy to get to.

By plane

Islamabad International Airport is located within the city of Rawalpindi. Daily flights to and from various international and local destinations are available.

By train

Rawalpindi has its own central railway station, with regular services to many destinations within Pakistan.

By Road

Rawalpindi has extensive road networks, linking it directly to various major cities such as Lahore, Peshawar and Taxila to the north. Apart from that, the twin city, which Rawalpindi is otherwise called, has a complete network for traveling around in the city through local buses.

Brief Introduction of the District

Rawalpindi - History

Rawalpindi has a long history spread over several millennia. Archaeologists believe that a distinct culture flourished on this plateau as far back as 3000 years ago. The material remains found at the site prove the existence of a Buddhist establishment contemporary to Taxila, but less celebrated than its neighbor.

It appears that the ancient city went into oblivion as a result of the Hun devastation. The first Muslim invader, Mahmud of Ghazni (979-1030), gifted the ruined city to a Gakhar Chief, Kai Gohar. The town, however, being on an invasion route, could not prosper and remained deserted until Jhanda Khan, another Gakhar Chief, restored it and in 1493 named it Rawalpindi after the village Rawal. Rawalpindi remained under the rule of the Gakkhars till Muqarrab Khan, the last Gakkhar ruler, was defeated by the Sikhs in 1765. The Sikhs invited traders from other places to settle here. This brought the city into prominence.

Following the British conquest of the Sikhs and their occupation of Rawalpindi in 1849, the city became a permanent garrison of the British army in 1851. In the 1880s a railway line to Rawalpindi was laid, and train service was inaugurated on January 1, 1886. The need for having a railway link arose after Lord Dalhousie made Rawalpindi the headquarters of the Northern Command and Rawalpindi became the largest British military garrison in British India.

In 1951, Rawalpindi saw the murder of the first elected Prime Minister of Pakistan, Liaquat Ali Khan, in Liaquat Garden. Today Rawalpindi is the headquarters of the Pakistani Army and Air Force.

The famous Murree Road has been a hot spot for various political and social events. Nala Lai, famous for its floods, runs through the middle of the city, dividing it into a city area and Cantonment area. History describes Nala Lai water as pure enough to do washing of clothes but now it has become polluted with wastewater from all sources including factories and houses

Photos of the areas, local people, past disaster



◆ Basic Data ◆

Area and Demography

According to the 1998 census, the population of the district was 3,363,911 of which 53.03% were urban, making Rawalpindi the second most urbanized district in Punjab. By 1998 the population was estimated to be 4.41 million - a rise of over a million.

The district has an area of 5,286 km² (2,041 sq mi). It was part of Rawalpindi Division, until the year 2000 when the division was abolished.

■ Demography		
	Population (census 1998)	3363911 persons
	Population growth rate (census 1998)	2.75 %
	Ratio of population less than 18 years old (census 1998)	%
	Ratio of population more than 65 years old (1998)	
	Ratio of urban population	1788273 (53.16 %)
	Population density	636.5person/sq. km
■ Literacy		
	Literacy rate	Total: 70.4% Male: 81.19% Female: 59.18%
■ Public Administration		
	Number and Names of Tehsil	8 Names: 1. <u>Gujar Khan</u> 2. <u>Potohar</u> (Southern Rawalpindi) 3. <u>Taxila Tehsil</u> 4. <u>Rawal</u> (Northern Rawalpindi) 5. <u>Kallar Syedan</u> 6. <u>Kahuta</u> 7. <u>Kotli Sattian</u> 8. <u>Murree</u>
	Number of Union Councils	170
	Areas	5285 sq. km
■ Housing		
	Average size of household	6.5
	Structures	Mixed Katcha/ Pakka
	Ratio of houses with piped water supply	215313 (41.29 %)
	Ratio of houses with electricity	474471 (90.98 %)
	Ratio of houses with sewerage	NILL
■ Industry		
	Major industries in the district	Transportation, food, etc
■ Hazard		
	Major hazards	Man Made Flood Earthquake
	Hazard / Risk level (if there is risk analysis)	NA Earthquake: Risk level: 3 out of 5

■ Population Growth (in 30 years)

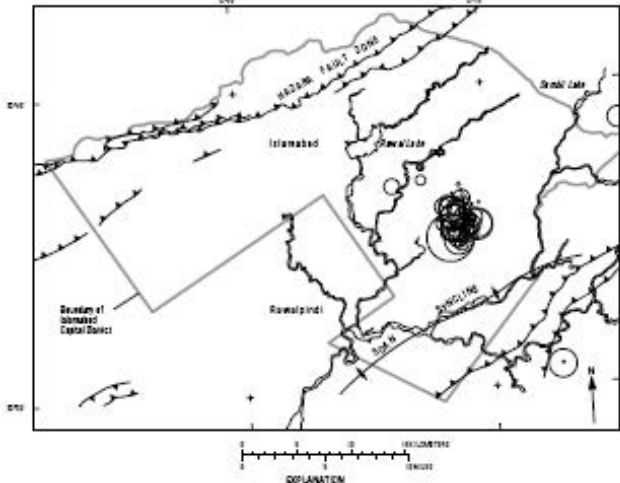
	1978	1981	1998	2008
Total	NA	2121450 persons	3363911 persons	NA
Growth rate	NA	2.75 %	2.75 %	NA
Population density (persons/sq.km)	NA	NA	636.5	NA

◆ Development Framework ◆

District Development Plan	
Name of the Plan / Prepared by	
a.	1. Annual Development Program
b.	2. Model Villages
c.	3. Punjab Development Social Program (PDSP)
-Education	
-Special Education	
-Health	
d.	4. Drought Recovery Assistance Program Project (DRAP-P)
-Agriculture	
-Water Supply	
e.	5. Chief Minister's Accelerated Program
-Education	
-Health	
f.	6. Chief Minister's Accelerated Program (LDP)
-Roads	
g.	7. Chief Minister's Packages
-Tehsil Gujar Khan	
-Tehsil Kahuta	
-Tehsil Kallar Syedan	
-Tehsil Kotli Sattian	
h.	8. Education Sector Reform Program (Phase 1-2)
i.	9. Education Sector Reform Program (Phase 3) NLC
j.	10. Health Sector Reform Program (Phase 3) NLC
k.	11. Development Program
-KPP-II (NA-53)	
-KPP-II (NA-55)	
l.	12. National Gender Reform Action Plan (GRAP)
m.	13. Sustainable Livelihood in Barani Areas Project (SLBAP)
n.	14. Federal ESR
o.	15. Special Education
p.	16. National Program for Improvement of Water Courses
q.	17. Literate Punjab Program (LPP)
r.	18. Literacy through Skill Training (LTST)
s.	19. Miscellaneous
Target Year	
Current projects	
Vision	
NA	
Action Plans	
NA	
Relevant Plans for Disaster Risk Management	
District Disaster Risk Management Plan	
Flood Relief Plan	

◆ Characteristics of Disasters ◆

Hazard	Description (General Vulnerability)
Flood	The Lai basin already receives most (90 percent) of its river flows within a period of one and a half months. The current carrying capacity of the Lai is about 10,000 cusecs [cubic meters per second] while the twenty-five year return period flood carries 35,000 cusecs of water causing inundation in the most densely populated areas of Rawalpindi. Climate change predictions of increased precipitation over approximately the same number of rainy days – in effect, higher intensity storm events -- would exacerbate this situation. Similarly, Islamabad is in an accelerated process of developing new sectors in the upstream watershed, reducing its absorption capacity. The combination of these factors is expected to significantly increase the flood peaks in the Lai. Population and economic growth along with the elitist planning of Islamabad is forcing the poorer population of the conurbation to inhabit the risk prone banks of the Lai, particularly because of its proximity to economic opportunities. Surprisingly, solid waste also emerges as the main hazard identified by the majority of the residents surveyed in the Lai basin. The mortality and disease load from the unhygienic living conditions and contaminated drinking water around the Lai may actually be claiming more lives than the floods. In the Lai floodplain at least 19,000 households lie within the historic 100-year return floodplain with most of them having a tenuous legal status over their habitation. In Rawalpindi City, being on the lower elevation, low-lying areas along Lai Nullah and tributaries suffer from even small floods. Serious flood events occur in particular along: the main stream between Gunj Mandi Bridge and Railway bridge, and the tributaries of Arya Nullha, Dhok Rata Nullah Dhok Charaghadin. Flood inundation starts in these areas once the water level of Lai Nullah reaches 18 feet (491.5 m) at Gawal Mandi Bridge.
Earthquake	The Islamabad-Rawalpindi area lies in a tectonically active zone, where faulting, folding, and earthquakes have been frequent in the recent geologic past. Quaternary deposits are tectonically deformed throughout the Islamabad District, the Rawalpindi District of Punjab and the Abbotabad District of Khyber-Pakhtunkhwa (formerly North Western Frontier Province). In A.D. 25, the Buddhist monasteries at Taxila, 25 km west-northwest of Islamabad, were destroyed by an earthquake estimated at Modified Mercalli intensity IX. An earthquake of Richter magnitude 5.8 on February 14, 1977, centered 7 km northeast of Rawalpindi, caused damage indicating Modified Mercalli intensity VII near the epicentre (Adhami et al, 1980). The focus of the 1977 earthquake was estimated to be at 14-18 km in depth. Although earthquake shaking is not confined to areas near surface faults, the risk of surface rupture is greater where the surface has been broken previously. Only those faults estimated as most likely to rupture during earthquakes are shown in the figure below, along with the historic epicentres and magnitudes of earthquakes in the Islamabad area between January 26, 1977, and April 30, 1978, from data of Adhami, et al. The earthquake of 2005 left behind more than 73,000 deaths and more than a hundred thousand injured.

	 <i>(Regional Studies of the Potwar Plateau Area, Northern Pakistan Ed. by USGS Peter D. Warwick and Bruce R. Wardlaw)</i>
Fire	Due to congested settlement and populated area any fire would quickly spread and cause heavy damage and casualties.
Heavy Rain	Heavy rain is one of the major causes of flooding it has an enormous effect on the lives of the Rawalpindi people.
Man Made	The law and order situation in the city always remains very precarious and this causes many incidents.

◆Disaster History◆

Hazard	Description	Disaster History		
		Month / Year	Human Damage (Casualties, Injuries)	Loss (PKR)
Earthquake	- Centered 7 km northeast of Rawalpindi, caused damage. The focus of the 1977 earthquake was estimated to be at 14-18 km in depth. - The 2005 Kashmir earthquake didn't affect Rawalpindi district directly but indirectly.	Feb 14, 1977	Modified Mercalli intensity VII near the epicentre	N/A
		Oct 8, 2005	More than 73,000 deaths and over 100,000 injured	> 400 Billion
Flood	100 year flood of 2001 in Nullah Lai, District Rawalpindi, 74 Deaths, 400,000 people affected, 742 cattle head totally perished, 1,087 houses destroyed in Rawalpindi besides some 2,448 partially damaged. Estimates indicate a damage/loss of 450 million Rs.	July 31, 2001 (Referred to as a flood with a recurrence period of 100 years) Aug 13, 2002 Aug 27, 1997 July 29, 1996 July 24, 1995 July 3, 1994 1990 1988 1985 Aug 10, 1982 1981 1978 1977 1976 1972 1970 July 31, 1966 1957 Aug 13, 1944	74 deaths, 400,000 people affected	More than 15 billion rupees
Fire	Gakhar Plaza collapse due to fire	2009	NA	

◆Risk Map◆

No risk maps are available.

◆ Disaster Risk Management ◆

<i>Disaster Risk Management</i>
Plan
Name of the Plan / Prepared by 1. District Disaster Management Plan / Government of the Punjab District Coordination Office Rawalpindi 2. Flood Relief Plan /District Govt.
Target Year 2009-10
Vision The aim of this plan is to provide a checklist and assign tasks/responsibilities to respective Departments in order to: 1. To secure the life and properties of the citizens 2. Secure national assets, etc. 3. To make necessary arrangements for an uninterrupted supply of utility services and daily households items to the general public Since Floods and Earthquakes are the major natural hazards with potential damage to humans, livestock, businesses and infrastructures, they have been addressed with due concern in the District Disaster Management Plan and Flood Relief Plan incorporating all available resources and stakeholders (government officials only in this case).
Action Plans NA The District Disaster Management Plan of Rawalpindi basically describes the aims and actions regarding emergency responses by different organizations and departments.
Past Activities
Mitigation Activities • Flood Forecasting & Warning System, City District Government Rawalpindi (JICA) • Establishment of Flood Control Centre at TMA • Organization, Control and Relief Measures
Preparedness Activities • Awareness Activity • Training by Civil Defence • Formulation of a Task Force • Formulation of a Volunteer Body (40 people) • Response during floods • Establishment of flood relief camps at Public School Buildings • Production of a detailed Flood Hazard Map for the District Establishment of an Early Warning System for flood • Flood Hazard Maps • Information Drill 2008 • Public Education through media
Photos NA

Capacity of Staff
Number of Staff
Training Received
Training Needs CBDRM, DRM planning, VCA, drills, mapping
Experience of conducting CBDRM activities Rescue 1122, Civil Defence jointly conducted awareness programs in the previous project of JICA for schools, institutions, communities. Since then, Rescue 1122 and Civil Defence have continued the CBDRM activities mainly at schools. 2 training officers joined CBDRM training in Javed Colony from Feb 10-18, 2011, organized by JICA and FOCUS and learned how to conduct CBDRM activities without using special equipment.
Current Activities and Plans on Capacity Development No capacity development activities are planned for the staff. Workshops on CBDRM for Community/stakeholders delivered by Rescue 1122, and Civil Defence are planned annually. The workshops are mainly for schools because of difficulties of mobilizing community people.
Strengths and Constraints Not Available
Lessons Learned from Recent Disasters • Government agencies respond but the communities are reluctant to leave behind their houses to seek shelter in the evacuation centres. • The communities need to realize the importance of being prepared to respond since they are the first responders to any disaster
Equipment (<i>Lists provided in the District Disaster Management Plan</i>)
Communication System PMD –DCO Flood Control Centre (District, Central, Local)-Different Departments(Rescue1122, Revenue, Civil Defence, WASA, Army-Community Telephone, Fax, Mobile Mega Phone, Speakers, etc.
Equipment <u>Civil Defence</u> Boat 1,OBM engine 1,Fuel tanks 2, Life Rings 2 , Life Jackets 4, Life Line 120 ft. 1, Emergency light 1, Megaphone 6, stretcher 1, First Aid box 1, hand sirens 6, Motor Boats with ORS 6, Motor Boats 2, Life jackets 6 <u>Cantonment Board</u> Four dewatering pumps, 2 shovels, 4 dumpers, 4 jack trolleys,4 mobile Suzukis, 2 tractors
Photos NA

COMMUNITY PROFILE

*Hazard, Risk, Vulnerability, Capacity
And
Development
Situation Analysis*

◆Community Profile◆

■Javed Colony, Rawalpindi Town, Union Council 45, Rawalpindi District, Punjab Province			
Representatives	Community Leader	Name: Mr. Tahir Mehmood	Tel: () -xxxx
	Community Leader	Name: Mr. Adnan Butt	Tel: 03015513180
	Religious Leader	Name: Imam Masjid Mr.	Tel: (374) -xxxx
	School/ Academy Principle/Teachers	Name: Col (Retd) Saeed Ms.	Tel: +92-
History	Establishment	1980s	
	History	The small colony popularly referred to as Javed Colony has a Muslim colony attached to it which runs contiguously. The population of the colony comes from varied backgrounds/cultures. Pathans, Punjabis, Kashmiris and the Hazaras are more prominent residents of these two colonies with Punjabis in the majority. The people follow diverse professions including medicine, Civil Servants, livestock dealing, mechanics, vendors and small businesses.	

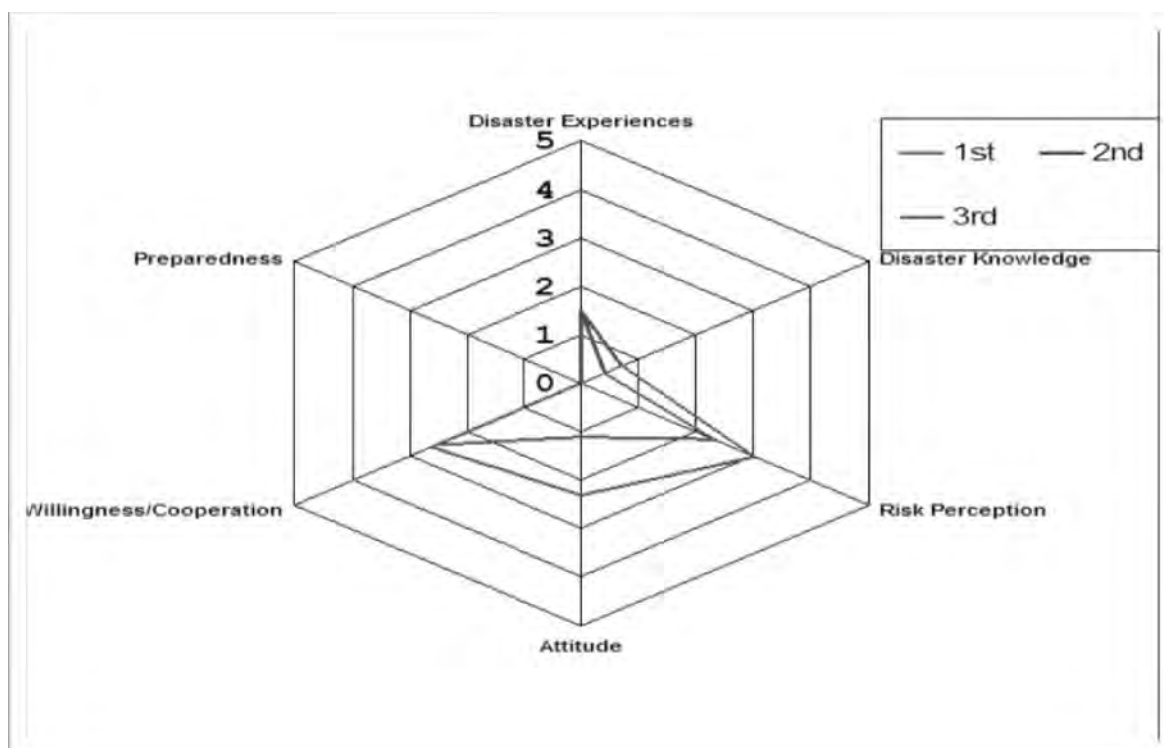
Location	Map			
				
Demography	Access		Located on Tipu Road on the famous Murree Road opposite Rawalpindi Medical College. The colony is over-crowded with narrow streets and poor housing that depicts a slum quarter kind of living condition. The two colonies, affected badly every year by the recurring monsoon flash floods, lie in a depression surrounded by elevated roads on three sides while on one side to the north, the colonies are bordered by a narrow tributary channel of Nala Lai that brings sewerage and rain waters from the I-9 elevated areas of Islamabad.	
	Population		Persons	
			16000-18000	
	Population structure	School children 7-16	NA	
		under 20 yrs.	NA	
		20-60 yrs.	NA	
		Over 60 yrs.	NA	
	Birth rate	NA	Aging rate	NA
	Household number	NA	2) Family members / HH	6.5

	Type of Family	Nuclear Joint Extended (nearly all)						
	Male : Female Ratio	49:51			Literacy rate	60%		
	Population trend	NA % increase in 10 years						
Economy	Income (Rp/year month)	Highest	NA	Average	NA	Lowest	NA	
	Savings (Rp/year month)	Highest	NA	Average	NA	Lowest	NA	
	Main Industry	Jobs, Labor, Govt. Servant, Micro-business						
Infrastructure	Total Land Area	NA sq. km						
	Type	Availability		Coverage		Remarks		
	Electricity line	Yes		Total		The whole area has access to electricity and gas except settlements along Lai Nullah		
	Gas pipeline	Yes						
	Water pipeline	Yes						
	Irrigation Water	NA				Because of urban settings, no irrigation system is needed.		
	Artesian Well	1						
	Nearest Water Source	km						
	Drainage pipelines	- km						
	Sewerage pipelines	- km						
	Type	Availability				Remarks		
	Telephone	Landline	NA	%	(house hold unit)			
		Mobile	nearly 100%					
		Satellite	NA%					
	Internet / Email	Yes						
	TV	Yes						
	Local Newspaper	Yes						
	Bridge	1 bridge				At the end of the colony in the north, there is one bridge crossing Lai Nullah		
	Main Road	Tipu Road				Boundary of the colony in the south		
	Type	Name			Capacity		Location	
	Educational Facilities	Noor Forces Academy 3 Madarasa			500 More than 150 each		Within the colony Within the colony	
	Cultural Facilities	None			persons			
Religious Facilities	3 Mosques			More 200 Persons each one with a capacity 1000 persons offering prayers at a time				
Medical Facilities	2 Clinic			00				
Housing	Structure of House	Mud Brick Tent Houses				0% 98% 1%		
	Comments	Congested, overpopulated and none are quake proof. Some residents have built their houses higher than the ground level of the colony to obtain flood protection but it could only save them from light rains since the physiographic settings of the colony itself make the colony vulnerable to flooding.						

	Name	Founded in	# of members	Activity (goal, service, fee, budget, plan, project)
Local CBOs	Zakat organization	Around 2000		During the Musharaf regime, the organization was founded to distribute money for poor families. However, after his regime, no activities have been conducted.
Social Situations	Leadership Structure In such urban areas in Rawalpindi, it is very difficult to find a community with strong leadership. Most communities have neither CBOs nor leaders. There is one elected UC councilor in the UC 45, but this person is not from Javed Colony. When there are problems, local people consult with a councilor to solve the problems.			
	Leadership NA			
	Trust, Support by Villagers NA			
	Development Vision of Community Leaders Experience of Mobilizing Villagers The community is mobilized through their relatives and/or convincing. No single leadership/decision making platform exists that could act as a unifying platform for such activities.			
Solidarity	Decision-making pattern Within the community, no collective actions for decision-making are taken. Whenever they face problems, people go to consult with a councilor on an individual basis.			
	Participation NA			
	Ethnicity Punjabis, Pushtoon, Hazara, Kashmiri and Jogis			
	Conflicts / Discriminations / Any social issues within the community Distribution of relief/compensation in the past hasn't been transparent and the communities still have their reservations			
Solidarity	What kind of actions have villagers taken in the past? Built their houses (particularly new ones) higher than the ground level. They have evacuated on their own and travelled to their relatives or to elevated roads during floods.			
	Can villagers contribute to construction work for free of charge? Not at all			
	What is the level of social cohesion? Cooperation exists but is observed more during disasters			
	Are there Local Festivals? No particular festival for the community, however, the community celebrates all Muslim festivals with great fervor as the overwhelming majority of the communities are Muslim.			

Political / Administrative	Access to Power Structure Previously, local body elections were held for Union Councilor, Nazim and Nazim-e-A'la (Mayor), but now only Elections for Punjab Assembly members (MPA—Member of Provincial Assembly) and Member of National Assembly (Parliamentarians) are held.			
	Access to Public Authority (Tehsil, UC, District) Through their offices. People have access through a councilor.			
Disaster History and Experience	Governance of Tehsil, UC, District The Tehsil is governed by a Tehsildar, the UC is administered by the Secretary of the Union Council and the District is currently administered by the DCO—District Coordination Officer			
	Disaster History and Actions			
	Type Disaster	Year	Damage	Action taken by Residents / Public Authorities
	Flood	2001, 2002, 2010	Property, lives, Livestock, Micro-businesses	Felt reluctant to leave behind their belongings but finally evacuated for a few hours to elevated areas, stayed with relatives at other localities or as the last option sought shelter in evacuation centres set up by the government.
	Earthquake	2005		Locals came out of their houses. They weren't affected.
	Evacuation experience (Did villagers have experience with evacuations? Who directed the evacuations?) In the 2001 floods the locals were evacuated by the use of Volunteers, Police, Armed forces and other security agencies. It was led by the DCO office and led in the field by the Civil Defence.			
	Monitoring experience (What kind of monitoring has the village done?) The locals aren't trained in monitoring floods, however, on their own they keep an eye on the weather patterns and the rising water level of the tributaries passing through their areas.			
	Disaster Information Distribution System (how was disaster information distributed?) Through announcements through mosques and Flood Warning Siren.			
	Any Collective DRM Actions taken in the past YES but details not available. Mostly cooperation during emergencies but not during ordinary times.			
	Any Collective DRM Actions that should be taken in the future? Yes, the Disaster Management Plan and Flood Relief Plan foresee a collaborative mechanism in responding to the disasters but the community is left out. No roles have been identified for the community members.			
	Availability of Utilization of Loudspeakers on Minarets/Minarabs in Mosques for Communication for DRM (such as evacuation guidance) YES			
	Disaster Experience Index		2.3	
Disaster Knowledge	Leaders Like the common folk, the leaders lack a scientific understanding of the hazards threatening the communities but they also are well aware of the problems arising from such disastrous situations.			
	Community People The level of understanding of the community members is not at all appreciable.			
	Knowledge Index		1.8	

Risk Perception	Comments The floods of 2001 and 2010 have left adverse memories and the community understands that their colony is not safe nor are their houses built to be safe from floods and/or earthquakes. Solid waste emerges as the main hazard identified by the majority of the residents surveyed in the Lai basin. The mortality and disease load from the unhygienic living conditions and contaminated drinking water around the Lai may actually be claiming more lives than the floods.	
	Risk Perception Index	2.8
Attitude	In the urban environment, not many people are willing to participate in the DRM activities; however, those who took time for interviewing had a serious attitude.	
	Knowledge Index	2.0
Willingness	Leaders They are willing to address the issue and come up with a solution. However, they aren't ready to commit themselves. Community People The willingness level of the community members is appreciable. They are willing to learn skills that could help them safeguard their assets and themselves.	
	Willingness Index	3.5
Preparedness	No structural measures have been put in place nor has anyone trained the local communities to respond to such disasters. However, the relevant government institutions have built their capacity to respond in a proper manner.	
	Preparedness Index	0.37



TEHSIL PROFILE

*Hazard, Risk, Vulnerability, Capacity
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Situation Analysis*

◆ Basic Data ◆

Basic Information		
Contact Person (office tel, mobile, email)	Mr. Muhammad Idress, Assistant Accountant Tel: 0333-5125957 Mr. Qasim Niazi, TO (I&S), 051-5773333	
Responsibilities of Tehsil	1. Execute and manage development plans for the functions which are performed by the Town Municipal Administration. 2. Prevent and remove encroachments. 3. Prepare budget and annual and long-term town and municipal development programs in collaboration with the Union Council, under the direction of the Town Nazim. 4. Propose taxes, cesses, user fees, rates, rents toll charges, levies, fines and penalties. 5. Collect taxes, cesses, user fees, rates, rents, toll charges, fines and penalties. 6. Organize local sports, culture and recreational events, fairs and shows. 7. Regulate markets and services and issues, permits, grants permission and imposes penalties for violations therefore as and where applicable. 8. Manages properties, assets and lands vested in the Town Municipal Administration. 9. Develops and manages schemes, including site development.	
Population within the Tehsil	More than 782,000	
Number of UCs within the Tehsil	46 UCs	
Number of Staff	684	
Organizational Structure (attach organogram)	Department names Number of Staff 1. Town Council 14 2. Administrator 7 3. Tehsil Municipal Officer: TMO (General, Store, Public Relation Officer, Religious and Computer Section) 68 4. Finance 84 5. Regulation 107 6. Infrastructure and Services (I&S) (Roads & Buildings, Patch work, Street Lights, Gardens) 361 7. Planning and Coordination (P&C) 43	
Annual Budget	993.686 million	
Sources of Budget	1. From last year's budget 56.30% 2. Provincial government 11.83% 3. Property tax 17.68% 4. Car parking and sales of forms and registers 0.34% 5. Income from Investments 2.09% 6. Sales of equipment, vehicle stand fees (fees for setting bus /Suzuki stands etc.), fee for approval of buildings / construction plan, fines for building violations, fines for encroachments, fees for slaughtering of animals, rent for play land and playgrounds, receipts from public latrines, registration/ establishment/ renewal of contractors, rent of TMA property and shops, road cutting charges 11.76%	
Employment of Staffs	Some from provincial government. Others hired by local committee in the TMA Rawal town. There is no ratio available.	

◆Development Framework◆

Development Plan	
Development Plan	Annual Development Plan (as requested by local representative), street lights, building streets and roads, repair and maintenance of shops and buildings of TMA, sports grounds, road cutting rehabilitation, construction of flats, multi story residences)
Components of DRM in Development Plan	DRM is not included in the Development Plan; this is a subject of the district government.
Persons Responsible for Development	Town Officer (I&S) and his staff (Assistant Town Officers and Sub-Engineers).
Mechanism for Preparing Development Plan	The local representative from the different UCs, refer their development plans to TMA. And then TMA T.O (I&S) prepares these development plans, which are approved by the Town Council or Administrator.
How to Improve Community in Planning	The people of the community do not directly approach the TMA but approach their local representative for their development plans, then the local representative gives that to TMA. At the time of discussions, these local representatives also join in.
Rough Budget Amount for Development of each Village/ Community	632.800 million for the year

◆ Disaster Risk Management ◆

DRM Plans and Activities	
Recent responsibilities/ activities on DRM	No, this issue is related to the district government.
Possible DRM activities Tehsil can take care of	No, this issue is related to the district government.
Responsible persons on DRM	From district government.
Mitigation measures on DRM	No, this issue is related to the district government.
How to link DRM plan with your development plan	No, this issue is related to the district government.
Capacity of Staffs	
Any training received on DRM	No training given. If JICA gives us training, it would be very useful.
Lessons learned from recent disasters	They do not deal with the disasters.
Current activities and plans on capacity development on DRM	No activities planned because that is a subject of the district government.
Necessity of DRM	1. Must stop dumping material in Lai Nullah. 2. Illegal settlement along Lai Nullah must be stopped. 3. Wide banks and deep river bed of the Lai Nullah are needed.
Experiences of conducting CBDRM activities	Not conducted because it's the responsibility of the district government.
Perceptions on CBDRM activities	1. CBDRM activities are essential because without involving the community, we cannot do any work properly. 2. Awareness Program for community and meetings with community regarding solid waste, illegal settlement are needed. 3. Enforcement of TMA Laws regarding illegal settlement is needed.
Equipment	
Communication system	Wireless system, landline telephones and mobile phones. Flood control room is located in the second floor, operated by Rescue 1122.
Equipment	Flood control room is connected with real time rain gauges installed at catchment areas, water level gauges installed at several places in the Lai Nullah and 10 warning posts in the Rawalpindi. Warning announcements can be delivered from this control room.
Photos	

UNION COUNCIL PROFILE

*Hazard, Risk, Vulnerability, Capacity
And
Development
Situation Analysis*

◆ Basic Data ◆

Basic Information		
Contact Person	Muhammad Tanveer Qureshi, Secretary-UC-45 Off: 051-5765199 Cell: 0345-5269460	
Responsibilities of UC	1. Major function is to undertake local level development projects and monitoring citizens' rights, and services and reporting to the tehsil and district level administration 2. Presentation of annual development plans along with local inputs 3. Conciliation of disputes in family matters (birth, death and divorce).	
Population within the UC	25,000 approximately	
Number of Villages within the UC	6 Villages or Mhallas	
Number of Staff	5 (3 Secretaries and 2 Naib Qasid {Office Boy})	
Organizational Structure	Department names Number of Staff 1. Finance budget and accounts 2. Municipal standards and coordination 3. Development of plans 4. Family Matters 5. Street light checking	
Annual Budget	Rs. 1,200,000 Annually	
Sources of Budget	Allocation from District Birth & death certificate and divorce case fees	98.75% 1.25%
Employment of Staff	Some come from the provincial government Some are employed by the district or town organization No ratio of permanent staff	

◆ Development Framework ◆

Development Plan	
Development Plan (visions, action plans, priority actions, land use)	Yes, we have a development plan for the UC.
Components of DRM in Development Plan	No DRM in the development plan because DRM is a subject for the district.
Responsible Persons on Development Plan	The secretary of the UC is responsible for development from the Funds of the UC.
Mechanism for Preparing Development Plan	Not done directly by the village inhabitants but elected people (Councilors) submitted their development plan to the UC. When the elected people submitted their plan the Secretary of the UC prepare a plan.
How to Involve the Community in Planning	The community does not directly approach the UC but rather approach the elected people and discuss their problems and these elected people prepare the plans.
Rough Budget Amount for Development of Each Village	Up to Rs. 500,000

◆Disaster Risk Management◆

DRM Plans and Activities	
Recent Responsibilities/ Activities on DRM	No
Possible DRM Activities UC Can Take Care of	No
Responsible Person on DRM	From district government
Mitigation Measures on DRM	Subject of district level
How to Link DRM Plan with Your Development Plan	Subject of district level
Capacity of Staffs	
Any Training Received on DRM	No training received
Lessons Learned from Recent Disasters	
Current Activities and Plans on Capacity Development on DRM	
Necessity of DRM	It is very important to have a DRM and to provide some training and important information about the DRM.
Experiences of Conducting CBDRM activities	
Perceptions on CBDRM activities	CBDRM activities are not very useful and therefore need to be improved. Work on sanitation needs to improve and at least 5 feet of cover over the Lai Nullah is needed because most people throw garbage in to Lai Nullah. Currently, there is no specific place to dispose of garbage. In each UC at least 10 points should be provided to drop off garbage and the district government truck should collect it and take it to a sanitary landfill on a daily basis. The street light system should be improved, because it becomes very dangerous at night. Sometimes people fall into the Lai Nullah in the dark. A government dispensary is currently available, but it needs at least 2 doctors (one male and one female) and it also needs basic gynecological facilities. UC can provide their services only because they have neither sufficient budget nor sufficient staff.
Equipment	
Communication System	Telephone, fax
Equipment	None
Photos	

Annex 2

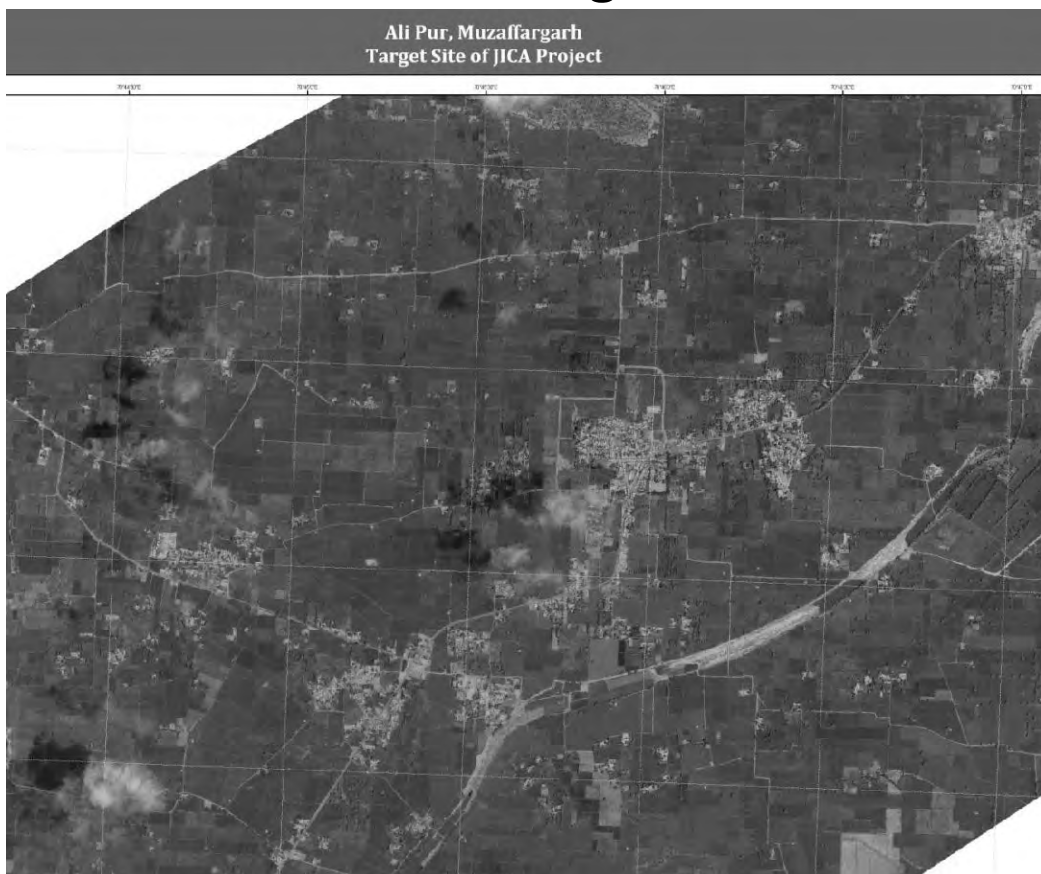
Participatory Community Disaster Management Planning

Example of Community Disaster Management Plan is attached. This plan was facilitated to be prepared by community facilitators / trainers of FOCUS Humanitarian Assistance.



FOCUS HUMANITARIAN ASSISTANCE

Community Disaster Risk Management (DRM) Plan for Khangarh Doma, Tehsil Alipur, District Muzaffargarh



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List of Abbreviation and Acronyms

JICA	Japan International Cooperation Agency
NDMA	National Disaster Management Authority
DDMA	District Disaster Management Authority
WASA	Water & Sanitation
CDMC	Community Disaster Management Committee
CBDRM	Community Based Disaster Risk Management
UC	Union Council
DCO	District Coordination Officer
DO	District Officer
TMA	Tehsil/Town Municipal Administration
SAO	Senior Administrative Officer
DIG	Disaster Imagination Game
TL	Team Leader
MBT	Main Boundary Thrust
SOP	Standard Operating Procedures

List of Stakeholders at District Level

Serial #	Name	Designation
1.	Azhar Baloch	DRM Coordinator at DCO Office
2.	Sayed Munawar Bukhari	CEO AWARD Foundation (Local NGO)
3.	Mureed Hussain	UC Secretary
4.	Shakaib Ahmad	DEO Civil Defence
5.	Sami ur Rahman	Executive Member of Society for Human Rights

Executive Summary

The name of this Project is ***“The Project for the National Disaster Management Plan in the Islamic Republic of Pakistan”*** and it is conducted by JICA and Focus Humanitarian Assistance Pakistan is an implementing partner. Under this Project, there are components of Community Based Disaster Management Activities.

The objective of this JICA Project is to support the formulation of basic plans for disaster risk management at the national level. The goal is the preparation of mitigating measures against possible damage arising from the occurrence of natural calamities by developing the capacity of disaster management administrative agencies in Pakistan, through the formulation of the plans means/mode of supporting the implementation.

Target Areas for this project are the Province of Punjab and the Province of Sindh.

The UC (Union Council) Khangarh Doma derives its name from a village (Moza) named Kangarh Doma that has at least four sub-villages (Basti) namely Basti Shado, Basti Younis Arayein, Basti Ghagri, and Basti Kotla Shah. Within the UC there are at least 24 Mozas, of them, four lie on the eastern banks of the Indus while the remaining lie on its western banks. Moza Khangarh Doma is located on the eastern banks of the Indus along with the Mozas Malik Arayein, Kotla Ghulam Shah and Moza Sarki

Khangarh Doma UC is one of the 14 UCs of Tehsil Alipur. The UC was formed as a result of the renaming and reconstitution of the former Dhaka UC in 2002.

Vulnerability of this community is very high and therefore, NDMA, JICA & Focus Pakistan decided to conduct a Community Based Disaster Risk Management Workshop for one week. Major components of this project are the following:

- 1) Formulation of a National Disaster Management Plan
- 2) This Formulation of a Human Resource Development Plan for Disaster Management and launching of a human resource development training program based on the foregoing plan.
- 3) Formulation of an Early Warning Plan for responding to major disasters. The Plan will identify high-priority activities to be undertaken during the course of the Project.
- 4) Implementing model projects for Community-based Disaster Risk Management (CBDRM) in cooperation with the community and local government.
- 5) Developing the cooperative systems/skills of relevant organizations, and enhancing the capacity of the staff members based on the above process.

The DRM plan envisions a community safe from the adverse impacts of natural disaster through an integrated approach. This can only be achieved through the establishment of an active CBDMC strongly linked with and supported by the government responding agencies such as Civil Defence, Rescue 1122 and TMA.

It is pertinent to mention that the government responding agencies and the community could be linked through a proper mechanism in place at the community level. Hence, to address this issue, this DRM Plan lays out the framework and terms of reference for a community based disaster management committee composed of responsible members of the community. It is strongly believed that this team of community volunteers through this platform could bridge the gaps that have been part of the practices in the past and ensure a smooth and the effective response to disasters in the future.

Community Disaster Management Plan

Introduction

The Community Disaster Management Plan under study outlines the overall understanding of the community residing in Moza Kangarh Doma that has at least four sub-villages (Basti) namely Basti Shado, Basti Younis Arayein, Basti Ghagri, and Basti Kotla Shah with regards to the vulnerabilities of their community to natural and man-made hazards. It includes communal perceptions, the formation of a Community Based Disaster Management Committee, roles of government responding agencies and represents an integrated approach towards responding to any future disaster.

The plan identifies linkages between all stakeholders from the government and the community as extremely critical to reduce the impacts of any disaster.

Available data has been incorporated as well for quick reference purposes. Government agencies have been identified for response and coordination of activities in case of disaster(s). Strong linkages have been built for smooth functioning of the government institutions in the future. Whereas the CDMC has been tasked with acting as first responders and mobilization of the community before a disaster, government agencies have been identified as resource institutions in times of normalcy and as aiding agencies in disasters.

Methodology

The Community Disaster Management Plan under study is being prepared with the consultation of the community leaders (Maliks, Head master, elders of the community), Community Members, Secretary UC and DRM coordinator Muzaffargarh. The process also included meetings with all stakeholders including all District Officials.

Consultations with the community members were carried out through a DIG (Disaster Imagination Game) that addressed four important subjects of concern with regards to disasters. These areas of concern were Problems and Improvements with regard to Information Distribution, Evacuation, and Impacts of Disaster. The data obtained was evaluated and incorporated into the plan. In addition, the formulation of this plan was preceded by a rigorous seven-day CBDRM (Community Based Disaster Risk Management) training program for a focus group of individuals in the community. The group was not selected but invited through open invitation from within the community.

Vision

A community safe from natural hazards with the capacity to deal with natural hazards and have a committed, responsible and responsive team of volunteers

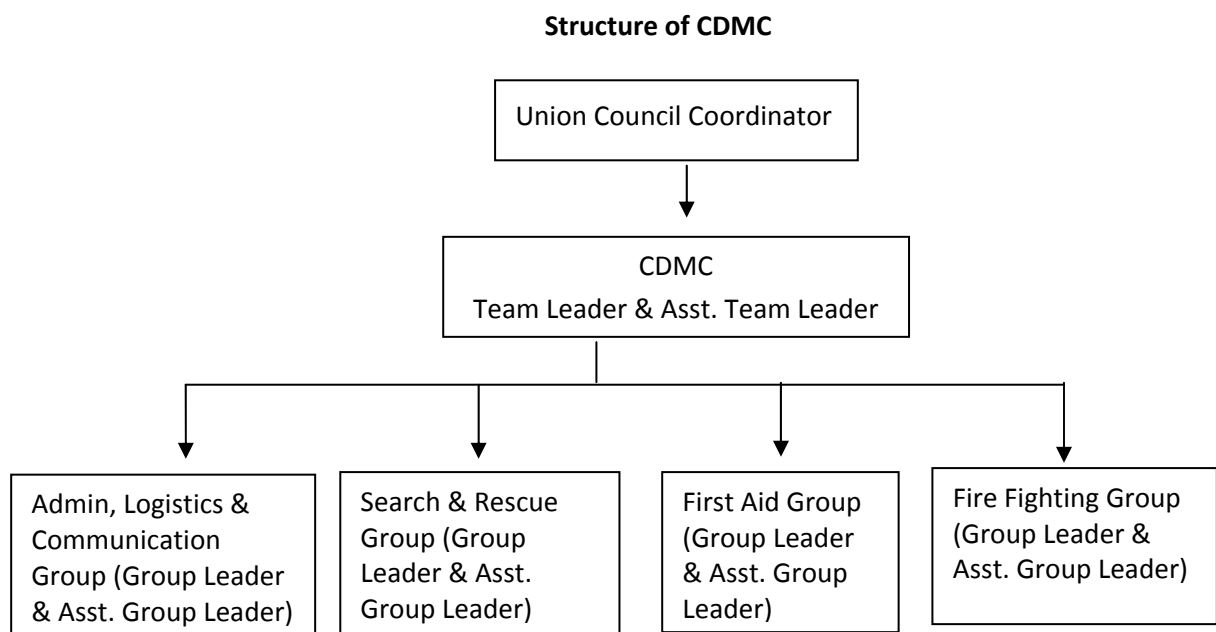
Mission

To create awareness and build capacity within the community and establish a permanent link with the government disaster responding departments in order to have a safer community

Objectives

- To raise awareness about the various forms of disasters in the community, especially floods
- To build the capacity of the human resources in the community and update their skills with regards to responding to floods and associated hazards
- To assist the governmental responding departments in the time of disaster
- To remove the communication gaps by developing a permanent link between the community stakeholders and government institutions

Community Disaster Management Committee



Major Responsibilities of CDMC

- ‘First responders’ at the local level in a crises situation
- Regularly update the local leadership about activities and plans
- Organize periodic simulations, drills and exercises

- Assess risks and develop plans to mitigate risks and present to the local leadership for approval and implementation
- Preparation of Disaster Management Plan in the community

Responsibilities of Each Group:

Group	Responsibilities
Union Council	• Supervise activities of the CDMC • Attend meetings of CDMC Leadership/General body meetings • Deploy CDMC members on emergency duty to perform critical operation in case of any emergency situation • Ensure the follow up of the Action Plan for the given year (attached in Annexes) • Arrange Equipment and other facilities for CDMC
Team Leader	• Decision-making and planning • Organize Operational Groups • Assign resources • Evaluate progress • Arrangement of equipment/supplies • Arrangement of food and/or water during emergency/disaster • Gather facts • Assess disaster sites • Develop and maintain links with the government responding departments • Co-ordinate and communicate with operational groups • Arrange transportation to safer places in case of evacuation • Documentation
Assistant Team Leader	• Assist the leader in his duties and lead the team in the absence of the Team Leader
Administration, Logistics & Communication Group	• To collect family profiles of the community • To identify potential hazards in houses • To identify potential crises and prepare effective strategic plan to address them on time • To develop comprehensive information and communication strategy • Responsible to disseminate information regarding any emergency • To provide all information and data to Emergency Response Teams and other agencies for timely response • To make an assessment of the disaster and its impact and also to share with concerned agencies • On the basis of information and data available, undertake an effective and efficient recovery, with rehabilitation and re-building/reconstruction
First Aid Group	• Head-to-toe assessment of victims • Opening airways • Controlling bleeding • Immobilization of spinal injury victims • Treatment of wounds • Treatment of fractures • Triage procedure • Transportation of victims
Fire Fighting Group	• Fight small fires • Shut off utilities • Isolate hazardous materials
Search & Rescue Group	• Rescuers safety • Search methodology • Search for victims • Rescue victims • Evacuate victims

Evacuation Points/Places

Type	Name of Place	Remarks
School building with quarters and almost 18 rooms and open space	Government High School for Boys Seetpur	Outside Community
Double story building Public College Building (50-60 Rooms (ask Bukhari)	Govt. Degree College Ali Pur	Outside Community
Govt. High School (56 rooms)	Ali Pur	Outside Community
High School	Thaimwala High School	Outside Community
High School	High School Sultanpur	Outside Community (10 km from the community, for minor floods only)
.....		
.....		

Evacuation Route

Name of Community	Population	# of Households	Building Structure	# of Stories	Difficulties & Characteristics regarding Evacuation, Remarks
Khangarh Doma	6,000	600	Brick and Mud	Single and Double	Over population and social issues related to females.

Characteristics of Evacuation Place

Name of Evacuation Site	Area	Accommodation Capacity	Remarks
Government High School for Boys Seetpur	2-4 Acres	10 Rooms (587)	Closest to the community but only useable if floods are not high (minor floods)
Govt. Degree College Ali Pur	24 Acres	36 Rooms (495 Students)	Located in the Tehsil Headquarters at a distance of more than 30 km.
Govt. High School for Boys Ali Pur	7 Acres	26 Rooms (980 Students)	Located in the Tehsil Headquarters at a distance of more than 30 km.
Thaimwala High School Alipur	>1 Acre	16 Rooms (750 Students)	Located in the Tehsil Headquarters at a distance of more than 30 km.
High School Sultanpur	>3 Acres	12 Rooms (584 Students)	Located in the Tehsil Headquarters at a distance of more than 30 km.
High School Khairpur	=>2 Acres	16-18 Rooms (>700 Students)	About 18-20 km from the community
Govt. Degree College Marhiya	N/A	N/A	More than 20 km from the Community

Source: Office of the EDO Education

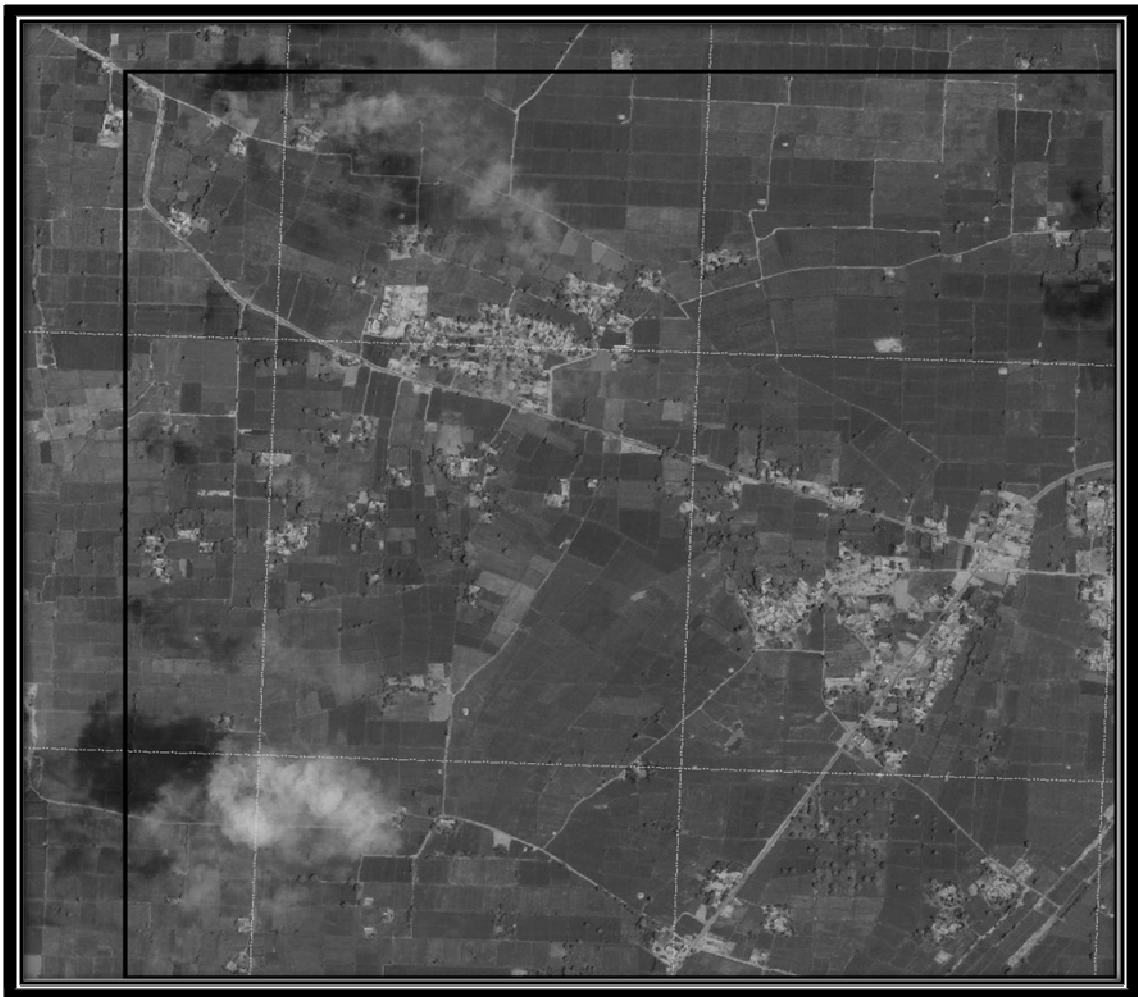
**COMMUNITY DISASTER MANAGEMENT COMMITTEE UC Khangarh Doma, Tehsil Alipur District
Muzaffargarh, ACTION PLAN FOR YEAR 2011**

S.#	MONTHS	ACTIVITY	RESPONSIBLE
01	April	In House meeting of CDMC with UC Secretary & Patwari	UC Secretary & CDMC Leader
02	May	2 hrs one day Refresher by AWARD Foundation	Ms. Rashida & UC Secretary & CDMC Leader
03	June	In June Pre flood safety arrangement meeting	DRM Coordinator, UC Secretary, Patwari & CDMC
04	June - Aug	Awareness raising by CDMC & Response agencies	CDMC & UC Secretary
05	September	Post flood safety arrangement meeting	DRM Coordinator, UC Sec and CDMC
06	Oct	2 hrs one day Refresher by AWARD Foundation	Ms. Rashida & UC Secretary & Team Leader
07	Nov	Refresher by Hamdard Citizen Community Board, Khangarh Doma	CDMC Leader, UC Secretary
08	Dec	General Body Meeting & Action Plan Formulation	UC Secretary, DRM Coordinator, Patwaris, & CDMC

Introduction to Khangarh Doma

The UC (Union Council) Khangarh Doma derives its name from a village (Moza) named Kangarh Doma that has at least four sub-villages (Basti) namely Basti Shado, Basti Younis Arayein, Basti Ghagri, and Basti Kotla Shah. Within the UC there are at least 24 Mozas. Of these, four lie on the eastern banks of the Indus while the remaining lie on its western banks. Moza Khangarh Doma is located on the eastern banks of the Indus along with the Mozas Malik Arayein, Kotla Ghulam Shah and Moza Sarki

Khangarh Doma UC is one of the 14 UC's of Tehsil Alipur. The UC was formed as a result of the renaming and reconstitution of the former Dhaka UC in 2002.



Demography:

According to the UC office, the current population of the UC Khangarh Doma is 35,000-36,000 persons with a male to female ratio of 49:51. The population of the 26 Mozas as per the Census 1998 was 29,227. The greater part of the population comprises of youth and middle aged. Senior citizens roughly comprise 5% of the population. (Source: UC Office)

Economy:

The community of Khangarh Doma heavily depends upon their agricultural products. It has lush fertile and vast fields that are a source of blessings to the community. Hence, an overwhelming majority of the community members adopt agriculture and farming professions by inheritance. In addition, quite a few move towards cities in search of jobs and for employment in the labor force. Women have no direct role in uplifting the economy of the households; however, they take part equally in the works related to agriculture in the field.

Communication & Infrastructure

Located close to the confluence point of the rivers Chenab and Indus, this community is at least 30 km from the nearest city centre, i.e., Alipur Tehsil Headquarter City. The UC is connected to the city via a link road, the Alipur road that crosses the UC all the way from Sarki to the confluence point. The houses built by the villagers remain substandard due to the use of substandard construction materials. In addition, government buildings have been overwhelmed by floods and collapsed. Quite a few buildings, including the schools and the only Basic Health Unit (BHU), now run by a visiting doctor and a dispenser from the International Medical Corp, have been renovated by the Pakistan Army after the floods of 2010. Only a few buildings could be identified as relatively sound in the area.

The communications problem has been overcome to a great extent by the recent influx of the mobile phone industry. Quite a few mobile companies have their towers installed inside the community. No landline exists and previously the community had to rely on the wireless system for communication purposes.



Education:

An estimated 30-32% of the residents of the UC are literate while an estimated 55-60% of the population of two mozas, Khangarh Doma and Malik Arayen, are literate and educated. Poverty, lack of resources and inclination towards manual agriculture (at a young age) stand as the harshest hindrances in getting educated or continuing one's education to higher levels.



Administrative System:

The UC Khangarh Doma is one of the 14 UCs of Tehsil Alipur, District Muzaffargarh. It's governed by a Union Council Secretary.

Union Council/Patwari

Union Council Khangarh Doma consists of the following 26 *Mozas*:

- | | | |
|---------------------------|------------------------------------|------------------------|
| 1. Moza Malik Arayen | 11. Moza Shah Wali | 21. Moza Basti Haji |
| 2. Moza Khangarh Doma | 12. Moza Wahkwar | 22. Moza Chak Daud |
| 3. Moza Kotla Ghulam Shah | 13. Moza Mohib Shah | 23. Moza Mahal Mesan |
| 4. Moza Tiba Borna | 14. Moza Bakir Shah Janoobi | 24. Moza Kotri lal |
| 5. Moza Sarki | 15. Moza Kohartira | 25. Moza Khairpur Para |
| 6. Moza Khwar Peeran | 16. Moza Nusratpur | 26. Moza Nahar Wala |
| 7. Moza Khanpul Nuharka | 17. Moza Khanwa | |
| 8. Moza Bait Parara | 18. Moza Chandia | |
| 9. Moza Bait Eisa | 19. Moza Daulatpur | |
| 10. Moza Dhaka | 20. Moza Bait Meer Ahmad
Jabail | |

The Union Council is currently led by the Secretary Union Council and there's no elected representative from the community.



Picture of Stakeholders Workshop on Disaster Management Plan

Disaster Risks in the Community

The geographic setting of the community makes it vulnerable to serious risks of recurring floods. The community is notorious for being the worst hit area of Muzaffargarh due to its location at the verge of the two major rivers of Punjab. Whenever there's a flood situation in either of the two rivers or in both, this community has to pay the price. The emergence of a mini-river, i.e., a canal type of link from Chenab to Indus that emerged as a result of bank erosion/breach from the Chenab, has been a constant source of threat for the community of Khangarh Doma Moza.

Natural Hazards:

- A natural hazard is defined as: “A naturally occurring or man-made geologic condition or phenomenon that presents a risk or is a potential danger to life or property” (American geological institute 1984),
- “An interaction of people and nature governed by the co-existent state of adjustment of the humans that use the system and the state of nature in the natural events system” (White, 1973)

Flood:

- Flooding is generally defined as any abnormally high stream flow that overtops the natural or artificial banks of a stream. Flooding is a natural characteristic of rivers.
- A flood is too much water in the wrong place, whether it be an inundated city or a single street or a field flooded due to a blocked drain.



Natural Hazards damaging Properties and Communication System

Flash Flood:

- A flash flood is a “sudden flood of water usually caused by heavy rain or snow melt”



Riverine Flood

Historical Profile of Different Disasters in the Community

S.#	Name of areas	Events	Years	Impact
1	Khangarh Doma UC	Flood	1973, 1984, 1992, 1995, 2002, 2005, 2008, 2010	Loss of life 36 Properties damaged, Loss of livestock, Major Economic set back

Potential Risks:

The floods of 2010 have washed away the protection bund(s) at several places exposing the community to serious risks of flooding in the succeeding years. Additionally, the use of substandard construction material and ill planning make the residents of this UC vulnerable to roof and wall collapse. Lack of knowledge of constructing flood proof houses and structures keep the community at the mercy of the two rivers. Since all the buildings follow the same code, i.e., defenseless against floods, the question of an available evacuation site within the community stands meaningless and this further adds to the vulnerability of the community.

Seasonal Calendar of Natural Hazards for Khangarh Doma, Tehsil Alipur, District Muzaffargarh

Months	J	F	M	A	M	J	J	A	S	O	N	D	Impacts
Hazards													
Earthquake													Loss of life, loss of livestock and properties, public infrastructure
Floods													Loss of crops, and vegetables, damage of houses, and infrastructure, economic losses, epidemics, contamination of drinking water, electricity supply damage
Wind Storm													Roofs collapse, uprooting of plants, loss of orchards, vegetables, traffic accidents, falling of electric polls, falling of sign boards
Hail Storm													Damage to crops, vegetables
Torrential Rainfall													Loss of crops, epidemics due to stagnant water, road accidents

Risk and Resource Map



Institutional Capacity

Capacity of Union Council

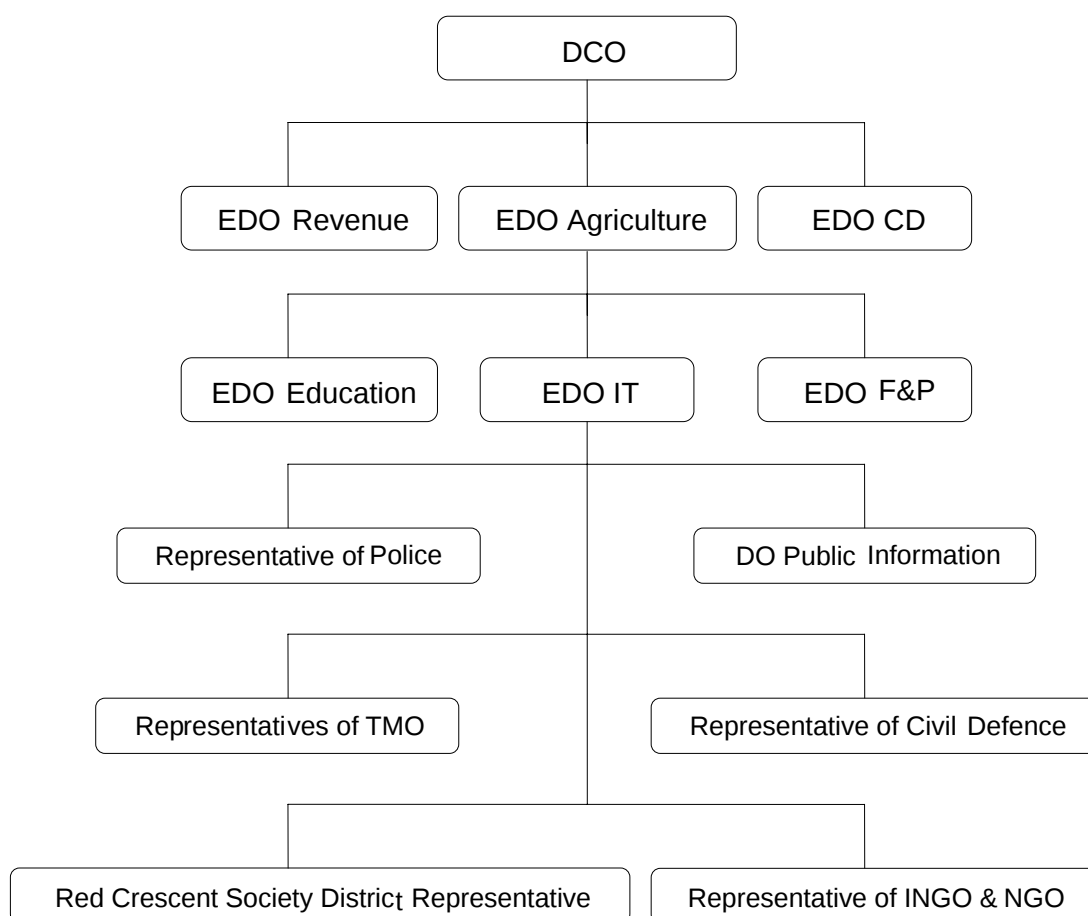
The Union Council Khangarh Doma is currently run by a secretary and a *Naib Qasid* (office boy). By sanction there should be three UC Secretaries and 2 Naib Qasids. However, the remaining posts remain vacant in the UC office Khangarh Doma. The Union Council has neither additional staff nor allocated budget to take care of issues related to Disaster Risk Management. UC Khangarh Doma functions under Tehsil Alipur.

Capacity of District Government

The DDMA is the focal organization and authority in the conduct and implementation of activities and actions on disaster management in Muzaffargarh District. In pre-, during and post-disaster stages, the DDMA holds primary importance. Basically along with its Town / Tehsil and UC tiers, the DDMA is responsible for three main objectives. They are:

- Pre-disaster preparedness
- During-disaster immediate response
- Post-disaster rehabilitation activities

The District Disaster Management Authority will comprise the Nazim, District Coordination Officer (DCO), District Police Officer and the EDO Health. Where appropriate, the District Nazim / DCO can appoint other officers as members of the DDMA. They may include EDOs from the education, social welfare, community development, meteorology department, revenue department, environment and agriculture departments, Army, Red Crescent, NGOs, media, private sector, Civil Defence services, or any other district stakeholders. After consultations and meetings conducted by the district with various stakeholders, the proposed structure of the DDMA in the District Muzaffargarh is shown below:



Source: District Disaster Risk Management Plan District Muzaffargarh

Town/Tehsil Disaster Management Committee

Institutions at this level are the frontline of disaster risk reduction and response. For many departments, this is the lowest level of administration where they interface directly with communities: agriculture, education, health, police, revenue and others. Extension workers of the above departments could play a significant role in promoting disaster risk reduction. For example, agriculture extension workers could promote awareness of drought, flood or cyclone resistant crops. Health workers could raise people's awareness about potential diseases that may occur after flood or drought and how to prepare for them. Education officials could work on school disaster preparedness. Similarly, town/tehsil authorities have an important role in organizing emergency response and relief; e.g. damage and loss assessment, and recovery needs assessment. Town/tehsil and town Nazims will lead in risk reduction and response operations with the help of town/tehsil or town municipal officers in consultation with DDMA. Other key players include: extension workers, police, fire services, community organizations (COs), traditional leaders and Doaba Foundation (NGO).

Under Local Government Ordinance (LGO) 2001, the TMAs is to facilitate, provide, manage, operate, maintain and improve the municipal infrastructure and services including: water supply and control and

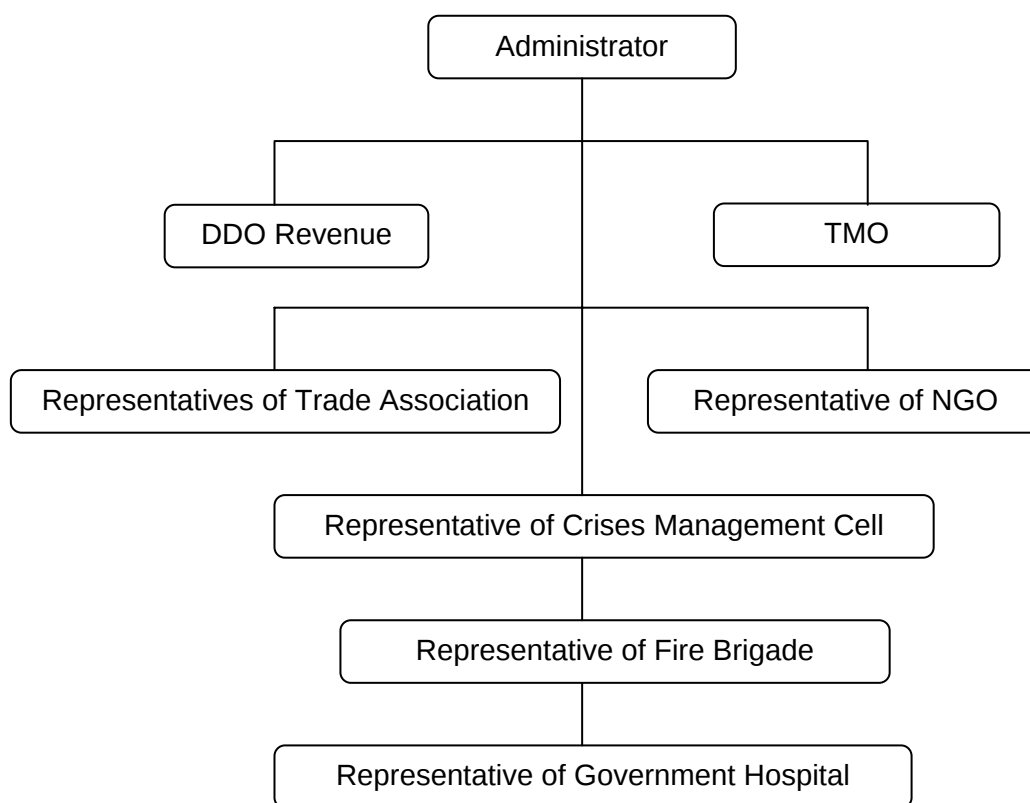
development of water sources other than systems maintained by the union and village council, sewerage, vector control, sewage treatment and disposal, storm water drainage and fire fighting.

There shall be a Town Disaster Management Committee (TDMC) to coordinate and implement disaster risk management activities at the town level. The Town Nazim shall be the chairperson of the TDMC and the Town Municipal Officer shall be the secretary. Members will include all elected town members, Town Officer (TO) Planning, Deputy District Officer (DDO) Revenue, president of the trade association, DDOs of respective line departments, religious leaders who are to be nominated, and representatives of CCBs and NGOs. Specific roles and responsibilities of the TDMC and members will be further outlined by the District Authority.

TDMC

The National Disaster Management Framework (NDMF) clearly elaborates town/tehsil administrations as the frontline of disaster management where disaster activities are actually implemented. As per the NDMF the TMAs are responsible for:

- Formulation of plans and procedures for DRM and DRR keeping view the specific needs of their respective locations.
- Establishment of civic groups for disaster reduction and relief operations.
- Coordinate with DDMA and lead operations regarding DRR and DRM during the different stages of disasters.
- Identification, mobilization and disposal of required financial, technical and logistic resources for disaster management.
- Identification and mapping of all hazards in their respective locations and conduct risk and vulnerability analyses and communicate with DDMA and other relevant groups/institutions.



Source: District Disaster Risk Management Plan District Muzaffargarh

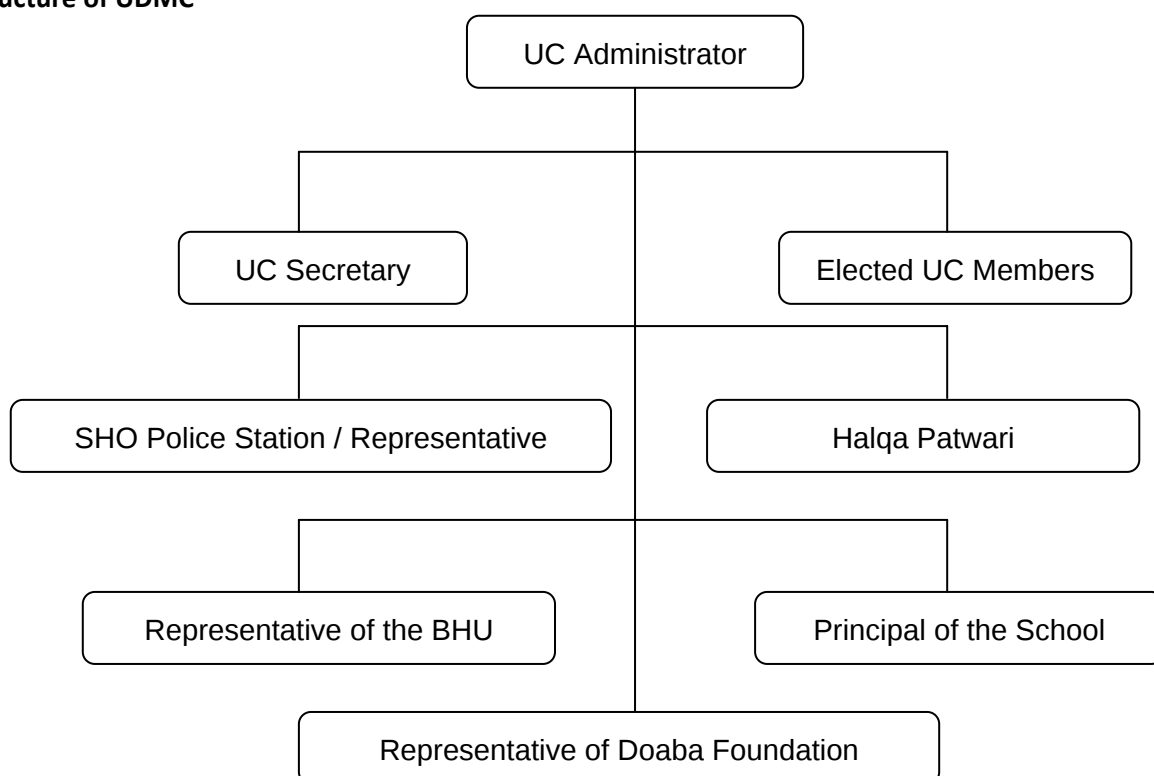
Union Council Disaster Management Committee¹

Union Councils are the lowest tier in the government structure having elected representatives from village and ward levels for these bodies. These are easily accessible by the people and can communicate the government's plan at the most grassroots level. These bodies have an important role in allocation of resources for local development works. Union Councils can play an important role in advocating demands of communities to the District Councils and DRM Authorities. Community demands may include requests for allocations of resources from local budgets for hazard mitigation and vulnerability activities; e.g., spurs for flood control, rainwater harvesting structures for drought mitigation, vocational training for livelihoods to reduce vulnerability etc.; therefore, it will be important to develop the orientation and knowledge of the local political leadership at this level. The Union Council may develop local policies and guidelines for vulnerability reduction.

Under the LGO 2001, UC is to assist the relevant authorities during disasters and natural calamities and assist in relief activities. At Union Council level, a Union Council Disaster Management Committee (UDMC) will be established to coordinate and implement disaster risk management activities at UC level. Following are the suggested members:

¹ Source: District Disaster Risk Management Plan District Muzaffargarh

Structure of UDMC



Source: District Disaster Risk Management Plan District Muzaffargarh

Town and Union Council level, Activities

During disaster emergencies, the Town and Union Council Administration will be involved in the delivery of the following activities within their jurisdiction:

- Send Initial Damage and Needs Assessment Report to District EOC
- Search and rescue operations in coordination with the Civil Defence and Police
- Corpse disposal
- Assistance to other agencies for mobility/transport of staff including rescue parties, relief personnel and relief materials
- Communicate to the Disaster Emergency Operation Centre (DEOC) additional resources required by the various control rooms
- Establish communication links with DEOC, Union Council Disaster Management Committees (DMCs), NGO coordinating committee and private donors
- Issue passes and identity cards to relief personnel including the persons from NGOs operating in the affected area
- Coordinate Doaba Foundation activities through necessary support to ensure community participation by establishing coordination mechanisms among NGOs
- Mobilizing and coordinating work of volunteers ensuring community participation

Non-Governmental Organizations (NGOs) and Voluntary Agencies

The Non-Governmental Organizations and voluntary agencies play an important role in disaster management and provide a strong band of committed volunteers with experience in managing the disasters. Their strength lies in the choice of their manpower, the informality in operations and flexibility in procedures. These organizations enjoy a fair degree of autonomy and hence can respond to changing needs immediately.

However, in order to maintain uniformity in operations and effective coordination, it is desirable that they follow the standards of services (*as given in the Guidelines*), information exchange and reporting so as to enable the DEOC to have a total picture of resource availability, disbursements and requirements. NGOs, therefore, have been assigned specific tasks by the District Administration to undertake relief work within the overall institutional framework. As and where possible, NGOs may also be able to improve the quality of delivery of services. In addition, CBO Committees have been operating at the community level, especially in times of emergencies like house collapses, fires, and floods. Such committees have been identified at the ward level.

Specific activities in which the NGOs/Private Sector can be involved during disaster management operations are:

- Search and rescue operations
- Information dissemination
- First aid
- Disposal of dead
- Damage assessment
- Management of information centres at temporary shelters
- Mobilization and distribution of relief supplies including finances
- Manpower for community mobilization, crowd control, rumor control, traffic management
- Specialized services (psychiatric and mental health assistance)
- Management of transit camps
- Rehabilitation activities

The following agencies will be associated with relief and rehabilitation activities. Most of these agencies have the capacity to mobilize required resources and have assisted the administration in the past in managing relief and rehabilitation activities. These agencies include:²

- UN Agencies
- WHO
- District Red Crescent Society
- DOABA Foundation
- CCBs and CBOs at Union Councils and village level
- Others

² Source: District Disaster Risk Management Plan District Muzaffargarh

Community Based Organizations (CBOs) and activities³

In order to promote community level disaster risk management activities, the capacity of existing community based organizations (CBOs) will be developed and enhanced by district and tehsil authorities. In the absence of community organizations, new groups would be established to work in disaster risk reduction and management. CBOs will be trained regarding local early warning systems, evacuation, first aid, search and rescue, fire fighting etc. Linkages would be developed between CBOs and relevant local agencies; e.g. agriculture, banks, health and veterinary services to promote disaster preparedness. Skills and knowledge of CBOs' leadership will also be developed in financial management, human resource management, resource mobilization, interpersonal communication and presentation and negotiations skills. The provision of Citizen Community Boards (CCBs) in Local Government Ordinance (LGO 2001) provides a good ground to organize communities and mobilize resources for issues like local level disaster risk management.

Civil Defence:

The Civil Defence Department will rush to the scene of a disaster and will estimate the damage done and will prepare a rescue plan with other service departments.

Equipment:

- Bomb Disposal Tool Kit
- Bomb Blankets
- Bomb Bins
- Metal detectors
- Remote removal poles
- Search rods
- Helmets
- Civil Defence Volunteers
- Boats
- OBM Engines
- Oars
- Life Jackets
- Life Rings

Rescue 1122

After confirmation of disaster/incident/bomb blast, Rescue 1122 will respond to the emergency spot with the following manpower and equipment, which are available round the clock to control & manage any kind of emergency.

³ Source: District Disaster Risk Management Plan District Muzaffargarh

- Three fully-equipped ambulances with trained rescuers are on high alert to meet any kind of road traffic accidents & serious medical emergencies;
- Specialized Rescue Vehicle (MGR01) with (T.E.A) tools, equipment & accessories along with highly trained & well skilled Disaster Rescuers will be available round the clock to control any kind of emergency,
- Deputation of rescuers for assistance of Fire Brigade Staff in different shifts at Fire Brigade Station Muzaffargarh as District Emergency Service Rescue. The 1122 Muzaffargarh does not have fire vehicles yet.
- Establishment of the key points to provide immediate rescue and medical aid & facilities at the incident site by maintaining the 7-minute response time.

Available Resources of 1122

- District Emergency Officer (D.E.O): Dr. Irshad-ul-Haq
- Control Room in Charge (C.R.I): Syed Faisal Karim Hamdani
- Station Coordinator (S.C): M. Imran Khan
- Transport Maintenance Inspector (T.M.I): Ijaz Ahmad
- Accountant (ACCT): Hafeez Ullah Khan
- Shift in Charge (S.I): M.Sajjad
M. Tahir Abbas
Safdar Abbas
- Wireless Technician (W.T): Mansoor Ahmaf

Table 0.1

Sr. No.	Designation	Total Strength
1	Computer, Telephone, Wireless, Operator (C.T.W.O.)	12
2	Emergency Medical Technician (E.M.T.)	21
3	Disaster Rescuer (D.R.)	14
4	Accountant Assistant (ACCT. ASST.)	01
5	Electrician/ Tube well Technician (E.T./T.T.)	01
6	Senior Stock Keeper (S.S.K.)	01
7	Light Transport Vehicle (L.T.V.)	21

Source: District Disaster Risk Management Plan District Muzaffargarh

Strategies for Disaster Risk Management

Flood:

- Response will be led by CDMC Leader and his assistant and members of CDMC and involved willing youth in a disciplined fashion.
- The team should act practically and have close coordination and cooperation with the govt., responding institutions, and the community.

Heavy Rain:

- Information Dissemination
- Displaying signs warning of the existence of mud or other impediments to travel
- Fallen electric wires should be covered
- Hazard awareness program for the community
- Establishing linkages with the government agencies both for information and response
- An Emergency Communication System should be established among the team members and associated institutions.

Standard Operating Procedures (SOPs)

Since the major hazard that the community is vulnerable to is floods, SOP (Standard Operating Procedure) is elaborated for the community hereunder.

As per the routine practices, the Pakistan Meteorological Department shall monitor and control the flood forecasting and monitoring systems and release information accordingly to all government agencies. Once the information reaches the DCO office it will be communicated to the relevant responding agencies. In this case, Khangarh Doma UC Secretary shall receive information from the Tehsil Office via message and/or fax. He shall then proceed to disseminate this information to the CDMC leader as explained in the Information Distribution System.

The CDMC leader will take the lead in informing the local notables, his committee members, Imam Masjid, and the community through his Admin, Logistics and Communication Group. Further, the Admin, Logistics and Communication team should lead the identification of the closest and safest site for the possible evacuation of the community. The group should ensure the provision of proper transportation given by the government for the purpose of evacuation. On reaching the camps, this group is responsible to register each community member through a formal process given by the government.

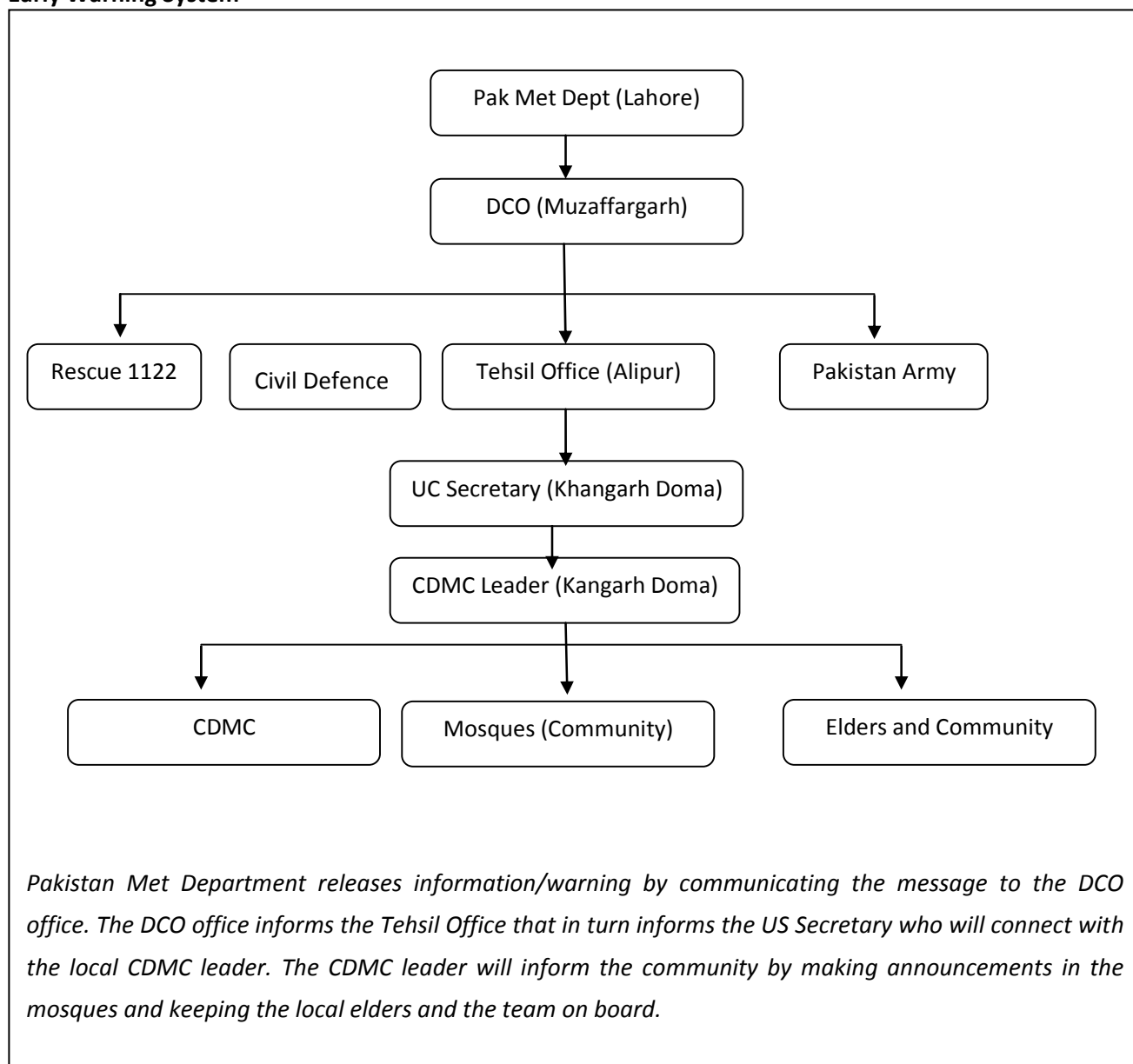
The Search and Rescue Group should be mobilized to function before the arrival of professional teams from the government or Army as per need and assist the incoming teams in their operations. In addition, the group should help in evacuating the community as per the ground realities and needs.

The First Aid Group should lead in assessment of the victims/those affected and give first aid as per need. They are expected to take part actively in the triage process.

The Fire Fighting Group is responsible to shut off the main utilities of the community and take part in other activities in which they have been trained.

The government agencies including the responders like the Civil Defence and Rescue 1122 (if activated during the disaster) are expected to take on board all the responsible members of the CDMC. In particular, the CDMC leader has to be taken into confidence.

Early Warning System



Land Use Planning:

No proper land use planning strategy or instructions are available for the community. They construct buildings manually as per their wishes regardless of the fact that the nature of their soil can't support heavy buildings and thus would suffer sinking. In addition, protection bunds constructed by the locals on their own without due planning have not been useful enough in protecting the community. Therefore, any such interventions, by the community or for the community, need careful examination of the ground conditions, i.e., land survey/soil survey of the area for better planning.

Rules and Regulations (Policy Making towards a safer community):

The community envisions a “resilient community supported by a team of dedicated volunteers to make the community safe from natural disasters”. This implies the wishes of the community to see practical measures taken on the ground level. Introduction of a new canal system that still doesn't exist in the Moza is believed to help reduce losses to flooding. In addition, rules and regulations need to be legislated at the community level and UC level to leverage the pre-requisites of a safer community. Building across the channel should be banned unless it's within an acceptable limit. The quality of construction material needs to be monitored. Residential houses need to be reviewed for retrofitting and new buildings be constructed as per the building codes applicable within the country taking into consideration, with due seriousness, the concept of flood proof buildings.

Establishment of Emergency Coordination Centre (ECC)

The establishment of a Community Disaster Management Committee requires the establishment of an Emergency Coordination Centre in the community where the committee members could gather and plan for their activities and where they can coordinate their activities with government responding agencies.

Structural Mitigation Strategies

Diversion Channels and Retention Ponds in the Upstream

The two major rivers confluence at a point downstream at least 12 km from the community in the adjoining Sarki Moza of the same UC; however, there exists enough space between the two in the upper part (relative to the community) where retention ponds could be dug to store water when the river is flooding. Similarly, diversion channels could be constructed to safeguard the community and provide an alternate nearby source of water in times of normalcy. Since the community has a past practice of erecting small protection bunds for their safety, motivating them for such a purpose shouldn't pose a big challenge.

Re-construction of Broken/Breached Bunds

What worries the community is the non-reconstruction of the breaches that brought in waters in the floods of 2010. In addition, a mini-river (called so by the locals) that derives from the Chenab and drops water into the Indus when the Chenab is flooded but remains dry during non-flood periods and becomes a field of cultivation for the community, adds to the worry of the community. Therefore, it's urged that these breaches be addressed seriously and the broken parts be renovated/reconstructed.

Appendix

Contacts of CDMC

Community Disaster Management Committee (CDMC) for Khangarh Doma, Tehsil Ali Pur, District Muzaffargarh

S. No	Name	Designation	Contact Number
1	A	CDMC Coordinator Secretary Union Council Khangarh Doma	
2	B	Team Leader	
3	C	Assistant Team Leader	
4	D	First Aid Group Leader	
5	E	Asst. Group Leader	
6	F	Asst. Group Leader	
7	G	Fire Fighting Group Leader	
8	H	Asst. Group Leader	
9	I	Asst. Group Leader	
10	J	Search and Rescue Group Leader	
11	K	Asst. Group Leader	
12	L	Asst. Group Leader	
13	M	Logistics/Administration & Communication Group Leader	
14	N	Asst. Group Leader	
15	O	Asst. Group Leader	

Details of Educational Institutions:

School (Educational Institution)	Capacity
Primary School Malik Arayen (Centre)	255 students
Bhambri Primary School	180
Primary School Ghakri for Boys	300 (154 Reg., 144 Irreg.)
Primary School Ghakri for Girls	204
Primary School for Boys Kotla Bakhsh (2)	235 and 141
Haji Khair Mohammad Madrassa	70
Al-Aziz Madrassa Malik Arayein	60
Eid Gah Madrassa Malik Arayein	204

Details of Veterinary, Health Institutions

S. No	Type	Capacity	Status
1.	BHU (Ghagri)	10 bed (6 rooms)	Renovated after floods of 2010 but only partially functional
2.	Veterinary Clinic	Unknown	Non-Functional

Lists of NGOs and CBOs Active in the Area

Name	Founded in
Awaz Foundation	2005
Dawat-e-Islami	2000
Agaz Foundation	
Hamdard Citizen Community Board, Khangarh Doma Moza	Feb 17, 2011
AWARD Foundation	

Production Plan

Crops	Kharif							Rabi				
Months	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep
Wheat	C						H					
Cotton			H					C				
Cereals (Moong)							C		H			
Pea		C				H						
Mustard				C		H						
Onion			C				H					
Gram	C					H						
Green Chili			C			H						
Millet	C											H
Maize							H				C	
Barsim	C						H					
Tobacco	C							H				
Garlic	C						H					

Cultivation = C
Harvest = H

Annex 3
DIG Manual

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DIG Manual

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Earthquake Disaster Risk Management for Almaty City in the Republic of Kazakhstan
Japan International Cooperation Agency (JICA)

1. Outline

(1) What is DIG?

DIG stands for Disaster Imagination Game, which is the training program for disaster risk management.

The English term 'dig' has meanings of "understand", thus it expects to imply, "raising awareness of disaster management", "Explore the locality", and "Understand disaster".

(2) Procedure for DIG

1. 5-10 people form one group and plot damage estimations and resources on a map. (Understanding Current Situation)
2. Participants list advantages and disadvantages of communities selected by the participants. (Evaluation of Current Situation)
3. Participants list necessary countermeasures to reduce disaster damages.
4. Each group will present results, and then all groups discuss and choose effective disaster countermeasures.

2. Effects

(1) Direct Effects

- Players can easily understand advantages and disadvantages of the local communities.
- Players can exercise "Image Training" of the disaster countermeasures.

(2) Indirect Effects

- Raising Disaster Awareness
- Networking among people who are involved in disaster risk management



3. Implementing DIG

(1) Preparation

- **Staffing**

【Planner and Operator of DIG】

1. Moderator
2. Expert who explains Damage Estimation
3. Advisor

【Participants】

1. Players

- **Materials and Tools**

【Map】

1. Topographic Map (Scale will be differentiated by purposes.
Size should be about the size that can cover tables to be used)
 - o Scale : 1/200,000 and above (E.g., For nation-wide plan of allocating human and physical resources)
 - o Scale : 1/50,000~1:25,000 (E.g., For managerial and operational plan of cooperation from cities surrounding affected areas)
 - o Scale : 1/10,000 and less (E.g., For relief operation plan for affected areas)
 - o Scale : 1/5,000 (E.g., For managerial and operational plan for evacuation centres)

【Stationery】

2. Transparent plastic sheet (approx. 2m×1.5m)
3. Permanent markers (thick, thin, 5-8 colors): for writing on map
4. Benzene & Tissue paper: for erasing markers
5. Color labels (with glue, several colors), colored clay (several colors), toothpicks: for identifying the locations
6. Post-it notes (big, small, different sizes): for writing comments
7. Scotch tape, thicker tapes for writing comments

• Setting Theme of DIG (disaster type, area, level etc.)



• Estimation of Participants



• Preparation of Venue • Invitation of Participants



• Preparation of Maps • Stationery, Materials and Tools



• Preparation of Documents for Distribution



• Confirmation of Task Allocation of Staffs

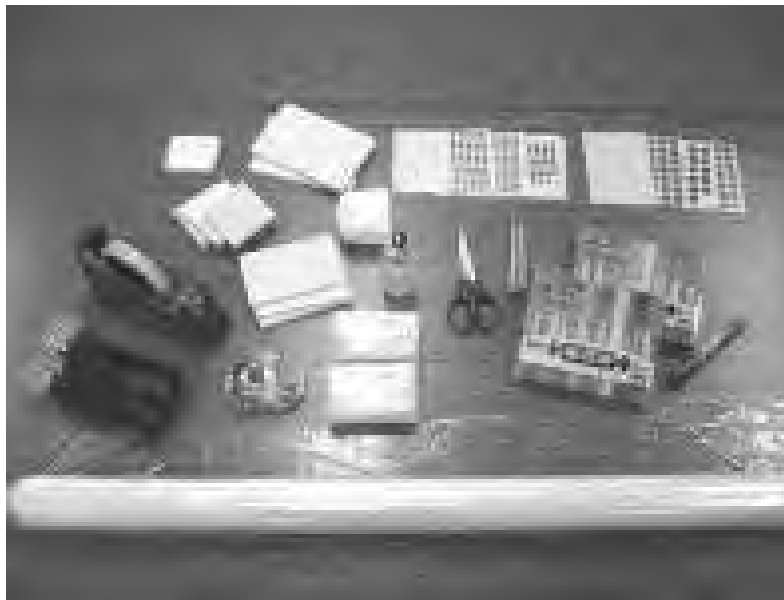


• DIG Implementation

8. White boards, Big paper for writing comments
9. Hazard Map/ Damage Map: for reference
10. OHP / sets of presentation materials: for presentations by groups
11. Table, chair, microphone : for presentation

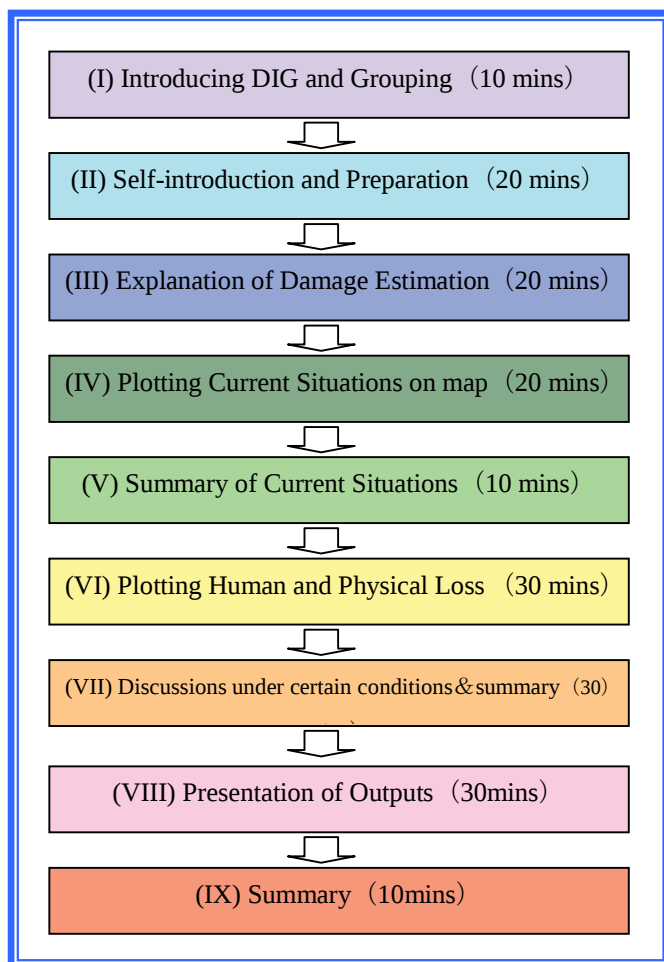
【Others】

1. Name tags : for introducing participants
2. Writing tools (notebooks, pencils, white board): for recording discussions
3. Camera, video, voice-recorder : for recording

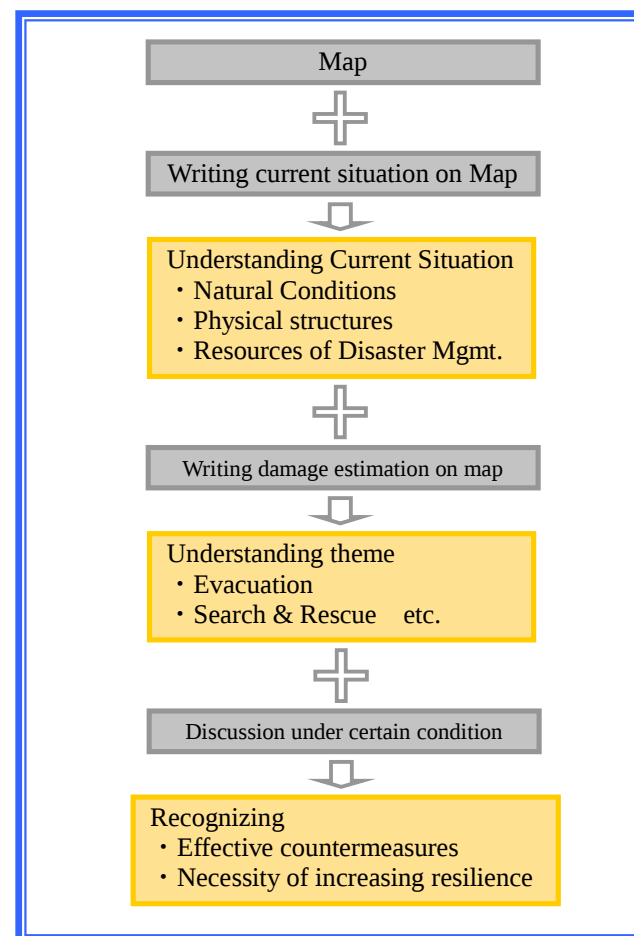


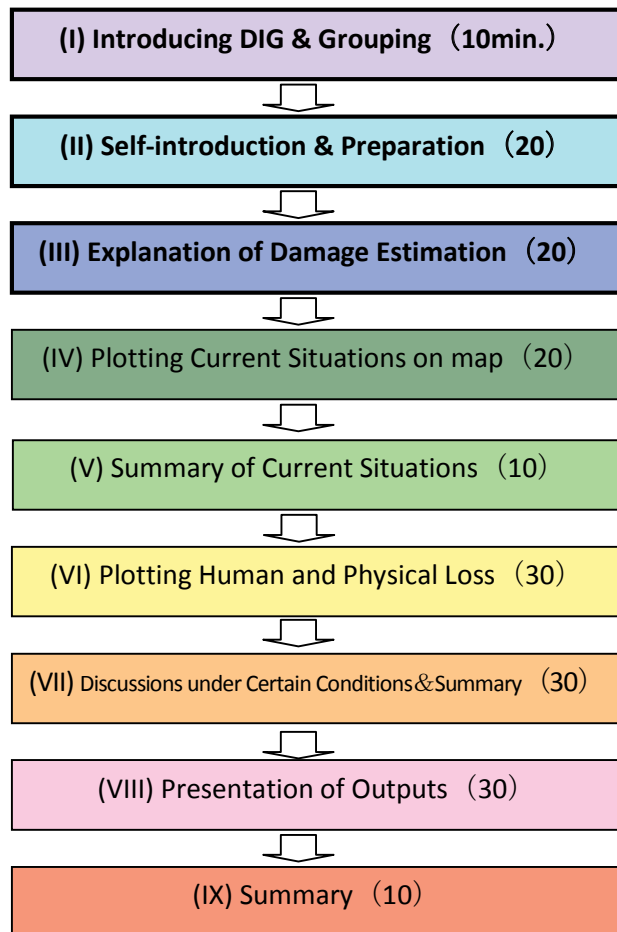
(2) Implementation

【Overall Program】



【Work Flow and Target Outputs】





【Contents of Each Session】

(I) Introducing DIG & Grouping

(I-1) Introducing DIG outline

(I-2) Explanation of rules of DIG

For the active participation and discussion, listen to the other persons comments; do not criticize nor deny, but provide alternative ideas. Never tell information you gain during DIG to others.

(I-3) One group consists of 5-15 people.

(I-4) Decide one leader, presenter, and note taker in each group

(II) Self-introduction and Preparation

(II-1) Self-introduction and ice-breaking

Everyone introduces oneself to ice-break for smooth discussion.

(II-2) Create image of disaster

Participants watch visual materials to have an image of disaster in order to work on DIG with reality.

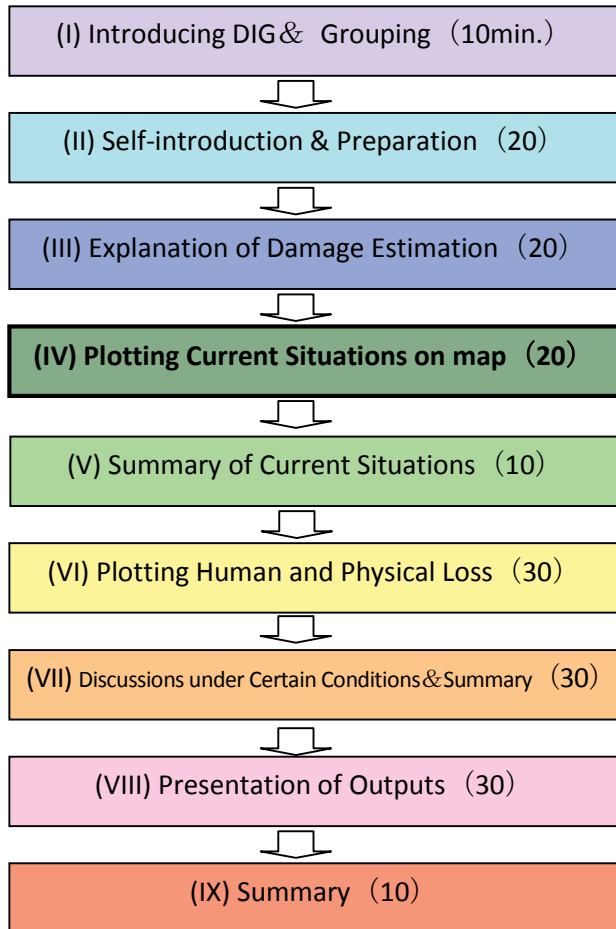
(III) Explanation of Damage Estimation

(III-1) Setting viewpoints of participants

Set a viewpoint either "General public" or, "Public administrator", or "Local Leader", etc.

(III-2) Damage estimation

Hazard Maps, Damage Maps will be provided and explained.



(IV) Plotting Current Situation on Map

(IV-1) Preparation of map

In case maps consist of small pieces or parts, they will be attached together into one sheet with scotch tape or glue.

(IV-2) Setting the map on table

Set the map on the table. Transparent sheet is held on top with scotch tape.

(IV-3) Identifying natural condition

Current natural conditions shown below are identified. If possible, old natural conditions are identified.

(IV-4) Plotting city structures

Identify the city structures, roads and open spaces. (a legend is prepared)

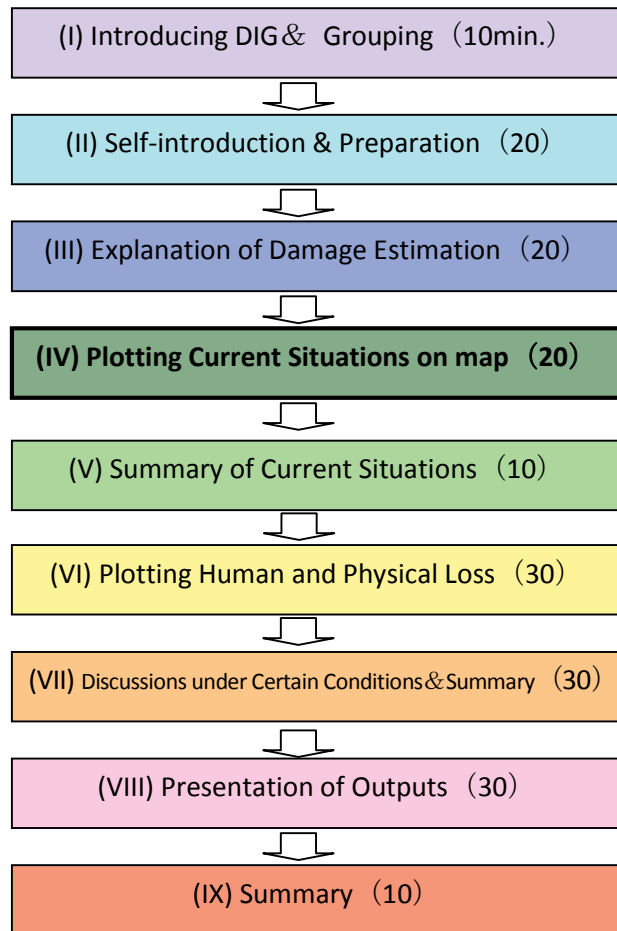


- Old City Centre
- Old river, wetland
- Old farmland

- Current City Centre
- Current mountains, hills, valley, plain
- Current river, channel, sea, lake

- Main roads
- Narrow Roads
- Parks, Open space

Blue thick lines
Red thick lines
Green lines



(IV-5) Plotting risks and resources

Legend will be decided (utilizing colored pens, Post-it notes, colored clay, and tooth picks)

• Public Buildings, Medical Facilities

- City Hall, District offices, Nahiye office, Police
- Univ., School, Kindergarten

- Hospital and Clinics

- Basij office, community meeting place

• Other disaster facilities

- Evacuation center, evacuation place
- Rescue and Relief operation
- Shops (food, commodities, medicines, fuel)

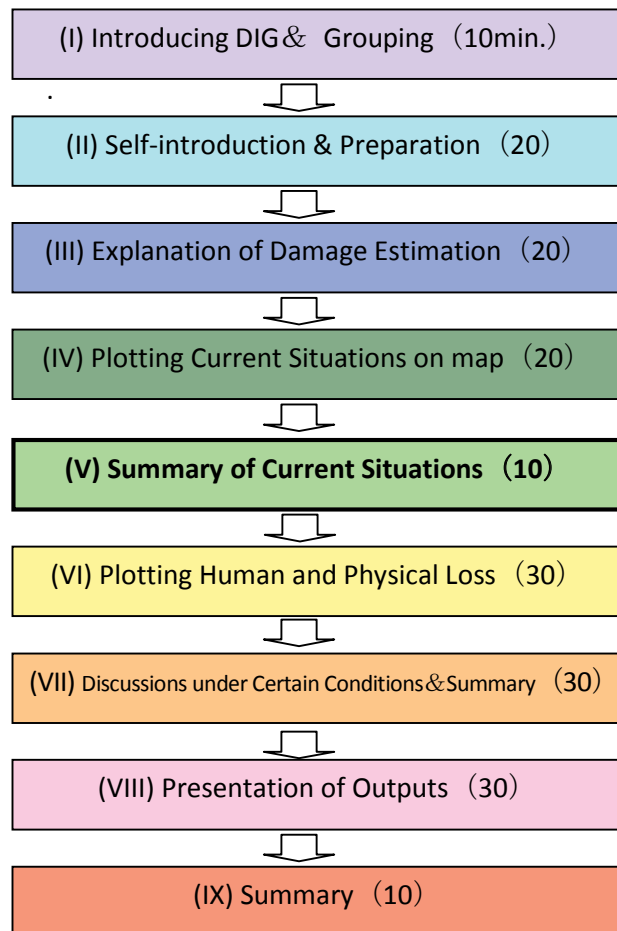
- Fire hydrants, pools, water tanks
- Private companies which own heavy machinery

• Hazardous facilities, falling objects, vulnerable facilities and areas

- Storage of hazardous materials
- Walls made of blocks and stones, steep slope

- Signboards
- Chronic traffic congestion





(V) Summary of Current Situations

(V-1) Plotting items (list description for each item)

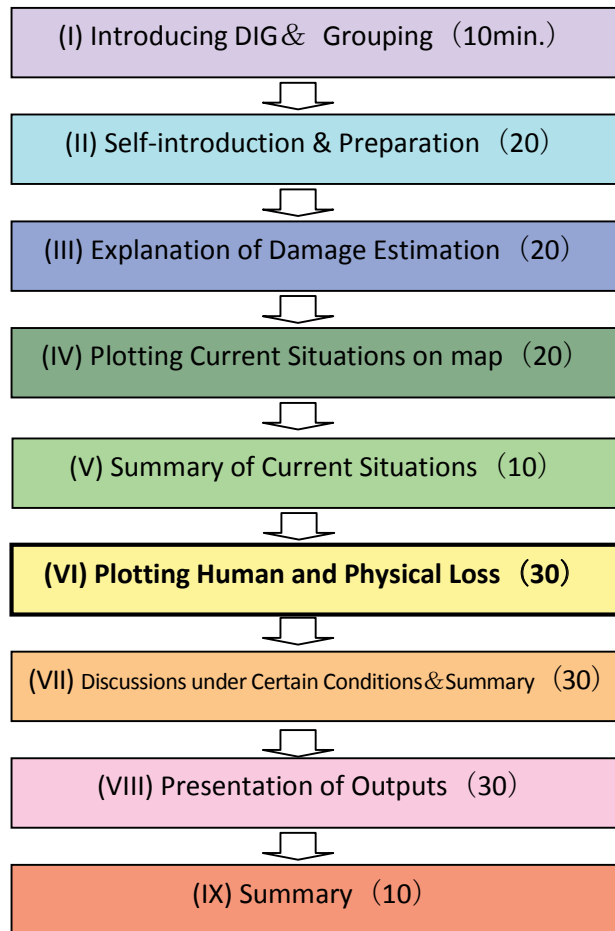
- What are the specific features of the area?
(Natural conditions, city structures, resources for disaster management, risks)
- What are the advantages of the area in disaster risk management?
- What are the disadvantages of the area in disaster risk management?



(V-2) Summary of the groups

Compile representative comments and important points from each group





(VI) Plotting Human and Physical Loss

(V-1) Choosing possible hazards in the target area

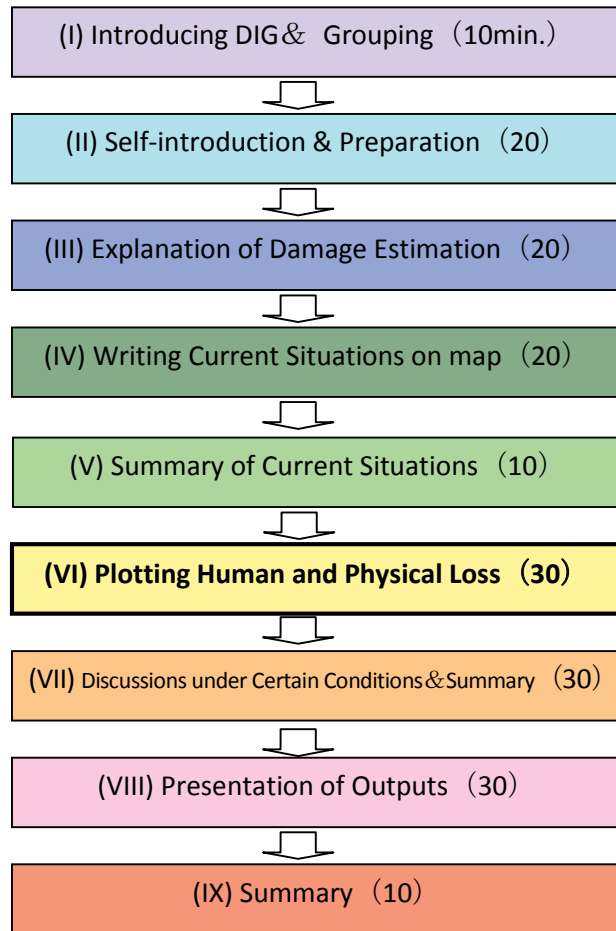
As related hazards, possible landslides, and tsunami affected areas are plotted and the damages caused by these hazards are considered.

- Damage estimation of landslides and liquefaction are distributed by grids.
- Steep slopes which are estimated high risk are marked in color.
- Possible damage areas of Tsunami of 10m and above are marked in color.

(V-2) Plotting damage estimation (buildings)

- Building Damages
- Damage estimations of buildings are distributed by grids.
- The number of buildings estimated heavily damaged are colored in red by grids.
(Buildings colors are selected at random)





(V-3) Visualizing physical damages

Based on the group discussion, players share the common understandings about the damage situation.

— Discussion Points

- Important facilities regarding disaster risk management, relief and rescue in the affected areas.

(Municipality, District, Nahiye office, Disaster Management Base, basketball courts, Police, evacuation sites, Schools, Mosques, Basij office, Hospitals and Clinics)

- Think about Isolated Areas

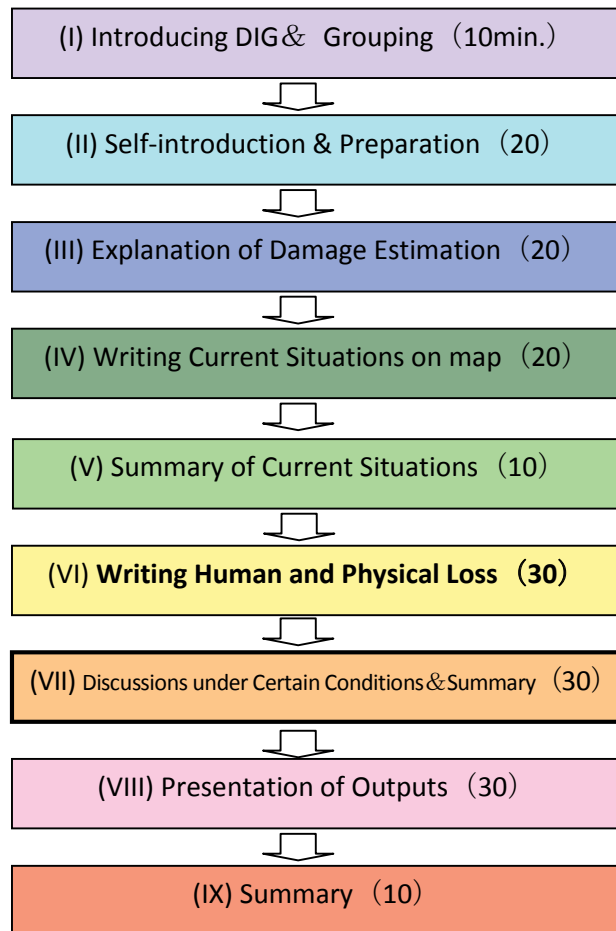
(Road blockage due to building damage, landslide, gas explosion etc.)

—Results of the discussion are listed on Post –It notes

(V-4) Plotting human losses

- | |
|--|
| • # of Residents, estimated deaths, and casualties are distributed by grids. |
| • # of residents are plotted in BLUE by grids. |
| • # of deaths are plotted in RED by grids. |
| • # of casualties are plotted in PINK by grids. |





(VII) Discussion by Providing Set-conditions

Facilitators set pre-conditions of the disaster and show them to the players. Players train themselves by imagining the situations in the target area based on the pre-conditions and plan countermeasures and community actions.

(VII-1) Procedures

- Facilitator decides and provides preconditions such as date (season), time, weather etc. (Earthquake occurred at 1 pm on Wednesday in the summer time, and it is raining)
- Each group discusses the countermeasures under the set conditions of the set theme (such as evacuation) by groups.
- Discussion results are compiled in the sequence of **problems, reasons, countermeasures** on the post-it notes at each agenda.

(VII-2) Providing conditions (after earthquake)

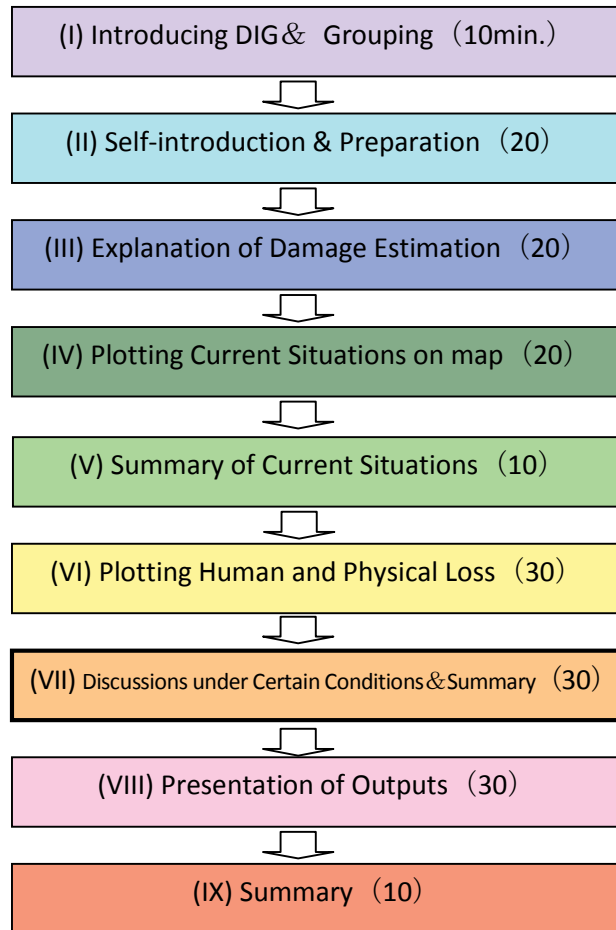
a) Communication Method

— Question

TDMMO wants to issue an evacuation order to the residents of District 17. Both land lines and mobiles are cut off. How do you communicate with the necessary persons? Think about **TO WHO, TO WHERE, and HOW** do you transmit the message.

— Points

Think about the situation when most of the roads are blocked. Landlines and mobile phones are out of order. How do you inform district, local community leaders? Think about the information flow such as district disaster manager, community leaders, Red Crescent Volunteers or members, etc.



(VII-3) Setting conditions

d) Operation of Evacuation Centres

— Sample Question

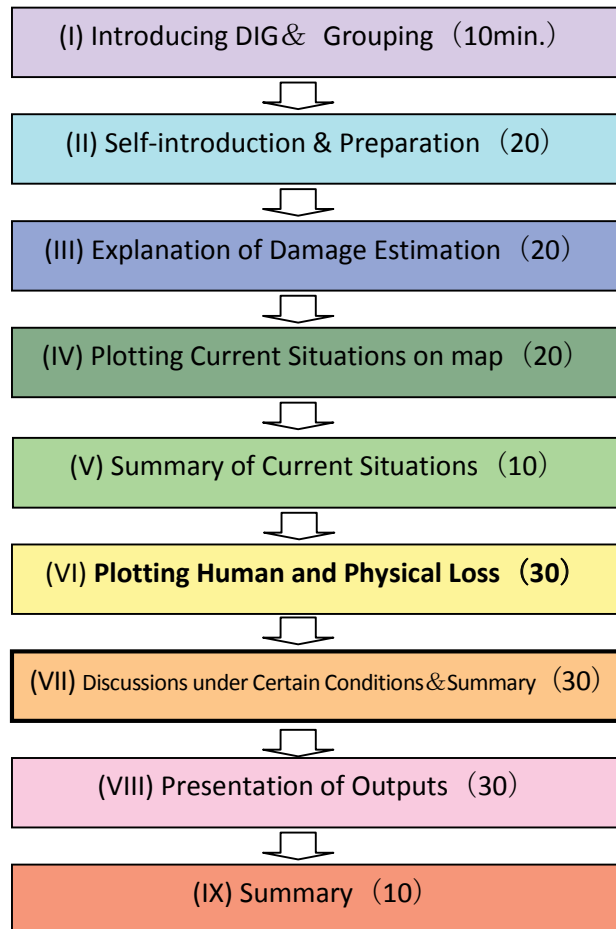
Residents who lost houses are gathering on the street looking worried. First of all, estimate the number of evacuees based on the damage estimation. Think about what to do step by step and make a concrete plan.

— Points

Compare the number of estimated evacuees with the accommodation capacity.

Imagine the congested evacuation centre and think about operation of the evacuation centres; who will operate, how to operate, how to get necessary items, how to check the stocks. Make a plan for task allocations such as administration, food distribution, medicine, etc.

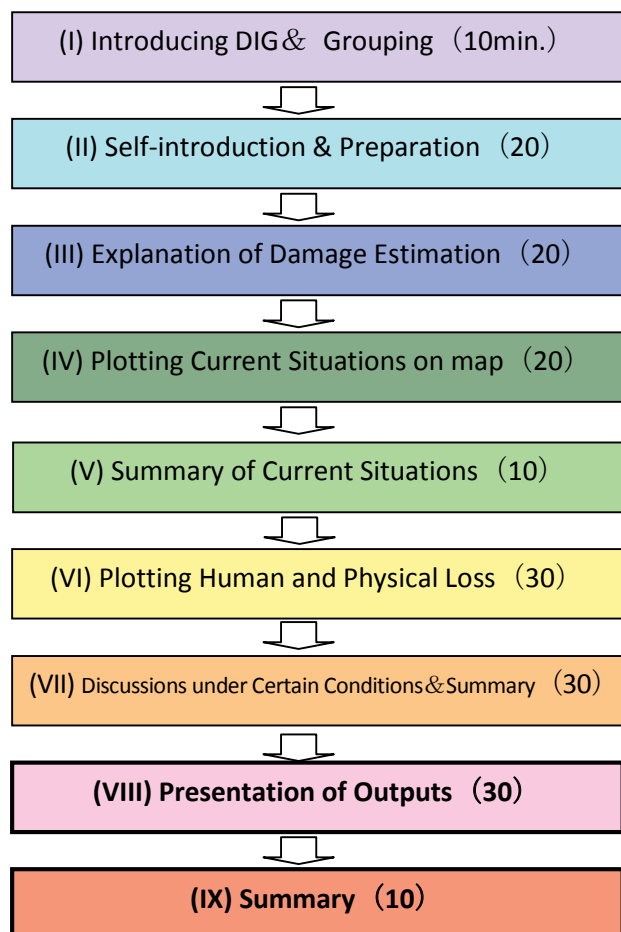




e) Other Issues and Countermeasures

- Write on Post-it notes possible damage in limited areas or particular to an area, which are not included in the damage estimation. Compile them based on “Where”, “What” and “When”.
- Points to Consider
 - ✓ Possible Evacuation Sites
 - ✓ Possible Evacuation Routes
 - ✓ Possible Tent Town
 - ✓ Possible Logistic Centres
- Plot important damage
- Discuss countermeasures to reduce damage and compile the results on Post-it notes.
 - Points to Consider
 - ✓ Necessary items to solve the problems
 - ✓ Things to prepare in advance
 - ✓ How to prepare
 - ✓ Expectations of public authorities
 - ✓ Things to do by individuals
- Select effective and efficient countermeasures





(VIII) Presentation of Outputs

Presenters and Facilitators give a presentation on what has been discussed and a Summary of what the teams wrote on Post-It notes.

— Comments —

During the emergency operation and disaster risk management, conditions and situations vary; thus, there is no best way. Based on each different condition, it is important to start better countermeasures that can be implemented as soon as possible. If other groups planned different actions and countermeasures, it is important to consider why they planned that way.

(IX) Summary

The advisor responds to the presentation and gives comments. Participants share their common understanding that the DIG session is an opportunity for reducing vulnerabilities and planning how to increase resilience. After the session, each organization and individual starts concrete actions.



References : Working Group for DIG Training Manual Publishing
 : Homepage of Shizuoka Prefecture Disaster Prevention Centre
 : DIG Presentation material for Caribbean Disaster Management Project, JICA