

No.	District Name	No.	District Name	No.	District Name	No.	District Name	No.	District Name
A1	Bagh	B20	Nasirabad	G3	Zaghr	P2	Bahawalnagar	P21	Sahiwal
A2	Balochistan	B21	Niazik	G4	Sherkhu	P3	Bahawalpur	P22	Saghalia
A3	Kali	B22	Tangur	G7	Jurzo-Nagar	P4	Dhokar	P23	Shekhupura
A4	Mirza	B23	Hafin	H1	Islamabad	P5	Chakwal	P24	Sialkot
A5	Muzaffarabad	B24	Cuttis	K1	Azadnabad	P6	Comot	P25	Toza Tek Sagar
A6	Nowshar	B25	Siba	K2	Bureis	P7	D. S. Khan	P26	Yusuf
A7	Poonch	B26	Zob	K3	Rataghar	P8	Faisalabad	S1	Haidi
A8	Sudhanil	B27	Zaral	K4	Bureis	P9	Gujranwala	S2	Dadi
A9	Haidi	B28	Vashik	K5	Chowaddi	P10	Gujral	S3	Ghok
A10	Haidi	B29	Hamsa	K6	Ghail	P11	Halebabi	S4	Hydrobad
B1	Awatari	B30	Shoan	K7	D. I. Khan	P12	Jhang	S5	Jacobabad
B2	Baloch	B31	Dispad Arin	K8	Hingru	P13	Shokri	S6	Jamshoro
B3	Bolan	F1	Bajaur Agency	K9	Haidi	P14	Kasa	S7	Kaokh
B4	Chagai	F2	Khyber Agency	K10	Karac	P15	Khanwal	S8	Kashmore
B5	Dea Ragi	F3	Kunar Agency	K11	Konai	P16	Kharidi	S9	Kharpur
B6	Gwadar	F4	Mohmand Agency	K12	Konidin	P17	Lahore	S10	Larkana
B7	Jalalabad	F5	North Waziristan Agency	K13	Laso Marwat	P18	Lahur	S11	Mahat
B8	Jhal Maga	F6	Orakzai Agency	K14	Lower Di	P19	Lodhran	S12	Mipur Khai
B9	Kabul	F7	South Waziristan Agency	K15	Malakand	P20	Mand Bahaudin	S13	Nasirpur-Feroze
B10	Kacchi	F8	FR Bannu	K16	Manshera	P21	Manwala	S14	Nandatalar
B11	Khanar	F9	FR D. I. Khan	K17	Mardan	P22	Multan	S15	Qambar and Shikharbuda
B12	Kharidi	F10	FR Kohat	K18	Nowshera	P23	Muzaffargarh	S16	Singhar
B13	Kili Abdullah	F11	FR Lakki Marwat	K19	Peshawar	P24	Narokan Sahar	S17	Shikarpur
B14	Kili Sarkat	F12	FR Peshawar	K20	Sawal	P25	Narowal	S18	Sukkur
B15	Kohli	F13	FR Tank	K21	Shangla	P26	Okara	S19	Tarbi Mahyar
B16	Ladkai	G1	Asokai	K22	Swabi	P27	Pakistan	S20	Tardi Muhammad Khan
B17	Ladkai	G2	Diani	K23	Tank	P28	Rahim Yaq Khan	S21	Thasphakar
B18	Mairan	G3	Gonochi	K24	Upper Di	P29	Rajpur	S22	Thatta
B19	Musabbi	G4	Ghazal	P1	Atok	P30	Rawalpindi	S23	Unskor

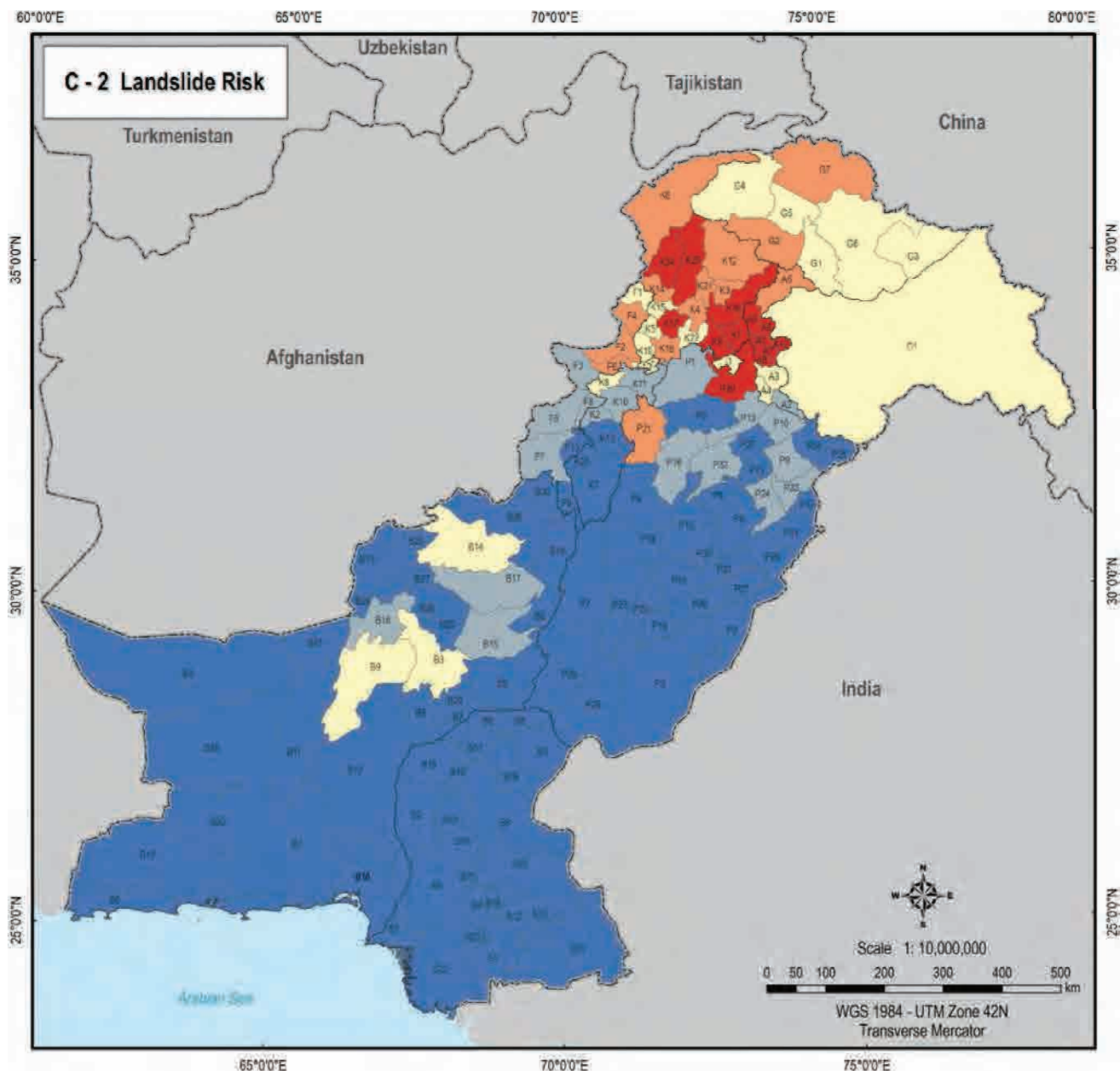
**Legend**

**Flood Risk Category**

- Very High
- High
- Medium
- Low
- Very Low
- No data

Source: JICA Study Team

The Project for National Disaster Management Plan in the Islamic Republic of Pakistan

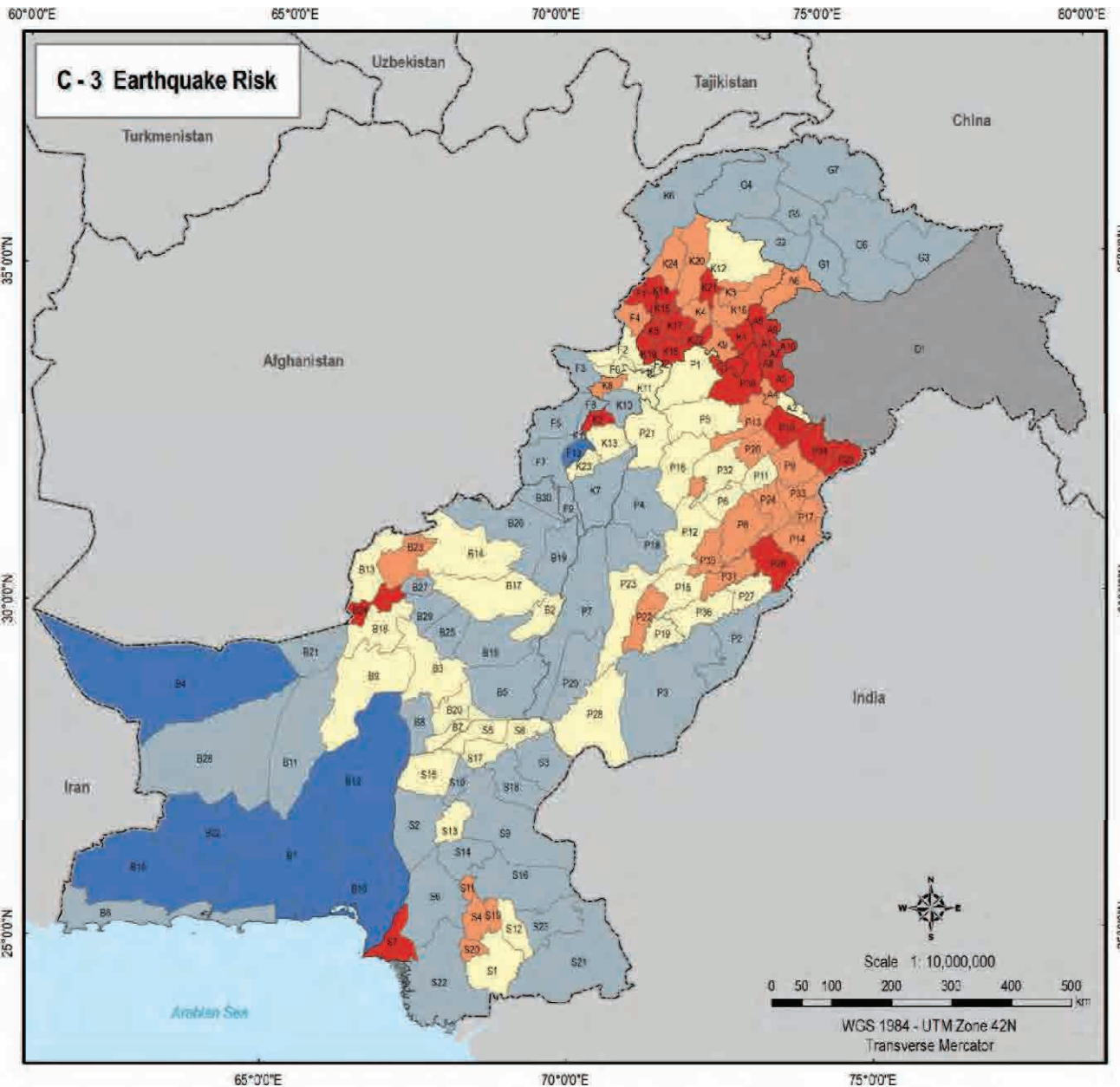


No.	District Name	No.	District Name	No.	District Name	No.	District Name	No.	District Name
A1	Bagh	320	Nasirabad	376	Gilgit	372	Gilgit-Baltistan	371	Sohawal
A2	Bahawal	321	Nawabshah	377	Skardu	373	Rahwalpur	372	Sargodha
A3	Kohat	322	Punjab	378	Hunza/Saygin	374	Shekhar	373	Shekhupura
A4	Mirpur	323	Faisalabad	379	Islamabad	375	Chakwal	374	Sialkot
A5	Muzaffargarh	324	Gujrat	380	Abbottabad	376	Chenab	375	Toba Tek Singh
A6	Nawabshah	325	Sialkot	381	Bannu	377	D. G. Khan	376	Vehar
A7	Poonch	326	Zahir	382	Balochistan	378	Fakirpur	377	Wahai
A8	Sahiwal	327	Zair	383	Buneri	379	Faisalabad	378	Wazir
A9	Hattian	328	Wahai	384	Chashma	380	Durrani	379	Toba Tek Singh
A10	Haveli	329	Haveli	385	Chitral	381	Hafiznagar	380	Hujraabad
B1	Awantipora	330	Shivchar	386	D. I. Khan	382	Jhang	381	Jacobabad
B2	Bakhar	331	Disputed Area	387	Hangu	383	Islamabad	382	Jamshoro
B3	Bolan	332	Bajaur Agency	388	Harpur	384	Kasur	383	Karachi
B4	Chagla	333	Khyber Agency	389	Karachi	385	Khanewal	384	Kasimabad
B5	Dera Bugti	334	Kunhar Agency	390	Kohat	386	Khatkhata	385	Khanpur
B6	Dera Ismael Khan	335	Mirpur Agency	391	Kohistan	387	Lahore	386	Lakhan
B7	Dera Ghaat Kot	336	North Waziristan Agency	392	Lakki Marwat	388	Lahore	387	Multan
B8	Dera Muzaffargarh	337	Orakzai Agency	393	Lower Dir	389	Lodhran	388	Muzaffargarh
B9	Dera Tarkhan	338	South Waziristan Agency	394	Makran	390	Mandi Bahaudin	389	Nasirabad
B10	Dera Yousofzai	339	FR Bannu	395	Mansherwah	391	Mansherwah	390	Nasirabad
B11	Dera Ghokan	340	FR D. I. Khan	396	Mardan	392	Multan	391	Nasirabad
B12	Dera Ismael Khan	341	FR Kohat	397	Nasirabad	393	Muzaffargarh	392	Nasirabad
B13	Dera Muzaffargarh	342	FR Lakki Marwat	398	Nasirabad	394	Nasirabad	393	Nasirabad
B14	Dera Tarkhan	343	FR Peshawar	399	Rawalpindi	395	Nasirabad	394	Nasirabad
B15	Dera Yousofzai	344	FR Tank	400	Shangha	396	Okara	395	Nasirabad
B16	Dera Ismael Khan	345	FR Tank	401	Swabi	397	Pakistan	396	Nasirabad
B17	Dera Muzaffargarh	346	FR Tank	402	Tank	398	Rahim Yar Khan	397	Nasirabad
B18	Dera Yousofzai	347	FR Tank	403	Upper Dir	399	Rajouri	398	Nasirabad
B19	Dera Muzaffargarh	348	FR Tank	404	Attock	400	Rawalpindi	399	Nasirabad

- Legend**
- Landslide Risk Category**
- Very High
  - High
  - Medium
  - Low
  - Very Low
  - No data

Source: JICA Study Team





No.	District Name	No.	District Name	No.	District Name	No.	District Name	No.	District Name
A1	Bajaur	B20	Nasirabad	S5	Gilgit	P2	Burawatsagar	F31	Salmal
A2	Bajaur	B21	Nuzki	S6	Skardu	P3	Balochistan	F32	Sargodha
A3	Kali	B22	Panjgur	S7	Hurza Nagar	P4	Dhokla	F33	Shekhpura
A4	Mipur	B23	Pehni	S8	Islamabad	P5	Chitrawa	F34	Sialkot
A5	Muzaffargarh	B24	Cucta	S9	Akotabad	P6	Chinot	F35	Toba Tek Singh
A6	Nawabshah	B25	Sibi	S10	Bemal	P7	C. S. Khan	F36	Vehari
A7	Poonch	B26	Jhok	S11	Balaghat	P8	Faisalabad	S1	Bah
A8	Sudhnot	B27	Zairi	S12	Saran	P9	Gujranwala	S2	Dadu
A9	Trabali	B28	Wapuh	S13	Chamsaddi	P10	Gurail	S3	Ghok
A10	Haveli	B29	Hama	S14	Chitral	P11	Hakzabad	S4	Hydrabad
B1	Awajan	B30	Shakar	S15	D-1 Khan	P12	Jhang	S5	Jacobabad
B2	Barkhan	D1	District Area	S16	Hargu	P13	Jhelum	S6	Jamsheri
B3	Bolan	F1	Bakur Agency	S17	Harpur	P14	Kasur	S7	Karachi
B4	Chagai	F2	Kharber Agency	S18	Karak	P15	Khanewal	S8	Kashmore
B5	Dea Bugt	F3	Kuzman Agency	S19	Kohat	P16	Khuzdab	S9	Kheipur
B6	Gwadar	F4	Mohmand Agency	S20	Koristan	P17	Lahore	S10	Larkana
B7	Jalundhar	F5	North Waziristan Agency	S21	Laki Marwat	P18	Ludhian	S11	Multan
B8	Jhal Magsi	F6	Graza Agency	S22	Lower Dir	P19	Muzaffargarh	S12	Mirpur Khas
B9	Kalat	F7	South Waziristan Agency	S23	Malakand	P20	Muzaffargarh	S13	Nasirabad
B10	Kohat	F8	FR Barani	S24	Manshera	P21	Muzaffargarh	S14	Nawabshah
B11	Kranji	F9	FR D-1 Khan	S25	Mardan	P22	Muzaffargarh	S15	Quetta and Shandkot
B12	Khyber	F10	FR Kohat	S26	Rawalpora	P23	Muzaffargarh	S16	Sargodha
B13	Killa Abdallah	F11	FR Laki Marwat	S27	Peshawar	P24	Narwana Sahib	S17	Shekhpura
B14	Killy Saikhan	F12	FR Peshawar	S28	Sawal	P25	Narwana	S18	Sukkur
B15	Kohat	F13	FR Tank	S29	Shangla	P26	Okara	S19	Talpur District
B16	Ladakh	S1	Adobe	S30	Swabi	P27	Pakistan	S20	Talpur District
B17	Lodhian	S2	Damer	S31	Tank	P28	Rahim Yar Khan	S21	Tarapur
B18	Manshera	S3	Ghanchi	S32	Upper Dir	P29	Rajapur	S22	Thatta
B19	Muzaffargarh	S4	Groza	S33	Attock	P30	Rawalpindi	S23	Unwerkot

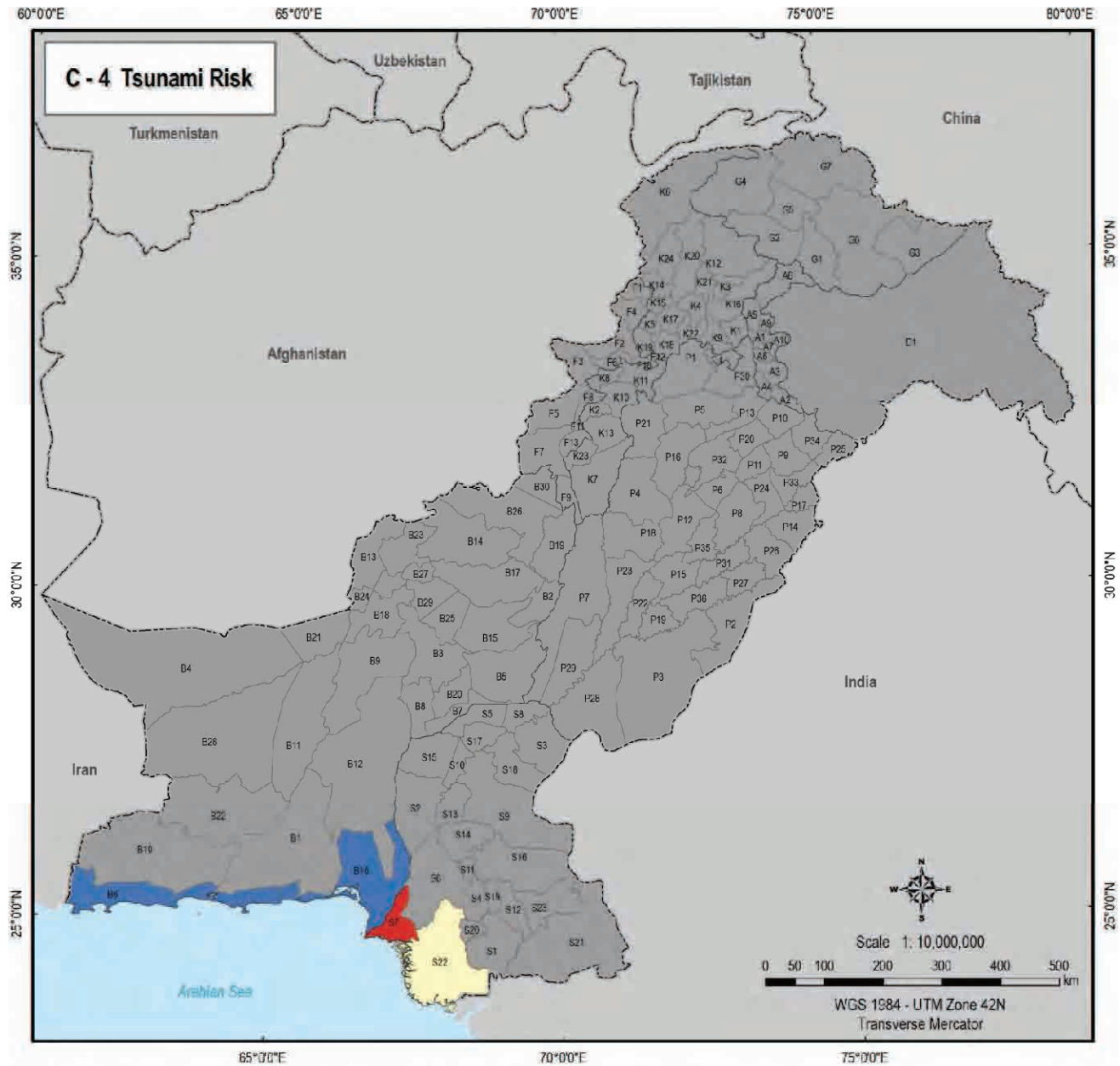
**Legend**

**Earthquake Risk Category**

- Very High
- High
- Medium
- Low
- Very Low
- No data

Source: JICA Study Team

The Project for National Disaster Management Plan in the Islamic Republic of Pakistan

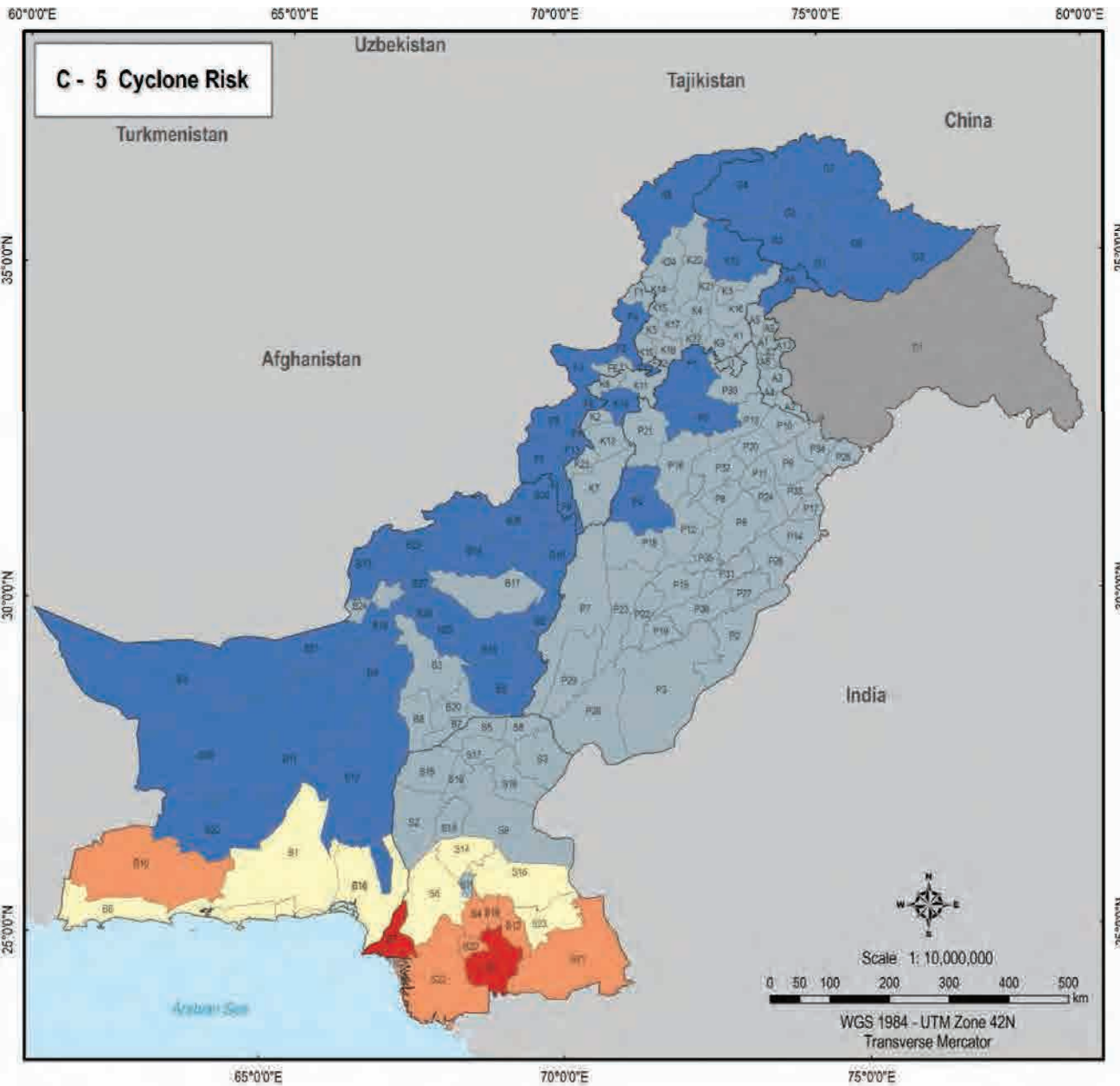


No.	District Name	No.	District Name	No.	District Name	No.	District Name	No.	District Name
A1	Dagh	B20	Nasirabad	S5	Gilgit	F2	Dehnanagar	F21	Sahwal
A2	Bhambor	B21	Nuchie	S6	Skardu	F3	Bahawalpur	F22	Sargodha
A3	Kali	B22	Pangpur	J7	Hurza Nagar	F4	Shekhar	F23	Sheikhpura
A4	Miqar	B23	Radin	11	Islamabad	F5	Chakwal	F24	Sialkot
A5	Muzaffargarh	B24	Coatta	K1	Accotabad	F6	Chiniot	F25	Toba Tek Singh
A6	Nedra	B25	Sibi	K2	Bannu	F7	C. O. Khan	F26	Uchail
A7	Popoiti	B26	Zobai	K3	Balagam	F8	Faisalabad	S1	Bahai
A8	Suflinot	B27	Zairai	K4	Burari	F9	Gujranwala	S2	Daska
A9	Hafar	B28	Wanpuk	K5	Chaniadda	F10	Gujrat	S3	Gleto
A10	Hareli	B29	Hanai	K6	Chiyai	S4	Hafzabad	S4	Hyderabad
B1	Awaran	B30	Shikari	K7	D. I. Khan	F12	Jhang	S5	Jacobabad
B2	Bakhsh	11	Disputed Area	K8	Hangu	F13	Jhelum	S6	Jamshoro
B3	Bolan	F1	Bajaur Agency	K9	Hakpur	F14	Kasur	S7	Kaschi
B4	Chagai	F2	Khyber Agency	K10	Karai	F15	Khanewal	S8	Kashmore
B5	Deer Bugti	F3	Kurram Agency	K11	Kohat	F16	Khatkhata	S9	Kharipur
B6	Dera Isfahan	F4	Mohmand Agency	F12	Kohistan	F17	Lahore	S10	Larkana
B7	Jaffarabad	F5	North Waziristan Agency	K13	Lakki Marwat	F18	Lahar	S11	Malkani
B8	Jhal Magsi	F6	Orakzai Agency	K14	Lower Dir	F19	Lodhran	S12	Majidi Khan
B9	Kohat	F7	South Waziristan Agency	K15	Malakand	F20	Mandi Bahaudin	S13	Muzaffargarh
B10	Kech	F8	FR Bannu	K16	Mardan	F21	Mianwali	S14	Nawabshah
B11	Khanoh	F9	FR D. I. Khan	K17	Mardan	F22	Multan	S15	Qambar and Shikarpur
B12	Khyber	F10	FR Kohat	K18	Nawabshah	F23	Muzaffargarh	S16	Sanghar
B13	Killa Abdullah	F11	FR Layan Marwat	K19	Peshawar	F24	Naraina Sahib	S17	Shikarpur
B14	Killa Saifullah	F12	FR Peshawar	K20	Sawal	F25	Narwal	S18	Sukkur
B15	Kohat	F13	FR Tank	K21	Shargha	F26	Okara	S19	Tando Allahyar
B16	Ladakh	S11	Afghanistan	K22	Swat	F27	Pakistan	S20	Tando Muhammad Khan
B17	Loralai	J12	Daman	K23	Tank	F28	Rahim Yar Khan	S21	Tharparkar
B18	Mansura	K13	Gharzhal	K24	Upper Dir	F29	Rawalpindi	S22	Toba
B19	Muzaffar	S14	Orkzai	F1	Attock	F30	Rawalpindi	S23	Umerkot

**Legend**  
**Tsunami Risk**  
**Category**  
■ Very High  
■ Medium  
■ Low  
■ Very Low  
■ Non hazard

Source: JICA Study Team

The Project for National Disaster Management Plan in the Islamic Republic of Pakistan



No.	District Name	No.	District Name	No.	District Name	No.	District Name	No.	District Name
A1	Dugh	B20	Nusrabad	C26	Citri	P2	Bahawalnagar	P34	Sohawal
A2	Bhambur	B21	Nusrati	C27	Swarthi	P3	Bahawalpur	P35	Sargodha
A3	Kohat	B22	Panjoa	C28	Huzara-Nagar	P4	Bhakkar	P36	Shekhupura
A4	Mirpur	B23	Pishin	C29	Jalambad	P5	Chakwal	P37	Sialkot
A5	Muzaffargarh	B24	Quetta	C30	Abbotabad	P6	Chenab	P38	Toba Tek Singh
A6	Noshera	B25	Say	C31	Baran	P7	D. G. Khan	P39	Velvet
A7	Poonch	B26	Zhob	C32	Balochistan	P8	Faisalabad	P40	Rahil
A8	Sudhawal	B27	Ziarat	C33	Buner	P9	Gujranwala	P41	Dadu
A9	Hattai	B28	Wahak	C34	Chasabdi	P10	Dupar	P42	Ghok
A10	Haveli	B29	Hanna	C35	Chitral	P11	Haltobah	P43	Hydrobad
B1	Awaraan	B30	Sharada	C36	D. I. Khan	P12	Jhang	P44	Jacobabad
B2	Barkhan	D1	Disputed Area	C37	Hangu	P13	Jhelum	P45	Jamshini
B3	Bolam	F1	Bakar Agency	C38	Hangpur	P14	Kasur	P46	Karachi
B4	Chagaz	F2	Khyber Agency	C39	Karac	P15	Khanewal	P47	Karmon
B5	Dera Bugti	F3	Kurum Agency	C40	Kohat	P16	Khanpur	P48	Kowapur
B6	Dera Ismael Khan	F4	Mitchard Agency	C41	Kohistan	P17	Lahore	P49	Larkana
B7	Jaffarabad	F5	North Waziristan Agency	C42	Laki Marwal	P18	Lahor	P50	Multan
B8	Jhal Magsi	F6	Orakza Agency	C43	Larar Dir	P19	Lodhran	P51	Muzaf Khan
B9	Kala	F7	South Waziristan Agency	C44	Malakand	P20	Mand Bahaudin	P52	Nasimiro Feroze
B10	Kachi	F8	FR Bannu	C45	Mianwali	P21	Mianwali	P53	Nasirabad
B11	Khanpur	F9	FR D. I. Khan	C46	Mardan	P22	Multan	P54	Quabak and Shabdialkot
B12	Khuzdar	F10	FR Kohat	C47	Nowshera	P23	Muzaffargarh	P55	Sargodha
B13	Killa Abdullahi	F11	FR Laki Marwal	C48	Peshawar	P24	Muzaffar Sahib	P56	Shekappa
B14	Killa Saikash	F12	FR Peshawar	C49	Sawal	P25	Narawal	P57	Sialkot
B15	Kohat	F13	FR Tark	C50	Shangha	P26	Okara	P58	Tando Allahpur
B16	Ladkahi	G1	Askara	C51	Swabi	P27	Pakpattan	P59	Tando Muhammad Khan
B17	Larkana	G2	Darlar	C52	Tank	P28	Rohin Yar Khan	P60	Tharparkar
B18	Machhri	G3	Gharo	C53	Ujjan Dir	P29	Rajpur	P61	Thatta
B19	Machhri	G4	Ordn	C54	Atkot	P30	Rawalpindi	P62	Umarwat

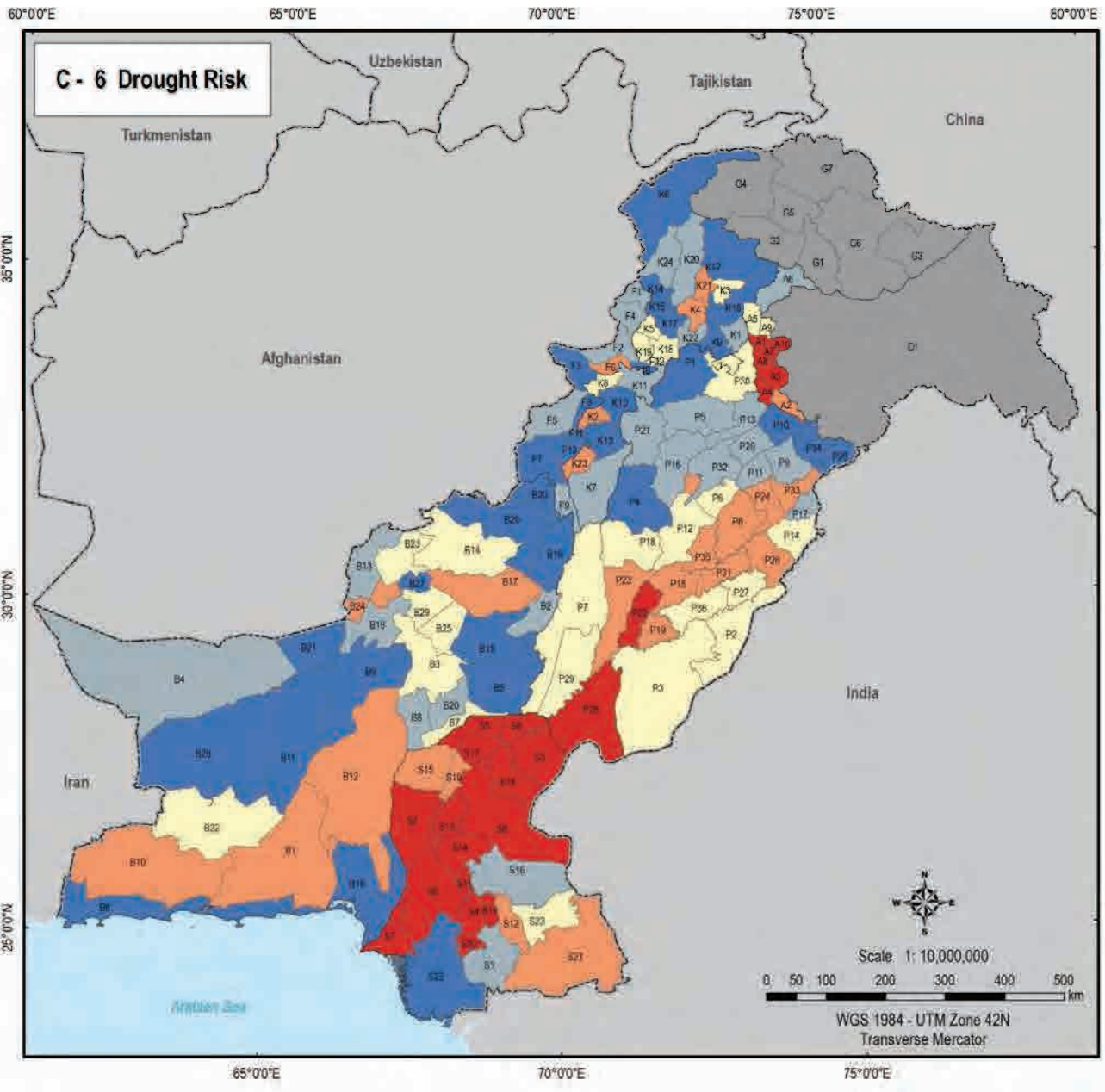
**Legend**

**Cyclone Risk Category**

- Very High
- High
- Medium
- Low
- Very Low
- No data

Source: JICA Study Team

The Project for National Disaster Management Plan in the Islamic Republic of Pakistan



No.	District Name	No.	District Name	No.	District Name	No.	District Name	No.	District Name
A1	Bagh	S20	Nasirabad	S5	Gogri	P2	Banawalpur	P31	Gawal
A2	Bhambur	S21	Nushki	S6	Skardu	P3	Bahawalpur	P32	Sargodha
A3	Kohat	S22	Pangor	S7	Hingol-Nagar	P4	Bhakar	P33	Sindh
A4	Mirpur	S23	Pishin	S8	Islamabad	P5	Chakwal	P34	Sukkur
A5	Muzaffargarh	S24	Quetta	S9	Abbottabad	P6	Chenab	P35	Toba Tek Singh
A6	Nasirabad	S25	Sibi	S10	Bannu	P7	D. G. Khan	P36	Vehar
A7	Papoh	S26	Jhelum	S11	Balochistan	P8	Faisalabad	S1	Bahawal
A8	Sudhnot	S27	Zafar	S12	Suway	P9	Gujranwala	S2	Daska
A9	Hattian	S28	Wazirabad	S13	Chitral	P10	Gujrat	S3	Ghokh
A10	Heval	S29	Haveli	S14	Chitral	P11	Hafizabad	S4	Hyderabad
B1	Awaran	S30	Shekhar	S15	D. I. Khan	P12	Jhang	S5	Jacobabad
B2	Bakhar	D1	District Area	S16	Haripur	P13	Jhelum	S6	Jamshoro
B3	Bolan	F1	Bajaur Agency	S17	Haripur	P14	Kasur	S7	Karachi
B4	Chagai	F2	Khyber Agency	S18	Karachi	P15	Khanewal	S8	Kashmoo
B5	Dera Bugt	F3	Kunur Agency	S19	Kohat	P16	Khushab	S9	Khepur
B6	Gwadar	F4	Mohmand Agency	S20	Kohistan	P17	Lahore	S10	Larkana
B7	Jalambad	F5	North Waziristan Agency	S21	Lakho Marwat	P18	Lahar	S11	Multan
B8	Jhal Mager	F6	Orakza Agency	S22	Lower Dir	P19	Lodhran	S12	Mirpur Khan
B9	Kabul	F7	South Waziristan Agency	S23	Makhdun	P20	Mansoorah	S13	Nasirabad
B10	Kohat	F8	FR Bannu	S24	Mardan	P21	Mannar	S14	Nawabshahr
B11	Khanoh	F9	FR D. I. Khan	S25	Mardan	P22	Multan	S15	Quetta and Shikohpur
B12	Khyber	F10	FR Kohat	S26	Nowshera	P23	Muzaffargarh	S16	Sargodha
B13	Killa Abdallah	F11	FR Lakho Marwat	S27	Peshawar	P24	Nankana Sahib	S17	Shikohpur
B14	Killa Saikhan	F12	FR Peshawar	S28	Sawal	P25	Narwal	S18	Sukkur
B15	Kohat	F13	FR Tank	S29	Shangha	P26	Okara	S19	Tando Allahyar
B16	Ladakh	G1	Afghanistan	S30	Swat	P27	Pakistan	S20	Tando Muhammad Khan
B17	Loralai	G2	Chagai	S31	Tank	P28	Rahim Yar Khan	S21	Tarapurkar
B18	Mandora	G3	Ghazni	S32	Upper Dir	P29	Rajshahi	S22	Tarbi
B19	Muzaffargarh	G4	Ghazni	S33	Attock	P30	Rawalpindi	S23	Umerkot

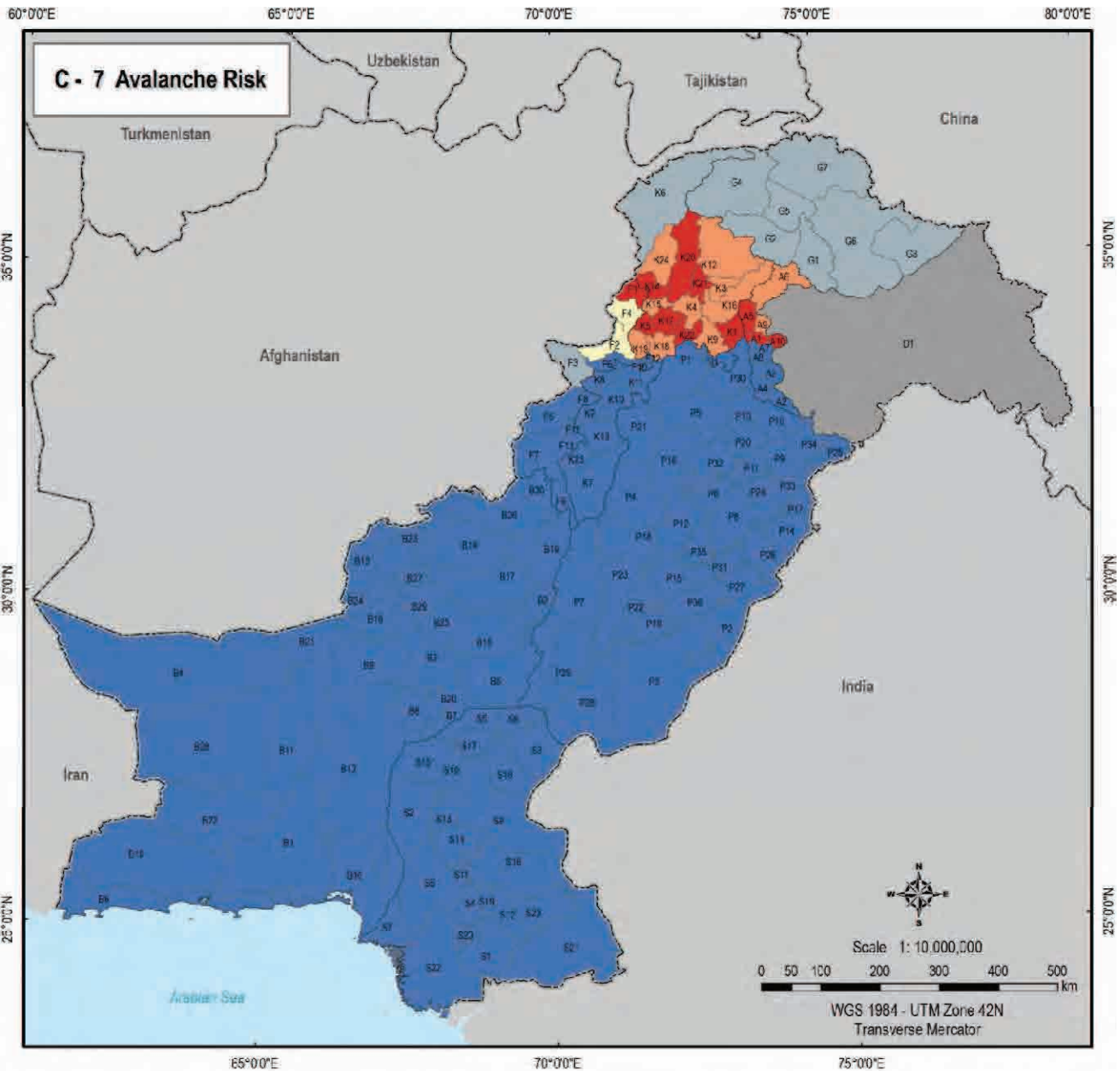
**Legend**

**Drought Risk Category**

- Very High
- High
- Medium
- Low
- Very Low
- Non hazardous

Source: JICA Study Team

The Project for National Disaster Management Plan in the Islamic Republic of Pakistan



No.	District Name	No.	District Name	No.	District Name	No.	District Name	No.	District Name
A1	Bagh	300	Nasirabad	354	Zigri	72	Bahawalnagar	P31	Sahwal
A2	Bherai	321	Nushli	06	Skardu	75	Bahawalpur	P32	Sargodha
A3	Kull	322	Faizji	07	Hilize/Nages	74	Rukhse	P33	Sheikhpur
A4	Mirpur	323	Faizi	08	Islamabad	75	Chakwal	P34	Sukot
A5	Muzaffargarh	304	Gullea	09	Ahmednagar	76	Chiniot	P35	Toba Tek Singh
A6	Neslian	325	Sia	10	Berul	77	C. G. Khan	P36	Yafai
A7	Poron	326	Zoo	11	Bajgram	78	Faisalabad	P37	Badr
A8	Sudhok	327	Zanal	12	Buzar	79	Gujranwala	P38	Dadu
A9	Hellai	328	Wairuk	13	Chandda	80	Chenab	P39	Dhok
A10	Haveli	329	Hama	14	Chobai	81	Hattabai	P40	Hyderabad
B1	Awami	330	Sheran	15	G. J. Khan	82	Jhang	P41	Jacobabad
B2	Barchan	331	Dagard Area	16	Hangu	83	Jhelum	P42	Jamshoro
B3	Bolan	332	Bakar Agency	17	Harpur	84	Kasur	P43	Karachi
B4	Chagai	333	Khyber Agency	18	Kandi	85	Khanewal	P44	Kashmore
B5	Dera Bugt	334	Kurum Agency	19	Konai	86	Khetwat	P45	Khatipur
B6	Gwadar	335	Mohmand Agency	20	Kohistan	87	Lahore	P46	Larkana
B7	Jaffarabot	336	North Waziristan Agency	21	Laki Mahwal	88	Lahor	P47	Multan
B8	Jhal Magdi	337	Dera Agency	22	Lower Dir	89	Ludhian	P48	Mirpur Khas
B9	Kale	338	South Waziristan Agency	23	Malakand	90	Mandi Bahawdin	P49	Muzaffargarh
B10	Kachi	339	FR Bannu	24	Marshehra	91	Mianwali	P50	Narwan
B11	Khanai	340	FR D. I. Khan	25	Madan	92	Multan	P51	Nawabshah
B12	Khuzdar	341	FR Kohat	26	Nowshera	93	Muzaffargarh	P52	Qambar and Shikarpur
B13	Killa Abdullah	342	FR Laki Marwat	27	Peshawar	94	Nankana Sahib	P53	Sanghar
B14	Killa Saifullah	343	FR Peshawar	28	Sawal	95	Narwal	P54	Sheikhpur
B15	Kohat	344	FR Tank	29	Shargha	96	Okara	P55	Tando Allahyar
B16	Ladkha	345	Azore	30	Swabi	97	Pakistan	P56	Tando Muhammad Khan
B17	Lodki	346	Diana	31	Tank	98	Rahim Yar Khan	P57	Thatta Parkar
B18	Machhi	347	Ghachhi	32	Upper Dir	99	Rajapur	P58	Trafalgar
B19	Mushah	348	Gidder	33	Attock	100	Rawalpindi	P59	Umerkot

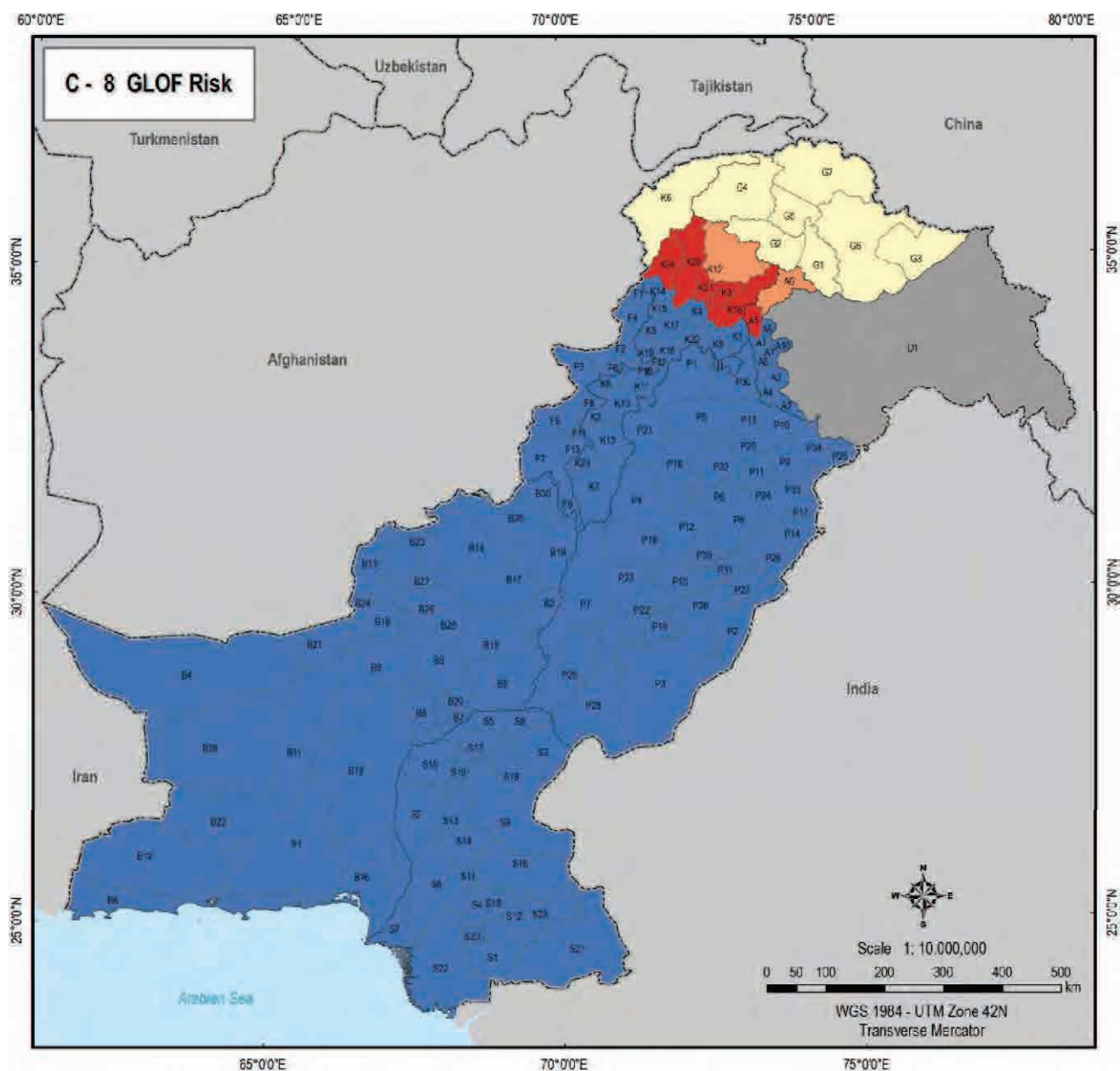
**Legend**

**Avalanche Risk Category**

- Very High
- High
- Medium
- Low
- Very Low
- No data

Source: JICA Study Team

The Project for National Disaster Management Plan in the Islamic Republic of Pakistan



No.	District Name	No.	District Name	No.	District Name	No.	District Name	No.	District Name
A1	Bagh	B20	Nasrabad	G5	Gilgit	F2	Chehavanager	P31	Sahawal
A2	Dherbar	B21	Nushki	G6	Skerdu	F3	Dehraabpur	P32	Sargodha
A3	Kali	B22	Faqir	G7	Hurze-Nagar	F4	Shekhar	P33	Shekhupura
A4	Muzar	B23	Tichin	H1	Islamabad	F5	Chakwal	P34	Siakot
A5	Muzaffarabad	B24	Quetta	K1	Abbottabad	F6	Chiniot	P35	Toba Tek Singh
A6	Neelam	B25	Gilg	K2	Bannu	F7	C. G. Khan	P36	Uchral
A7	Poonch	B26	Zhok	K3	Balagram	F8	Pashtunabad	S1	Barkot
A8	Sudhrot	B27	Banul	K4	Buner	F9	Dargawala	S2	Daska
A9	Hafian	B28	Waskul	K5	Charwadde	F10	Gurial	S3	Chokli
A10	Haveli	B29	Harnal	K6	Chitral	F11	Hafizabad	S4	Hyderabad
B1	Awam	B30	Shimra	K7	D. I. Khan	F12	Unang	S5	Jacobabad
B2	Barkhan	D1	Disputed Area	K8	Hargu	F13	Jhelum	S6	Jamshoro
B3	Bolan	F1	Baloch Agency	K9	Haripur	F14	Kasur	S7	Karachi
B4	Chagai	F2	Khyber Agency	K10	Karak	F15	Khanewal	S8	Kashmoro
B5	Dera Gupki	F3	Kunum Agency	K11	Kohat	F16	Khanuab	S9	Khanpur
B6	Gwadar	F4	Momand Agency	K12	Kopror	F17	Lere	S10	Larkana
B7	Jaffarabad	F5	North Waziristan Agency	K13	Laki Marwal	F18	Lahor	S11	Multan
B8	Jhar Magar	F6	Orakza Agency	K14	Lower Dir	F19	Lodhoro	S12	Mirpur Khan
B9	Kala	F7	South Waziristan Agency	K15	Malakand	F20	Mandi Bahaudin	S13	Nasrathoro Feroze
B10	Karh	F8	FR Baloch	K16	Manshero	F21	Manwal	S14	Nawalshoro
B11	Khwair	F9	FR D. I. Khan	K17	Mardan	F22	Multan	S15	Qambar and Sandakot
B12	Khwair	F10	FR Kohat	K18	Nowshoro	F23	Muzaffargarh	S16	Sarghar
B13	Kila Abdullan	F11	FR Laki Marwal	K19	Peshawar	F24	Naraina Sahib	S17	Sialkot
B14	Kila Sahib	F12	FR Peshawar	K20	Sawal	F25	Narawal	S18	Sialkot
B15	Kohat	F13	FR Tank	K21	Shorjo	F26	Daska	S19	Tando Allahyar
B16	Ladkha	G1	Akoro	K22	Sawal	F27	Pakistan	S20	Tando Muhammad Khan
B17	Larkana	G2	Damer	K23	Tank	F28	Rahim Yar Khan	S21	Tharpakar
B18	Makran	G3	Bharcho	K24	Upper Dir	F29	Rajmoro	S22	Toba
B19	Muzahid	G4	Ghazir	F1	Attock	F30	Rawalpindi	S23	Unwot

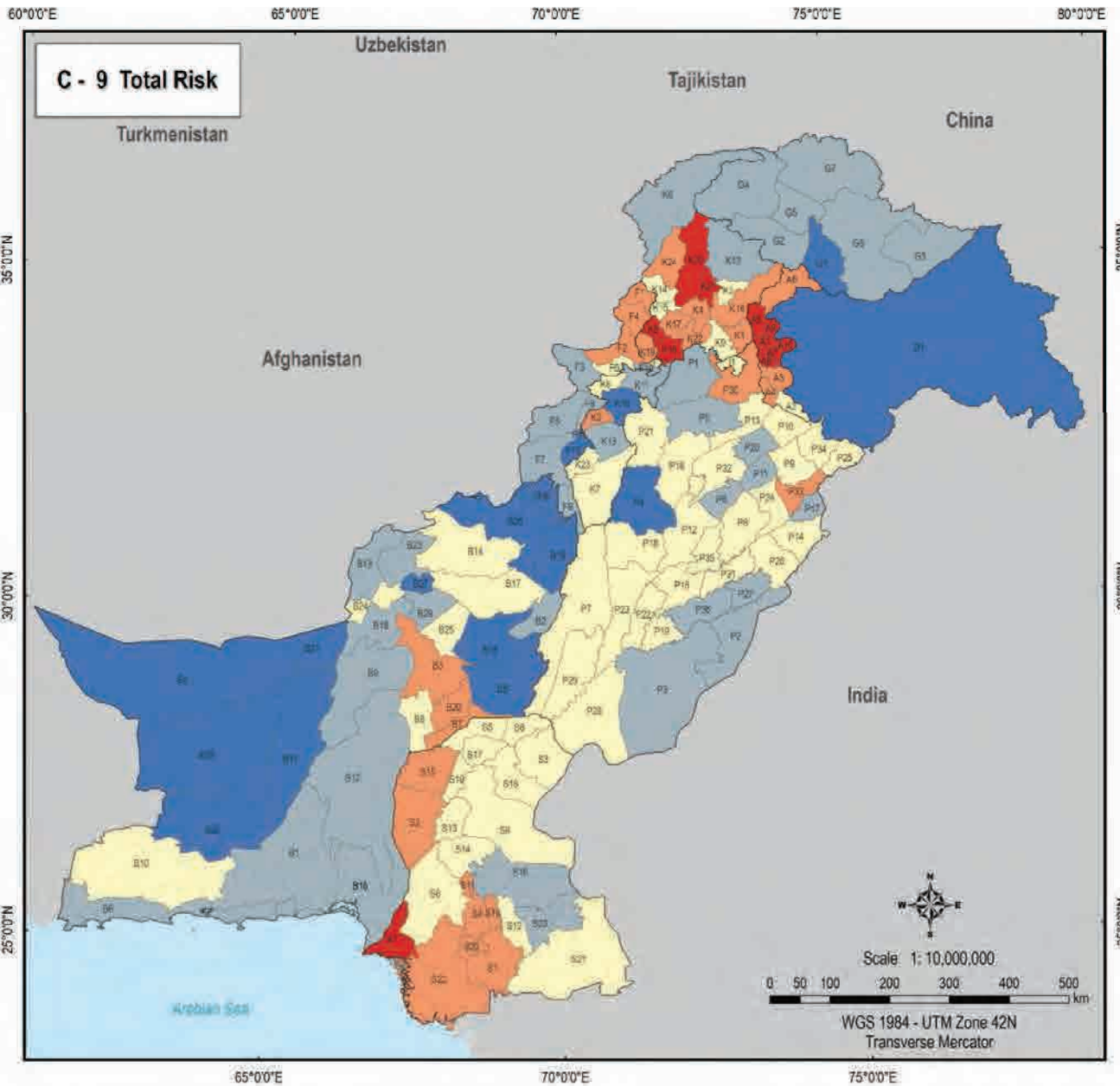
**Legend**  
GLOF Risk Category

- Very High
- High
- Medium
- Very Low
- No data

Source: JICA Study Team

The Project for National Disaster Management Plan in the Islamic Republic of Pakistan





No.	District Name	No.	District Name	No.	District Name	No.	District Name	No.	District Name
A1	Bagh	B20	Nasirabad	K15	Gilgit	P2	Bahawalnagar	P21	Sahiwal
A2	Balochistan	B21	Nushki	K16	Skardu	P3	Bahawalpur	P22	Sargodha
A3	Kohat	B22	Panjgur	K17	Haripur	P4	Bhakkar	P23	Shekhupura
A4	Muzaffargarh	B23	Peshawar	K18	Islamabad	P5	Chakwal	P24	Sialkot
A5	Muzaffargarh	B24	Quetta	K19	Attock	P6	Chenab	P25	Toba Tek Singh
A6	Nawabshah	B25	Sibi	K20	Bannu	P7	D. G. Khan	P26	Wah
A7	Poonch	B26	Zob	K21	Balochistan	P8	Faisalabad	S1	Badin
A8	Sudhnot	B27	Zamb	K22	Buner	P9	Gujranwala	S2	Dadu
A9	Haveli	B28	Wahai	K23	Cherasaddi	P10	Gujrat	S3	Dhaka
A10	Haveli	B29	Harnai	K24	Choral	P11	Hafizabad	S4	Hyderabad
B1	Awatari	B30	Shenar	K25	D. I. Khan	P12	Jhang	S5	Jacobabad
B2	Bekhar	D1	Dispalal Area	K26	Haripur	P13	Jhelum	S6	Jamshoro
B3	Bohar	F1	Bajaur Agency	K27	Haripur	P14	Kasur	S7	Karachi
B4	Chagai	F2	Khyber Agency	K28	Korak	P15	Khanewal	S8	Kashmore
B5	Dera Bugti	F3	Kurram Agency	K29	Kohat	P16	Khuzdar	S9	Khanpur
B6	Gwadar	F4	Mohmand Agency	K30	Kohistan	P17	Lahore	S10	Larkana
B7	Jalorod	F5	North Waziristan Agency	K31	Laki Mawait	P18	Rawal	S11	Multan
B8	Jhal Mags	F6	Orakza Agency	K32	Lower Dir	P19	Lodhran	S12	Mirpur Khas
B9	Kabul	F7	South Waziristan Agency	K33	Muzakard	P20	Mandi Bahaudin	S13	Nasirabad
B10	Kochi	F8	FR Bannu	K34	Miranshera	P21	Mansera	S14	Nasirabad
B11	Kharan	F9	FR D. I. Khan	K35	Mardan	P22	Multan	S15	Gamber and Sheikhpur
B12	Khuzdar	F10	FR Kohat	K36	Nawshera	P23	Muzaffargarh	S16	Sargodha
B13	Killa Abdulla	F11	FR Laki Mawait	K37	Peshawar	P24	Nankana Sahib	S17	Shekhpura
B14	Killa Saifullah	F12	FR Peshawar	K38	Sawal	P25	Narwal	S18	Sukkur
B15	Kohat	F13	FR Tank	K39	Shingla	P26	Citrus	S19	Tando Allahyar
B16	Ladkwa	G1	Askeri	K40	Siwaki	P27	Pakistan	S20	Tando Muhammad Khan
B17	Larkana	G2	Diana	K41	Tank	P28	Rahim Yar Khan	S21	Tarapur
B18	Makran	G3	Gharachi	K42	Upper Dir	P29	Rajapur	S22	Tatta
B19	Musakhil	G4	Choral	K43	Attock	P30	Rawalpindi	S23	Umerkot

**Legend**

**Total Risk**

**Total Risk**

- Very High
- High
- Medium
- Low
- Very Low
- No data

Source: JICA Study Team

**Table. C-1 Relative severity of various Risks per district (1)**

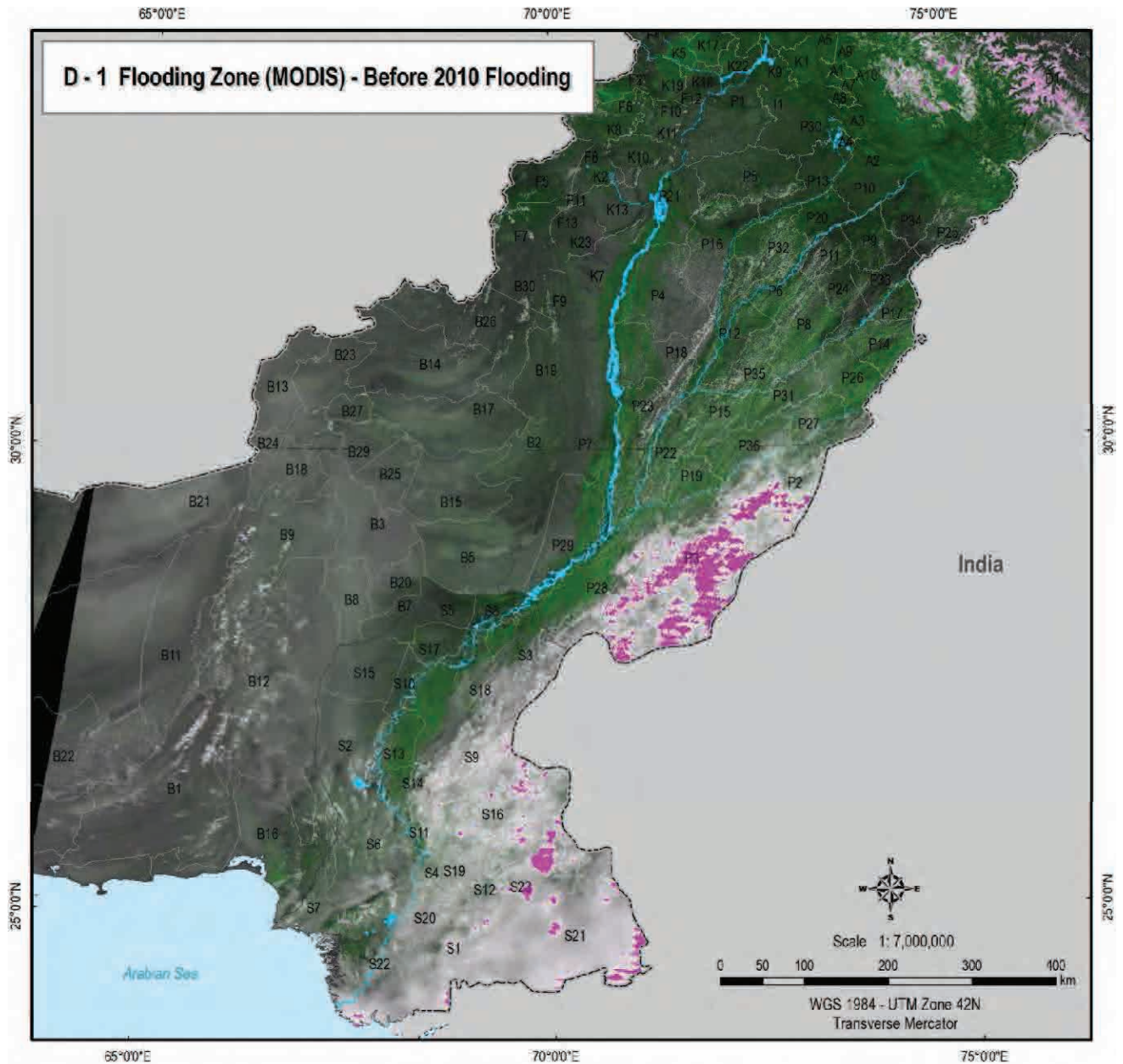
Rank No.	No.	Province	District	Flood Risk	Landslide Risk	Earthquake Risk	Tsunami Risk	Cyclone Risk	Drought Risk	Avalanche Risk	GLOF Risk	PDMs Policy	Total Risk
1	S7	Sindh	Karachi	4	1	2	2	2	2	1	1	1	26
2	A9	A.J.K	Hatton	4	2	2	-	2	3	4	1	1	25
3	A5	A.J.K	Muzaffarabad	4	2	2	-	2	3	4	1	1	25
4	K18	Khyber Pakhtunkhawa	Nowshera	4	4	2	-	2	3	4	1	1	24
5	A1	A.J.K	Bagh	4	2	2	-	2	3	3	1	1	23
6	A10	A.J.K	Nowel	4	2	2	-	2	3	3	1	1	23
7	A7	A.J.K	Poonch	4	2	2	-	2	3	1	1	1	22
8	A8	A.J.K	Susthooli	4	2	2	-	2	3	1	1	1	22
9	K5	Khyber Pakhtunkhawa	Charsadda	4	3	2	-	2	3	1	1	1	21
10	K20	Khyber Pakhtunkhawa	Sawat	4	3	4	-	2	2	1	1	1	21
11	K21	Khyber Pakhtunkhawa	Shangla	4	4	2	-	2	4	3	3	3	28
12	K16	Khyber Pakhtunkhawa	Mensehra	4	3	4	-	2	1	4	1	1	21
13	A3	A.J.K	Kotli	4	3	2	-	2	3	1	1	1	20
14	A6	A.J.K	Neelum	4	4	2	-	1	2	4	4	1	20
15	B3	Balochistan	Bolan	4	3	3	-	2	3	1	1	1	20
16	F1	FATA	Bajaur Agency	3	3	3	-	2	2	3	1	1	20
17	K4	Khyber Pakhtunkhawa	Buner	4	4	4	-	2	4	4	1	1	20
18	P30	Punjab	Rawalpindi	4	1	3	-	2	3	1	1	1	20
19	S1	Sindh	Badin	4	1	3	-	4	2	1	1	1	20
20	S2	Sindh	Dadu	4	1	2	-	2	3	1	1	1	20
21	S4	Sindh	Hyderabad	4	1	4	-	4	3	1	1	1	20
22	S15	Sindh	Qamber and Shikardkal	4	1	3	-	2	4	1	1	1	20
23	S20	Sindh	Tando Muhammad Khan	4	1	4	-	4	3	1	1	1	20
24	S22	Sindh	Thatta	4	1	2	3	4	1	1	1	1	20
25	B7	Balochistan	Jaffarabad	4	1	3	-	2	3	1	1	1	19
26	F4	FATA	Mchmand Agency	3	4	4	-	1	2	3	1	1	19
27	K17	Khyber Pakhtunkhawa	Mardan	4	4	2	-	2	1	3	1	1	19
28	K19	Khyber Pakhtunkhawa	Peshawar	4	3	2	-	2	3	4	1	1	19
29	S19	Sindh	Tando Alahyar	4	1	4	-	4	3	1	1	1	19
30	A4	A.J.K	Mirpur	3	3	4	-	2	3	1	1	1	18
31	B20	Balochistan	Nasirabad	4	1	3	-	2	2	1	1	1	18
32	F2	FATA	Khyber Agency	3	4	3	-	1	2	3	1	1	18
33	K1	Khyber Pakhtunkhawa	Abbottabad	3	3	2	-	2	2	3	1	1	18
34	K2	Khyber Pakhtunkhawa	Bannu	4	2	2	-	2	4	1	1	1	18
35	K22	Khyber Pakhtunkhawa	Swabi	4	3	2	-	2	2	3	1	1	18
36	K24	Khyber Pakhtunkhawa	Upper Dir	4	2	4	-	2	2	4	1	1	18
37	P33	Punjab	Sheikhupura	4	2	4	-	2	4	1	1	1	18
38	S11	Sindh	Metlan	4	1	4	-	2	3	1	1	1	18
39	K3	Khyber Pakhtunkhawa	Balagram	3	4	4	-	2	3	4	3	1	17
40	K7	Khyber Pakhtunkhawa	D.I. Khan	4	1	2	-	2	2	1	1	1	17
41	K14	Khyber Pakhtunkhawa	Lower Dir	4	4	2	-	2	1	3	1	1	17
42	P22	Punjab	Multan	4	1	4	-	2	3	1	1	1	17
43	P28	Punjab	Rahim Yar Khan	4	1	3	-	2	3	1	1	1	17
44	S5	Sindh	Jacobabad	4	1	3	-	2	3	1	1	1	17
45	S6	Sindh	Jamshoro	4	1	2	-	3	3	1	1	1	17
46	S8	Sindh	Kashmore	4	1	3	-	2	3	1	1	1	17
47	S12	Sindh	Mirpur Khas	4	1	3	-	4	4	1	1	1	17
48	S13	Sindh	Nausahro Feroze	4	1	3	-	2	3	1	1	1	17
49	S14	Sindh	Nawabshah	4	1	2	-	3	3	1	1	1	17
50	S17	Sindh	Shikarpur	4	1	3	-	2	3	1	1	1	17
51	A2	A.J.K	Bhimber	4	2	3	-	2	4	1	1	1	16
52	B8	Balochistan	Jhal Magsi	4	1	2	-	2	2	1	1	1	16
53	B24	Balochistan	Quetta	3	1	2	-	2	4	1	1	1	16
54	F	Capital Territory	Islamabad	2	3	2	-	2	3	1	1	1	16
55	F6	FATA	Orakzai Agency	2	4	3	-	2	4	1	1	1	16
56	K8	Khyber Pakhtunkhawa	Hangu	3	3	4	-	2	3	1	1	1	16
57	K9	Khyber Pakhtunkhawa	Haripur	3	3	4	-	2	1	4	1	1	16
58	K15	Khyber Pakhtunkhawa	Malakand	4	3	2	-	2	1	4	1	1	16
59	P9	Punjab	Gujranwala	4	2	4	-	2	2	1	1	1	16
60	P10	Punjab	Gujrat	4	2	2	-	2	1	1	1	1	16
61	P21	Punjab	Mianwali	4	4	3	-	2	2	1	1	1	16
62	P23	Punjab	Muzaffargarh	4	1	3	-	2	4	1	1	1	16
63	P24	Punjab	Nankana Sahib	3	2	4	-	2	4	1	1	1	16
64	P26	Punjab	Okara	3	1	3	-	2	4	1	1	1	16
65	S3	Sindh	Ghotki	4	1	2	-	2	3	1	1	1	16
66	S9	Sindh	Khairpur	4	1	2	-	2	3	1	1	1	16
67	S18	Sindh	Sukkur	4	1	2	-	2	3	1	1	1	16
68	B17	Balochistan	Loralai	3	2	3	-	2	4	1	1	1	15
69	B25	Balochistan	Sibi	3	1	2	-	1	3	1	1	1	15
70	K23	Khyber Pakhtunkhawa	Tank	4	1	3	-	2	4	1	1	1	15
71	P8	Punjab	Faisalabad	3	1	4	-	2	4	1	1	1	15
72	P12	Punjab	Jhang	4	1	3	-	2	3	1	1	1	15
73	P25	Punjab	Narowal	4	1	3	-	2	3	1	1	1	15
74	P31	Punjab	Sahiwal	3	1	4	-	2	4	1	1	1	15
75	P34	Punjab	Sialkot	4	1	3	-	2	3	1	1	1	15
76	P35	Punjab	Tooa Tek Singh	3	1	4	-	2	4	1	1	1	15
77	S10	Sindh	Larkana	4	1	2	-	2	4	1	1	1	15
78	S21	Sindh	Tharparkar	3	1	2	-	4	4	1	1	1	15
79	B10	Balochistan	Kech	3	1	1	-	4	4	1	1	1	14
80	B14	Balochistan	Kila Saifullah	3	3	3	-	1	3	1	1	1	14

Scoring Key	Very High	High	Medium	Low	Very Low	Non Hazard
	4	3	2	1	-	-

**Table. C-2 Relative severity of various Risks per district (2)**

Rank No.	No.	Province	District	Flood Risk	Landslide Risk	Earthquake Risk	Tsunami Risk	Cyclone Risk	Drought Risk	Avianche Risk	GLOF Risk	PDMA's Policy	Total Risk
81	F12	FATA	FR Peshawar	2	3	3	-	2	3	1	1	1	14
82	P7	Punjab	D. G. Khan	3	1	2	-	2	3	1	1	1	14
83	P13	Punjab	Jhelum	3	2	4	-	2	2	1	1	1	14
84	P14	Punjab	Kasur	3	1	4	-	2	3	1	1	1	14
85	P15	Punjab	Khanewal	3	1	3	-	2	4	1	1	1	14
86	P16	Punjab	Khushab	4	2	3	-	2	2	1	1	1	14
87	P18	Punjab	Leiah	1	1	2	-	2	3	1	1	1	14
88	P19	Punjab	Lodhran	3	1	3	-	2	4	1	1	1	14
89	P29	Punjab	Rajapur	1	1	2	-	2	3	1	1	1	14
90	P32	Punjab	Sargodha	4	2	3	-	2	2	1	1	1	14
91	F7	FATA	South Waziristan Agency	2	2	2	-	1	1	1	1	1	13
92	K11	Khyber Pakhtunkhwa	Kohat	3	2	3	-	2	2	1	1	1	13
93	K12	Khyber Pakhtunkhwa	Kohistan	3	4	3	-	1	1	4	4	1	13
94	P6	Punjab	Chiniot	3	1	3	-	2	3	1	1	1	13
95	P17	Punjab	Lahore	3	1	4	-	2	2	1	1	1	13
96	P20	Punjab	Mandi Bahauddin	3	1	4	-	2	2	1	1	1	13
97	P27	Punjab	Pakpattan	3	1	3	-	2	3	1	1	1	13
98	P36	Punjab	Vehari	3	1	3	-	2	3	1	1	1	13
99	S16	Sindh	Sanghar	4	1	2	-	3	2	1	1	1	13
100	S23	Sindh	Umerkot	3	1	2	-	3	3	1	1	1	13
101	B1	Balochistan	Awaran	2	1	1	-	3	4	1	1	1	12
102	B6	Balochistan	Kalot	3	3	3	-	1	1	1	1	1	12
103	B23	Balochistan	Pishin	2	1	4	-	1	3	1	1	1	12
104	F9	FATA	FR D. I. Khan	1	1	2	-	1	2	1	1	1	12
105	K6	Khyber Pakhtunkhwa	Chitral	3	4	2	-	1	1	2	3	1	12
106	P2	Punjab	Bahawalnagar	3	1	2	-	2	3	1	1	1	12
107	P11	Punjab	Hafizabad	3	1	3	-	2	2	1	1	1	12
108	B2	Balochistan	Barkhan	3	1	3	-	1	2	1	1	1	11
109	B29	Balochistan	Hama	3	1	2	-	1	3	1	1	1	11
110	B12	Balochistan	Khuzdar	3	1	1	-	1	4	1	1	1	11
111	B13	Balochistan	Killa Abdullah	3	1	3	-	1	2	1	1	1	11
112	B18	Balochistan	Mastung	2	2	3	-	1	2	1	1	1	11
113	F10	FATA	FR Kohat	2	3	3	-	1	1	1	1	1	11
114	G2	Gilgit-Balistan	Diamir	3	4	2	-	1	-	2	3	1	11
115	G7	Gilgit-Balistan	Hunza-Nagar	3	4	2	-	1	-	2	3	1	11
116	K13	Khyber Pakhtunkhwa	Lakki Marwat	3	1	3	-	2	1	1	1	1	11
117	P3	Punjab	Bahawalpur	2	1	2	-	2	3	1	1	1	11
118	B6	Balochistan	Gwadar	1	1	2	1	3	1	1	1	1	10
119	B16	Balochistan	Lasbela	2	1	1	1	3	1	1	1	1	10
120	F8	FATA	FR Bannu	1	2	2	-	1	1	1	1	3	10
121	F3	FATA	Kurum Agency	3	2	2	-	1	1	2	1	1	10
122	F5	FATA	North Waziristan Agency	2	2	2	-	1	2	1	1	1	10
123	G3	Gilgit-Balistan	Ghanche	3	3	2	-	1	-	2	3	1	10
124	G4	Gilgit-Balistan	Ghizer	3	3	2	-	1	-	2	3	1	10
125	G5	Gilgit-Balistan	Gitgit	3	3	2	-	1	-	2	3	1	10
126	G6	Gilgit-Balistan	Skardu	3	3	2	-	1	-	2	3	1	10
127	P1	Punjab	Attock	2	2	3	-	1	1	1	1	1	10
128	P5	Punjab	Chakwal	2	1	3	-	1	2	1	1	1	10
129	B15	Balochistan	Kohlu	2	2	2	-	1	1	1	1	1	9
130	G1	Gilgit-Balistan	Aslore	2	3	2	-	1	-	2	3	1	9
131	K10	Khyber Pakhtunkhwa	Karak	2	2	2	-	1	1	1	1	1	9
132	P4	Punjab	Bhakkar	3	1	2	-	1	1	1	1	1	9
133	B4	Balochistan	Chagai	2	1	1	-	1	2	1	1	1	8
134	B11	Balochistan	Kharan	2	1	2	-	1	1	1	1	1	8
135	B21	Balochistan	Nushki	2	1	2	-	1	1	1	1	1	8
136	B22	Balochistan	Panjgur	1	1	1	-	1	3	1	1	1	8
137	B28	Balochistan	Washuk	2	1	2	-	1	1	1	1	1	8
138	B26	Balochistan	Zhob	2	1	2	-	1	1	1	1	1	8
139	F13	FATA	FR Tank	1	1	1	-	1	1	1	1	3	8
140	B5	Balochistan	Dera Bugti	1	1	2	-	1	1	1	1	1	7
141	B19	Balochistan	Musakhel	1	1	2	-	1	1	1	1	1	7
142	B30	Balochistan	Sherani	1	1	2	-	1	1	1	1	1	7
143	B27	Balochistan	Ziarat	1	1	2	-	1	1	1	1	1	7
144	F11	FATA	FR Lakki Marwat	1	1	2	-	1	1	1	1	1	7
145	D1	Disputed Area	Disputed Area	-	3	-	-	-	-	-	-	1	4

Scoring Key	Very High	High	Medium	Low	Very Low	Non Hazard
	4	3	2	1	-	-



No.	District Name	No.	District Name	No.	District Name	No.	District Name	No.	District Name
A1	Bugti	B20	Nasirabad	B7	Qilgi	P2	Bulohrainger	P31	Sahawal
A2	Bhambur	B21	Nusliki	B6	Skardu	F3	Balochistan	P32	Saghalie
A3	Koch	B22	Fargha	B5	Huzar-Nagar	F4	Bhakkal	P33	Shekhupura
A4	Virpur	B23	Fisher	B4	Islamabad	F5	Chakwal	P34	Shakot
AC	Muzaffargarh	B24	Quetta	K1	Abbottabad	F6	Chitral	P35	Toba Tek Singh
AC	Muzaffargarh	B25	Sibi	K2	Barkhan	F7	D. G. Khan	P36	Velvet
AC	Muzaffargarh	B26	Zob	K3	Batagram	F8	Faisalabad	S1	Bader
AC	Muzaffargarh	B27	Zarab	K4	Buner	F9	Gujranwala	S2	Dada
AC	Muzaffargarh	B28	Wazirabad	K5	Chokkidda	F10	Gurki	S3	Ghokki
AC	Muzaffargarh	B29	Harnai	K6	Chitral	F11	Hafizabad	S4	Hyderabad
B1	Awara	B30	Shekani	K7	D. I. Khan	F12	Jhang	S5	Jacobabad
B2	Bakhar	D01	Dephal Anil	K8	Hangu	F13	Jhelum	S6	Jamshori
B3	Bolan	F1	Bikar Agency	K9	Harpur	F14	Kasur	S7	Karachi
B4	Chagai	F2	Khyber Agency	K10	Karak	F15	Khanewal	S8	Kashmore
B5	Dera Bugti	F3	Kunam Agency	K11	Kohat	F16	Khanas	S9	Khanpur
B6	Divadar	F4	Mohmand Agency	K12	Kohistan	F17	Lahore	S10	Laknawi
B7	Jaffarabad	F5	North Waziristan Agency	K13	Laki Manwal	F18	Leah	S11	Multan
B8	Jhal Magri	F6	Orakza Agency	K14	Lower Dir	F19	Lothran	S12	Mirpur Khas
B9	Kawal	F7	South Waziristan Agency	K15	Makran	F20	Mandi Bahaudin	S13	Nasirpur Feroze
B10	Kech	F8	FR Bannu	K16	Mastung	F21	Mansha	S14	Nawabshah
B11	Khuzai	F9	FR D. I. Khan	K17	Mardan	F22	Multan	S15	Qambar and Shikohabad
B12	Khuzdar	F10	FR Kohat	K18	Nowshera	F23	Muzaffargarh	S16	Sarghar
B13	Killa Abdullh	F11	FR Laki Manwal	K19	Peshawar	F24	Nankana Sahib	S17	Shekpur
B14	Killa Spikhan	F12	FR Peshawar	K20	Sawal	F25	Nankana	S18	Sukkur
B15	Kohat	F13	FR Tank	K21	Shargha	F26	Okara	S19	Tanda Allahyar
B16	Lahada	G11	Adoni	K22	Swat	F27	Pakistan	S20	Tanda Muhammad Khan
B17	Loralai	G12	Diamer	K23	Tara	F28	Rahim Yar Khan	S21	Tarapur
B18	Mashang	G13	Ghanche	K24	Upper Dir	F29	Rashtari	S22	Thatta
B19	Muzaffhar	G14	Chitral	F1	Adock	F30	Rawalpindi	S23	Umerkot

**Legend**

River Zone (MODIS) - Before 2010 Flooding

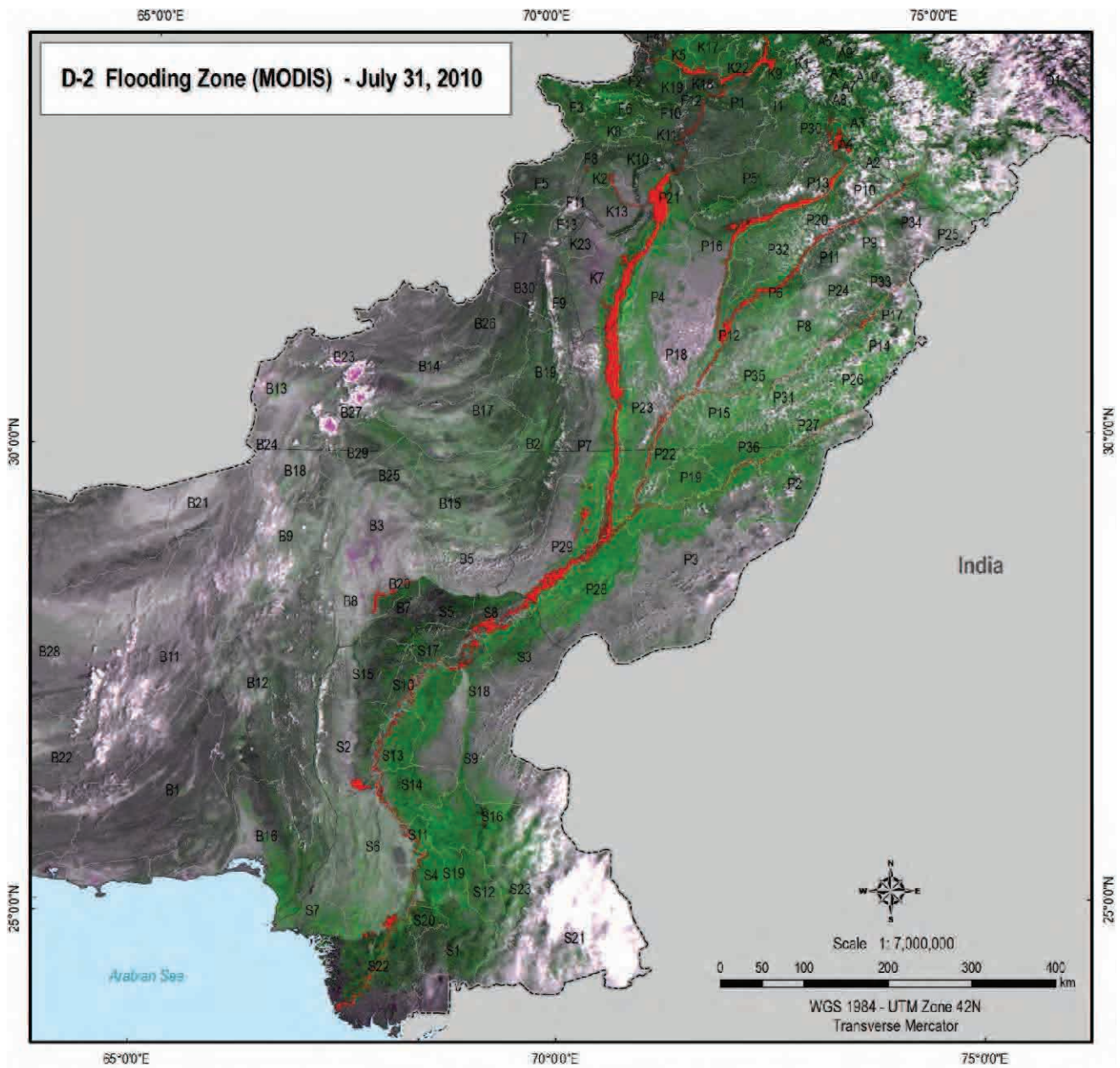
Satellite Data (MODIS) - July 23, 2010

RGB

- Red: Band\_1
- Green: Band\_2
- Blue: Band\_1

Source: JICA Study Team  
(Satellite image of the background: NASA)





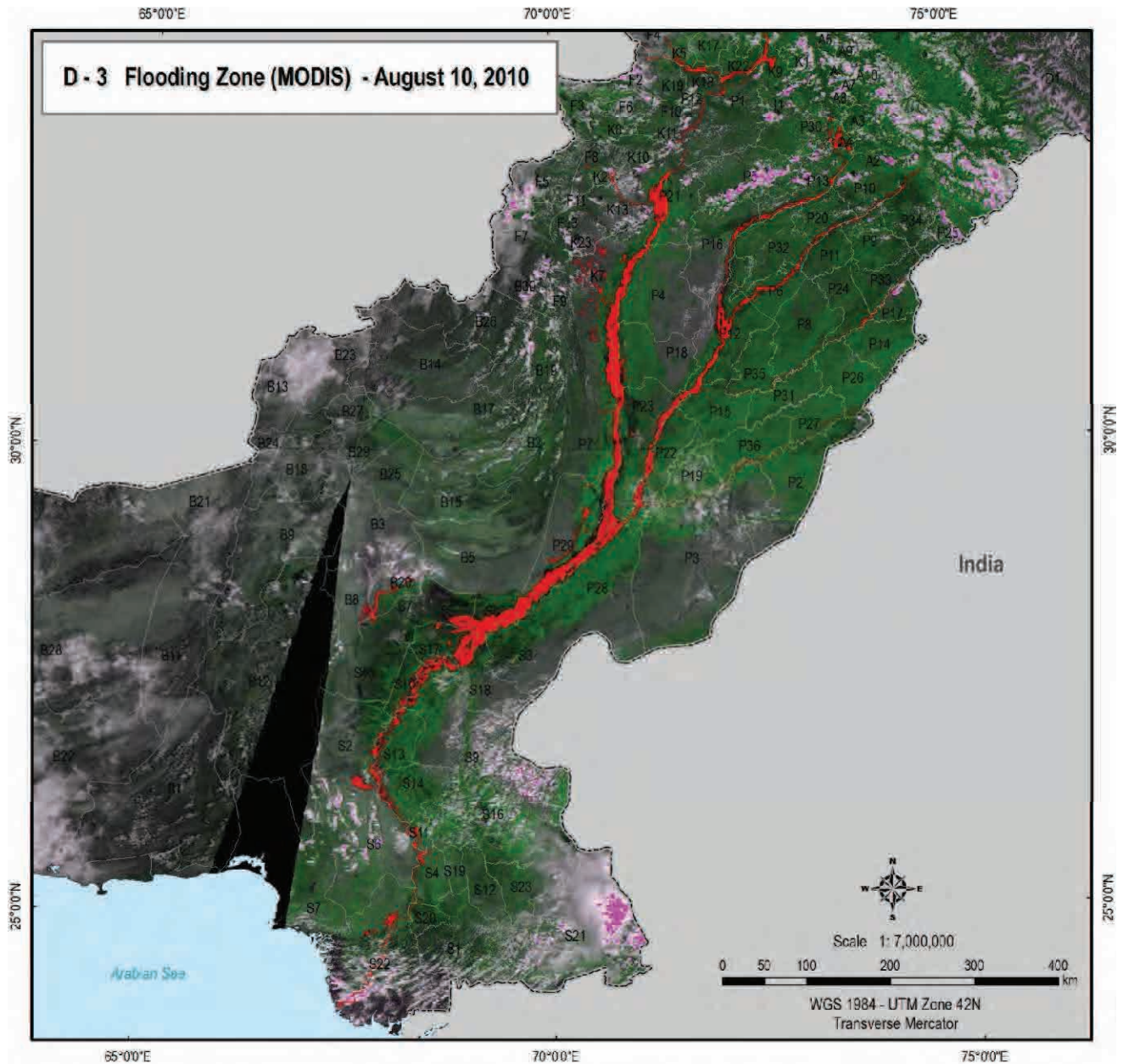
No.	District Name	No.	District Name	No.	District Name	No.	District Name	No.	District Name
A1	Bagh	B20	Nasirabad	E9	Gilgit	F2	Bahawalnagar	P91	Sialkot
A2	Bhakra	B21	Neshki	F6	Skardu	F3	Bahawalpur	P92	Sargodha
A3	Kot	B22	Paigdar	F10	Huzar-Nagar	F4	Rahwal	P93	Sheikhpura
A4	Mirpur	B23	Faisal	F11	Islamabad	F5	Chakwal	P94	Sialkot
A5	Muzaffargarh	B24	Quetta	K1	Abbottabad	F6	Chiniot	P95	Toba Tek Singh
A6	Neelum	B25	Sial	K2	Bannu	F7	G. S. Khan	P96	Velvet
A7	Poonch	B26	Zhob	K3	Bahawalpur	F8	Faisalabad	P97	Badin
A8	Sudhnot	B27	Zair	K4	Buner	F9	Gujranwala	P98	Dadu
A9	Haveli	B28	Wachul	K5	Chorhadda	F10	Gujrat	P99	Ghoro
A10	Haveli	B29	Hama	K6	Chitral	F11	Hakazabad	P100	Hyderabad
B1	Awatran	B30	Sherani	K7	D. I. Khan	F12	Jhang	P1	Jacobabad
B2	Bakhtan	D1	Dopatali Area	K8	Hangu	F13	Jhelum	P2	Jamshoro
B3	Bolan	F1	Baqar Agency	K9	Haripur	F14	Kasur	P3	Karachi
B4	Chagai	F2	Khyber Agency	K10	Karak	F15	Khanawal	P4	Kashmore
B5	Dera Bugti	F3	Kurram Agency	K11	Kohat	F16	Khushab	P5	Khanpur
B6	Gwadar	F4	Muzirard Agency	K12	Kohistan	F17	Lahore	P6	Lahore
B7	Jaffarabad	F5	North Waziristan Agency	K13	Lakki Marwat	F18	Lahor	P7	Multan
B8	Jhal Magsi	F6	Orakzai Agency	K14	Lower Dir	F19	Lodhran	P8	Mirpur Khas
B9	Kohat	F7	South Waziristan Agency	K15	Makrand	F20	Mandi Bahaudin	P9	Nawabshah
B10	Kachi	F8	FR Bannu	K16	Mambrho	F21	Mannar	P10	Nawabshah
B11	Khanor	F9	FR D. I. Khan	K17	Mardan	F22	Multan	P11	Qambar and Sohrawadkot
B12	Khuzdar	F10	FR Kohat	K18	Nowshera	F23	Muzaffargarh	P12	Sargha
B13	Kila Abdullak	F11	FR Lakki Marwat	K19	Peshawar	F24	Nankana Sahib	P13	Shikarpur
B14	Killa Saifullah	F12	FR Peshawar	K20	Sawal	F25	Narwal	P14	Shikhar
B15	Kohat	F13	FR Tank	K21	Shangla	F26	Okara	P15	Tando Allahyar
B16	Ladkhi	G1	Astore	K22	Swat	F27	Pakpattan	P16	Tando Muhammad Khan
B17	Loralai	G2	Gamsi	K23	Tank	F28	Rahim Yar Khan	P17	Thatta
B18	Mastung	G3	Ghanche	K24	Upper Dir	F29	Rajapur	P18	Thatta
B19	Muzaffar	G4	Chagai	P1	Attock	F30	Rawalpindi	P19	Umarkot

**Legend**

- River Zone (MODIS) - Before 2010 Flooding
- Satellite Data (MODIS) - July 31, 2010
- RGB
  - Red: Band\_1
  - Green: Band\_2
  - Blue: Band\_1

Source: JICA Study Team  
(Satellite image of the background: NASA)





No.	District Name	No.	District Name	No.	District Name	No.	District Name	No.	District Name
A1	Bughr	B20	Nasirabad	G5	Gilgit	F2	Balochistan	P31	Sahiwal
A2	Bhambae	B21	Nushki	G6	Skardu	F3	Balawasti	P32	Sargodha
A3	Kot	B22	Faisal	G7	Huzra-Nagar	F4	Praklee	P33	Shekhpura
A4	Mirpur	B23	Fishan	H1	Islamabad	F5	Chitral	P34	Sialkot
A5	Muzaffargarh	B24	Quetta	K1	Abbottabad	F6	Chitkot	P35	Toba Tek Singh
A6	Neelum	B25	Sibi	K2	Bannu	F7	C. G. Khan	P36	Yelka
A7	Poonch	B26	Zhob	K3	Bastiyam	F8	Fakhrabad	S1	Bader
A8	Sudkot	B27	Zaira	K4	Buner	F9	Ratanwala	S2	Daska
A9	Hafen	B28	Wachuk	K5	Chorhadda	F10	Gumt	S3	Shoni
A10	Haveli	B29	Hama	K6	Chitral	F11	Hafizabad	S4	Hyderabad
B1	Awara	B30	Shezari	K7	D. I. Khan	F12	Jhang	S5	Jacobabad
B2	Sakhar	D1	Dejabad Ania	K8	Hangu	F13	Jhelum	S6	Jarshon
B3	Bolan	F1	Bajaur Agency	K9	Haripur	F14	Kasur	S7	Karachi
B4	Chagaj	F2	Khyber Agency	K10	Kacok	F15	Khanawal	S8	Kashmora
B5	Dera Bughr	F3	Kurram Agency	K11	Komal	F16	Khusab	S9	Khanpur
B6	Swada	F4	Muzaffar Agency	K12	Koratan	F17	Lahore	S10	Larkana
B7	Jafferabad	F5	North Waziristan Agency	K13	Laki Manwal	F18	Lalian	S11	Multan
B8	Jhal Magas	F6	Dera Agency	K14	Lower Dir	F19	Lodhran	S12	Mirpur Khan
B9	Koat	F7	South Waziristan Agency	K15	Makwad	F20	Mandi Bahaudin	S13	Nasirpore Feroze
B10	Kach	F8	FR Bannu	K16	Manshera	F21	Mannar	S14	Nawabshah
B11	Kharan	F9	FR D. I. Khan	K17	Mardan	F22	Multan	S15	Qambar and Bahawalpur
B12	Kharzar	F10	FR Kohat	K18	Nawshera	F23	Muzaffargarh	S16	Sargha
B13	Killa Abdullah	F11	FR Laki Manwal	K19	Peshawar	F24	Nasirwan Sahbi	S17	Sialkot
B14	Killa Saifullah	F12	FR Peshawar	K20	Swat	F25	Nawab	S18	Sukkur
B15	Kohat	F13	FR Tank	K21	Shargha	F26	Onars	S19	Tando Allahyar
B16	Ladkela	G1	Aslora	K22	Swat	F27	Fakarabad	S20	Tando Muhammad Khan
B17	Loralai	G2	Diamer	K23	Tank	F28	Rahim Yar Khan	S21	Panipat
B18	Mastung	G3	Gharachi	K24	Upper Dir	F29	Rajapur	S22	Thatta
B19	Muzakheri	G4	Choke	F1	Attock	F30	Rawalpindi	S23	Umerkot

**Legend**

■ River Zone (MODIS) - August 10, 2010

Satellite Data (MODIS) - August 10, 2010

RGB

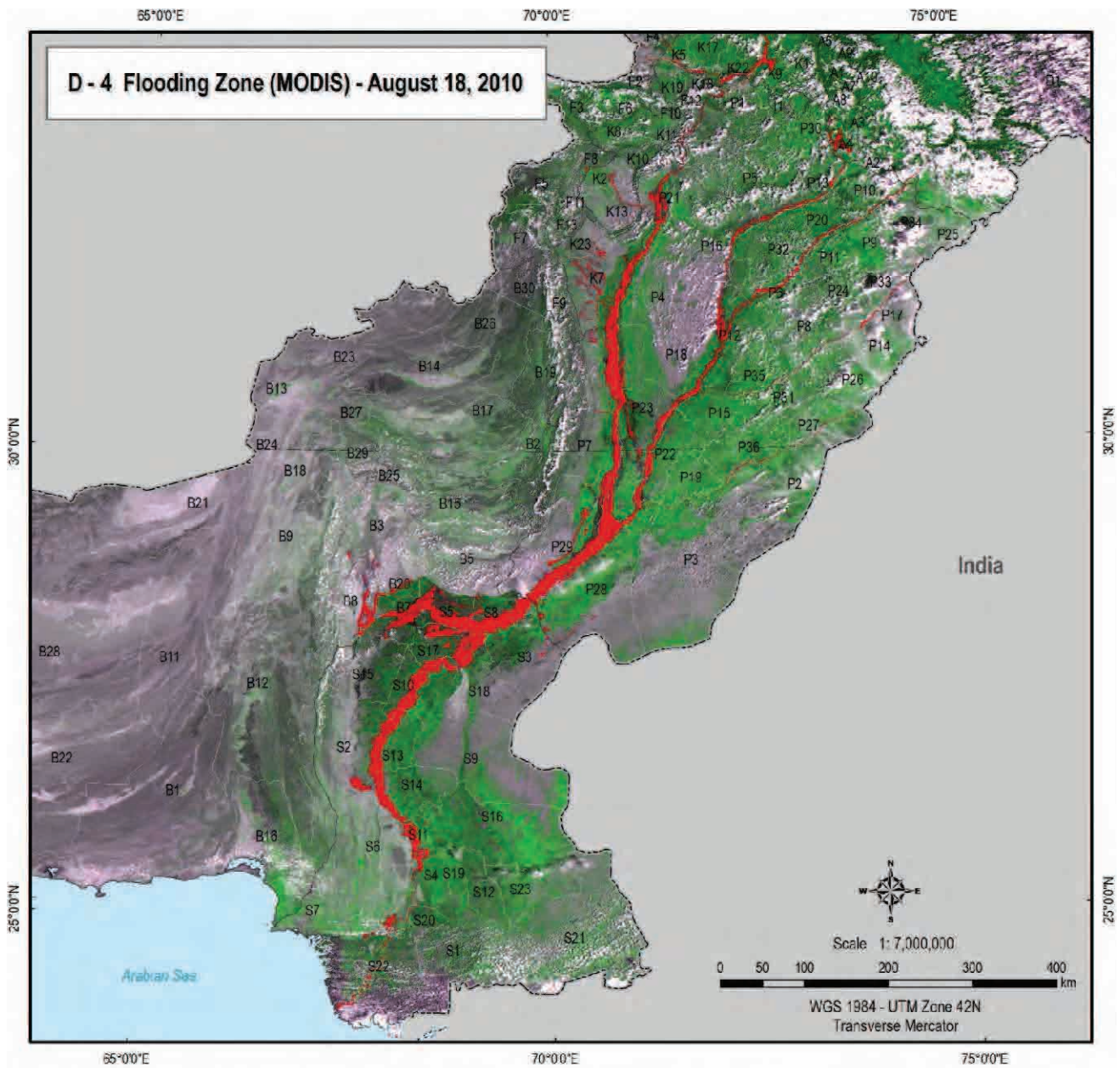
■ Red: Band\_1

■ Green: Band\_2

■ Blue: Band\_1

Source: JICA Study Team  
(Satellite image of the background: NASA)



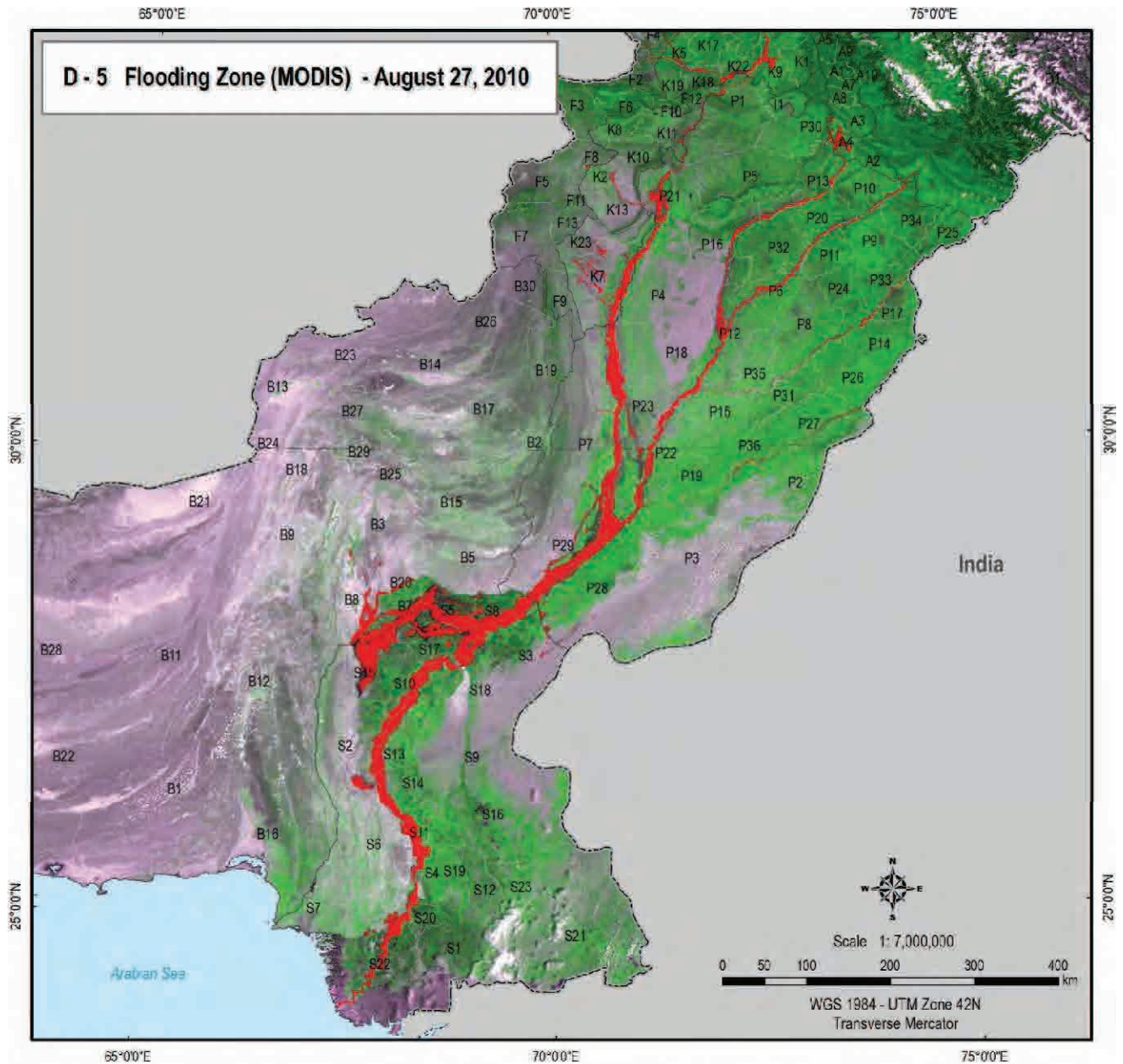


No.	District Name	No.	District Name	No.	District Name	No.	District Name	No.	District Name
A1	Bagh	B20	Nasirabad	C5	Faisal	F2	Bahawalnagar	P91	Sialkot
A2	Bhakra	B21	Nushki	C6	Swat	F3	Bahawalpur	P92	Sargodha
A3	Koh	B22	Pakistan	C7	Huzar-Nagar	F4	Trakhar	P93	Sheikhpura
A4	Mirpur	B23	Faisal	C8	Islamabad	F5	Chakwal	P94	Sialkot
A5	Muzaffargarh	B24	Quetta	C9	Abbottabad	F6	Chitral	P95	Toba Tek Singh
A6	Neelum	B25	Sial	C10	Bannu	F7	C. S. Khan	P96	Velvet
A7	Poonch	B26	Zhob	C11	Balochistan	F8	Ferdoskot	P97	Badr
A8	Sudhnot	B27	Zair	C12	Buner	F9	Gujranwala	P98	Dadu
A9	Habin	B28	Wahkai	C13	Chorwad	F10	Gurki	P99	Ghori
A10	Harek	B29	Hama	C14	Chitral	F11	Hakzabad	P100	Hydrabad
B1	Awatran	B30	Sherani	C15	D. I. Khan	F12	Jhang	P101	Jacobabad
B2	Bakhtan	D1	Dopdard Area	C16	Hangu	F13	Jhelum	P102	Jamshoro
B3	Bolan	F1	Bajar Agency	C17	Harpur	F14	Kasur	P103	Karachi
B4	Chagai	F2	Khyber Agency	C18	Karak	F15	Khanawal	P104	Kashmore
B5	Dera Bugt	F3	Kurram Agency	C19	Kohat	F16	Khanuab	P105	Khanpur
B6	Gwadar	F4	Mormand Agency	C20	Khrdada	F17	Lahore	P106	Lahore
B7	Jaffarabad	F5	North Waziristan Agency	C21	Larko Marwal	F18	Lahar	P107	Multan
B8	Jhal Mags	F6	Orakzai Agency	C22	Lower Dz	F19	Lodhran	P108	Milpur Khan
B9	Kohat	F7	South Waziristan Agency	C23	Makwand	F20	Mandi Bahaudin	P109	Nawabshahr
B10	Kachi	F8	FR Bannu	C24	Mamozha	F21	Mansha	P110	Nawabshahr
B11	Kharan	F9	FR D. I. Khan	C25	Mardan	F22	Multan	P111	Quetta and Sindhkhot
B12	Khuzdar	F10	FR Kohat	C26	Nowshera	F23	Muzaffargarh	P112	Sargha
B13	Kila Abdullak	F11	FR Larko Marwal	C27	Peshawar	F24	Nankana Sahib	P113	Shikarpur
B14	Killa Saifullah	F12	FR Peshawar	C28	Sawal	F25	Narwal	P114	Shikhar
B15	Kohat	F13	FR Tank	C29	Shangla	F26	Okara	P115	Tando Allahyar
B16	Ladkhi	C1	Astora	C30	Swabi	F27	Pakpattan	P116	Tando Muhammad Khan
B17	Loralai	C2	Dandi	C31	Tank	F28	Rahim Yar Khan	P117	Thatta
B18	Mastung	C3	Gharochi	C32	Upper Dir	F29	Rajapur	P118	Thatta
B19	Muzaffar	C4	Chozar	C33	Attock	F30	Rawalpindi	P119	Umarkot

**Legend**

- Red: River Zone (MODIS) - August 18, 2010
- Green: Satellite Data (MODIS) - August 18, 2010
- Blue: Band\_1
- Green: Band\_2

Source: JICA Study Team  
(Satellite image of the background: NASA)



No.	District Name	No.	District Name	No.	District Name	No.	District Name	No.	District Name
A1	Bugh	B20	Nasirabad	B5	Gilgi	F2	Bahawalnagar	P31	Sahiwal
A2	Bhakra	B21	Nushki	B6	Skardu	F3	Bahawalpur	P32	Sargodha
A3	Kut	B22	Faisalpur	B7	Huzar-Nagar	F4	Prakhar	P33	Shekhpura
A4	Mirpur	B23	Faisal	B8	Islamabad	F5	Chahval	P34	Sialkot
A5	Muzaffargarh	B24	Quetta	B9	Abbottabad	F6	Chitral	P35	Toba Tek Singh
A6	Needwala	B25	Sibi	B10	Bannu	F7	D. G. Khan	P36	Yelwa
A7	Poonch	B26	Zhob	B11	Bastiyam	F8	Fakhrabad	S1	Bader
A8	Sudkot	B27	Zaira	B12	Buner	F9	Gulistanwala	S2	Daska
A9	Hafiz	B28	Washuk	B13	Chahabada	F10	Gumt	S3	Shikri
A10	Haveli	B29	Hama	B14	Chitral	F11	Hafizabad	S4	Hyderabad
B1	Awara	B30	Shekri	B15	D. I. Khan	F12	Jhang	S5	Jacobabad
B2	Sakhar	B31	Dejald Agency	B16	Hangu	F13	Jhelum	S6	Jarshora
B3	Bolan	F1	Bajaur Agency	B17	Haripur	F14	Kasur	S7	Karachi
B4	Chagla	F2	Khyber Agency	B18	Kacok	F15	Khanawal	S8	Kashmora
B5	Dera Bugh	F3	Kurram Agency	B19	Kohat	F16	Khusab	S9	Khanpur
B6	Swada	F4	Muzaffar Agency	B20	Koratan	F17	Lahore	S10	Larkana
B7	Jaffarabad	F5	North Waziristan Agency	B21	Laki Manwal	F18	Lahar	S11	Multan
B8	Jhal Magas	F6	Orakza Agency	B22	Lower Dz	F19	Lodhar	S12	Mirpur Khan
B9	Koat	F7	South Waziristan Agency	B23	Makwad	F20	Mandi Bahaudin	S13	Nasrullah Feroze
B10	Kuch	F8	FR Bannu	B24	Manshera	F21	Mannar	S14	Nawabshah
B11	Kwara	F9	FR D. I. Khan	B25	Mardan	F22	Multan	S15	Qambar and Bahawalpur
B12	Kuzdar	F10	FR Kohat	B26	Nawabshah	F23	Muzaffargarh	S16	Sargha
B13	Killa Abdullah	F11	FR Laki Manwal	B27	Peshawar	F24	Nasirwan Sahbi	S17	Shikappa
B14	Killa Saifullah	F12	FR Peshawar	B28	Swal	F25	Nawab	S18	Sukka
B15	Kohat	F13	FR Tank	B29	Shargha	F26	Onars	S19	Tando Allahyar
B16	Ladkwa	F14	Aslwa	B30	Swat	F27	Fakhrabad	S20	Tando Muhammad Khan
B17	Loralai	F15	Dama	B31	Tank	F28	Rahim Yar Khan	S21	Panipat
B18	Mastung	F16	Gharshi	B32	Upper Dir	F29	Rahbar	S22	Thatta
B19	Muzakki	F17	Chow	B33	Atack	F30	Rawalpindi	S23	Umerkot

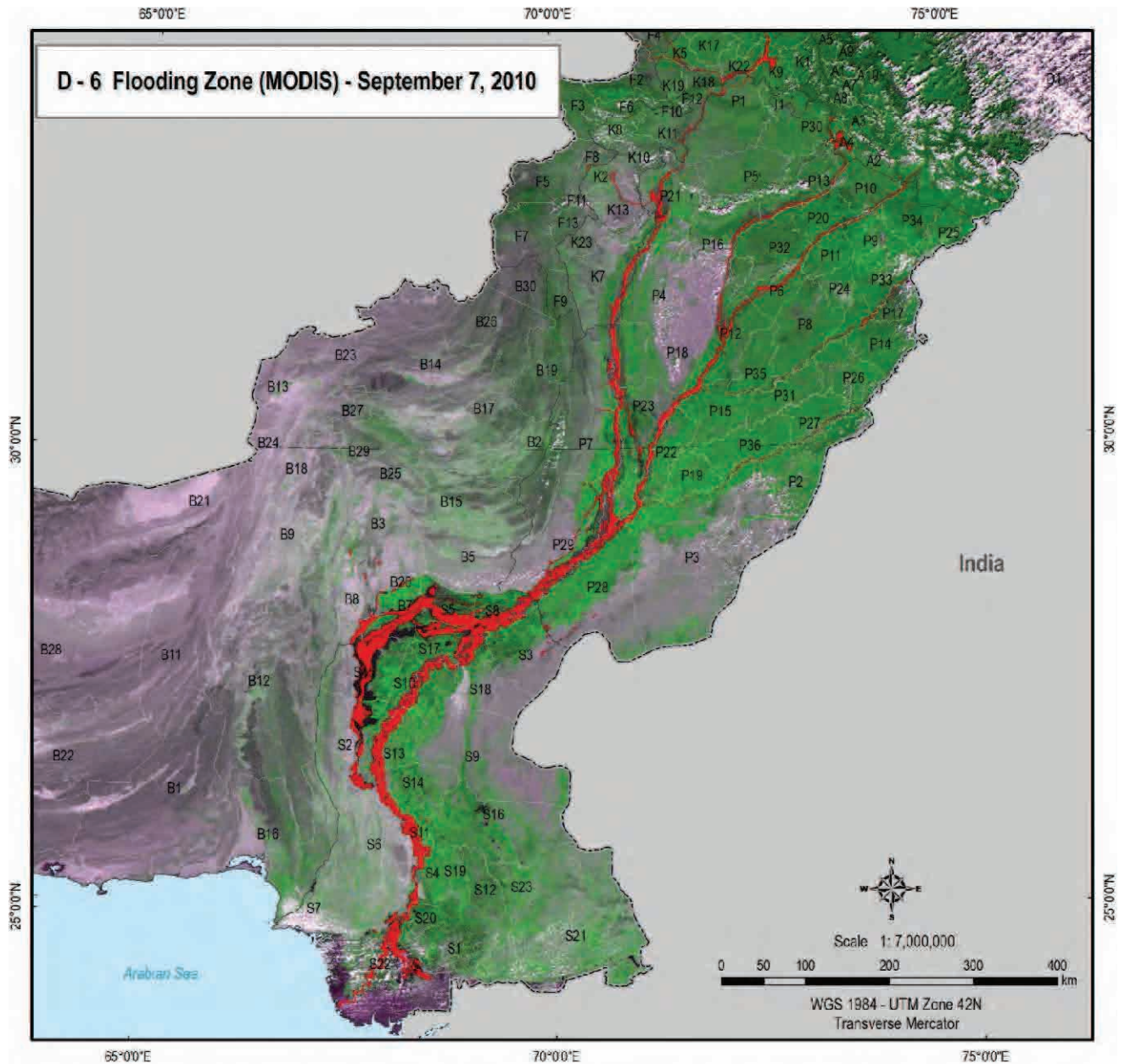
**Legend**

- River Zone (MODIS) - August 27, 2010
- Satellite Data (MODIS) - August 27, 2010**
- RGB**
- Red: Band\_1
- Green: Band\_2
- Blue: Band\_1

Source: JICA Study Team  
(Satellite image of the background: NASA)







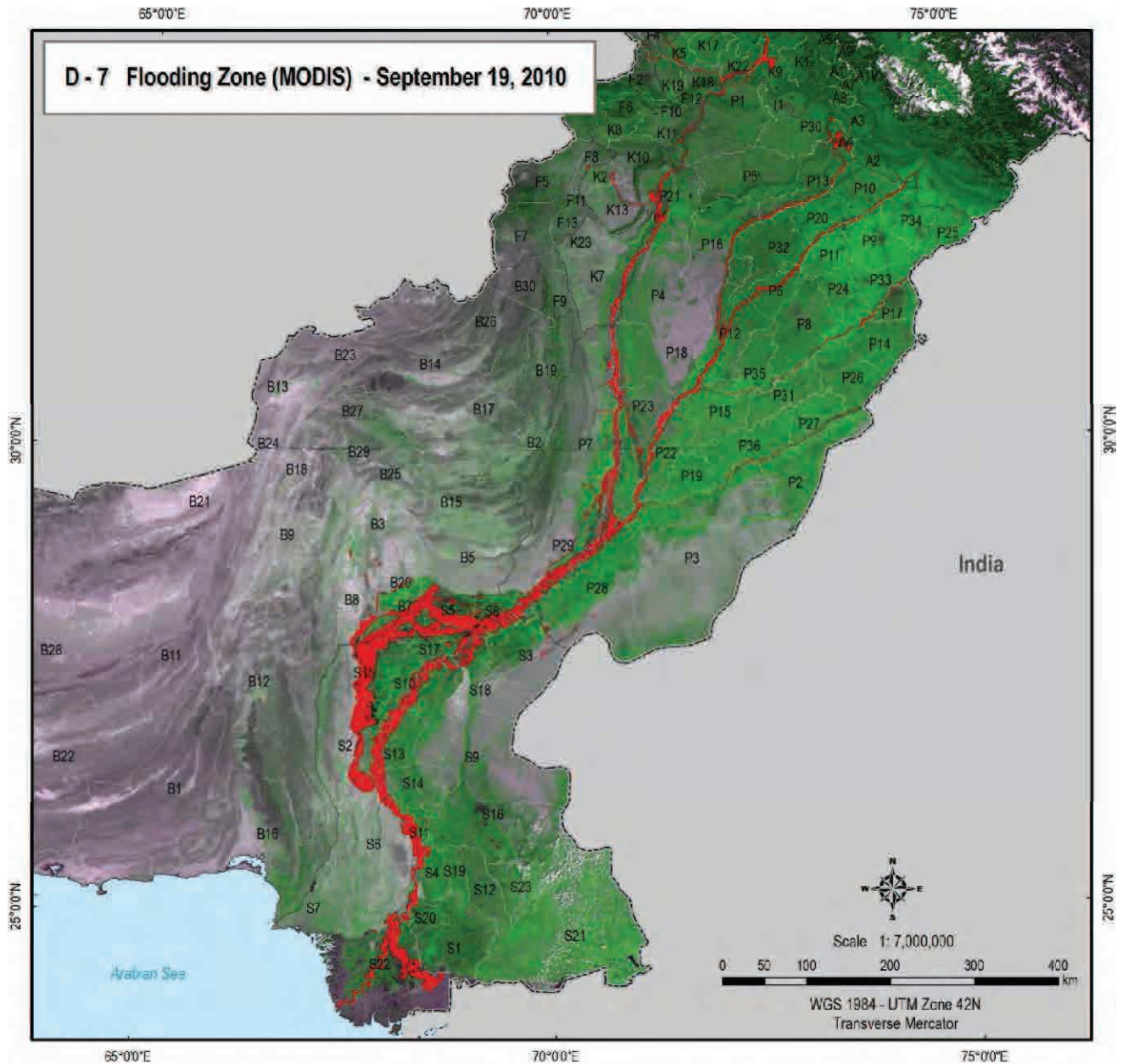
No.	District Name	No.	District Name	No.	District Name	No.	District Name	No.	District Name
A1	Bagh	B20	Nasirabad	E5	Faisal	F2	Bahawalnagar	P31	Sahiwal
A2	Bhakra	B21	Neshki	E6	Swat	F3	Bahawalpur	P32	Sargodha
A3	Koh	B22	Pingoor	E7	Huzar-Nagar	F4	Rahwal	P33	Sibi
A4	Mirpur	B23	Faisal	E8	Islamabad	F5	Chakwal	P34	Sialkot
A5	Muzaffargarh	B24	Quetta	E9	Abottabad	F6	Chitral	P35	Toba Tek Singh
A6	Neelum	B25	Sial	E10	Bannu	F7	G. S. Khan	P36	Velvet
A7	Poonch	B26	Zhob	E11	Balochistan	F8	Ferdowsi	P37	Badin
A8	Sudhnot	B27	Ziar	E12	Buner	F9	Gujranwala	P38	Dadu
A9	Haveli	B28	Wahkai	E13	Chorhadda	F10	Gujrat	P39	Dhok
A10	Haveli	B29	Hama	E14	Chitral	F11	Hakimabad	P40	Hyderabad
B1	Awatran	B30	Sherani	E15	D. I. Khan	F12	Jhang	P41	Jacobabad
B2	Bakhtan	D1	Dopatali Area	E16	Hangu	F13	Jhelum	P42	Jamshoro
B3	Bolan	F1	Bajar Agency	E17	Harpur	F14	Kasur	P43	Karachi
B4	Chagai	F2	Khyber Agency	E18	Karak	F15	Khanawal	P44	Kashmore
B5	Dera Bugt	F3	Kurram Agency	E19	Kohat	F16	Khunjerab	P45	Khanpur
B6	Gwadar	F4	Mairmand Agency	E20	Kohistan	F17	Lahore	P46	Larkana
B7	Jaffarabad	F5	North Waziristan Agency	E21	Lakki Marwat	F18	Lahar	P47	Multan
B8	Jhal Mags	F6	Orakzai Agency	E22	Lower Dir	F19	Lodhran	P48	Mirpur Khas
B9	Kohat	F7	South Waziristan Agency	E23	Makrand	F20	Mandi Bahaudin	P49	Nawabshah
B10	Kachi	F8	FR Bannu	E24	Mambrho	F21	Manshera	P50	Nawabshah
B11	Kharan	F9	FR D. I. Khan	E25	Mardan	F22	Multan	P51	Quetta and Sindhbadkot
B12	Khuzdar	F10	FR Kohat	E26	Nowshera	F23	Muzaffargarh	P52	Sargodha
B13	Kila Abdullatif	F11	FR Lakki Marwat	E27	Peshawar	F24	Nankana Sahib	P53	Sialkot
B14	Killa Saifullah	F12	FR Peshawar	E28	Sawal	F25	Narwal	P54	Sialkot
B15	Kohat	F13	FR Tank	E29	Shangla	F26	Okara	P55	Tando Allahyar
B16	Ladkahi	E1	Astora	E30	Swabi	F27	Pakpattan	P56	Tando Muhammad Khan
B17	Loralai	E2	Dandi	E31	Tank	F28	Rahim Yar Khan	P57	Thatta
B18	Mastung	E3	Ghanchei	E32	Upper Dir	F29	Rajapur	P58	Thatta
B19	Muzaffar	E4	Chozai	E33	Attock	F30	Rawalpindi	P59	Umar Kot

**Legend**

- River Zone (MODIS) - September 07, 2010
- Satellite Data (MODIS) - September 07, 2010
- RGB**
- Red: Band\_1
- Green: Band\_2
- Blue: Band\_1

Source: JICA Study Team  
(Satellite image of the background: NASA)





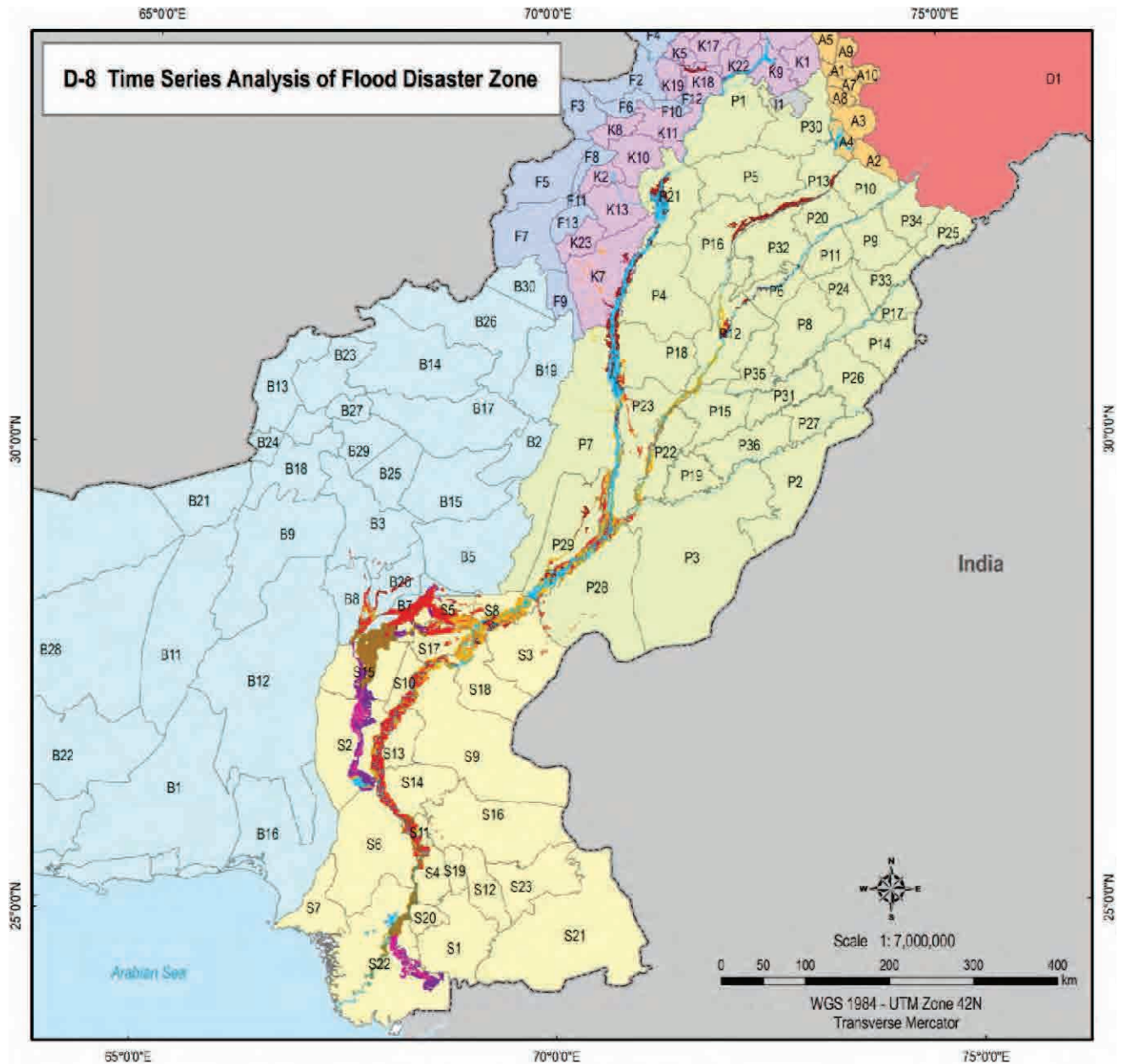
No.	District Name	No.	District Name	No.	District Name	No.	District Name	No.	District Name
A1	Bugh	B20	Nasirabad	B9	Gilgit	P2	Balochistan	P31	Sakhal
A2	Bhambur	B21	Nushki	B8	Skardu	P3	Balochistan	P32	Sargodha
A3	Kot	B22	Peshawar	B7	Huzar-Nagar	P4	Prakke	P33	Shikarpur
A4	Wipar	B23	Faisal	B6	Islamabad	P5	Chitral	P34	Sialkot
A5	Muzaffargarh	B24	Quetta	B5	Abbottabad	P6	Chitral	P35	Toba Tek Singh
A6	Neelum	B25	Sibi	B4	Bannu	P7	D. G. Khan	P36	Yelka
A7	Poonch	B26	Zhob	B3	Bastiyam	P8	Fakhrabad	S1	Bader
A8	Sudkot	B27	Zaira	B2	Buner	P9	Gulistan	S2	Daska
A9	Hafen	B28	Wachuk	B1	Cherhadda	P10	Gumt	S3	Shik
A10	Hawal	B29	Hama	B0	Chitral	P11	Hafizabad	S4	Hyderabad
B1	Awara	B30	Shesani	K1	D. I. Khan	P12	Jhang	S5	Jacobabad
B2	Sakhar	D1	Deputat Ania	K2	Hangu	P13	Jhelum	S6	Jarshon
B3	Bolan	F1	Bajaur Agency	K3	Haripur	P14	Kasur	S7	Karachi
B4	Chagla	F2	Khyber Agency	K10	Kacok	P15	Khanawal	S8	Kashmora
B5	Dera Bugh	F3	Kurram Agency	K11	Komal	P16	Khusab	S9	Khanpur
B6	Swada	F4	Muzaffar Agency	K12	Koratan	P17	Lahore	S10	Larkana
B7	Jaffarabad	F5	North Waziristan Agency	K13	Laki Manwat	P18	Lalwal	S11	Multan
B8	Jhal Magas	F6	Dakka Agency	K14	Lower Dz	P19	Lodharan	S12	Mirpur Khan
B9	Koek	F7	South Waziristan Agency	K15	Makwad	P20	Mandi Bahaudin	S13	Nasrullah Feroze
B10	Kach	F8	FR Bannu	K16	Manshera	P21	Mannawa	S14	Nawabshah
B11	Kharan	F9	FR D. I. Khan	K17	Mardan	P22	Multan	S15	Qambar and Bahawalpur
B12	Kharzar	F10	FR Kohat	K18	Nawabshah	P23	Muzaffargarh	S16	Sargha
B13	Killa Abdullah	F11	FR Laki Manwat	K19	Peshawar	P24	Nasirwan Sahbi	S17	Srikanpur
B14	Killa Saifullah	F12	FR Peshawar	K20	Swal	P25	Nawabshah	S18	Sukkur
B15	Kohat	F13	FR Tank	K21	Shargha	P26	Onara	S19	Tando Allahyar
B16	Ladkela	G1	Aslora	K22	Swal	P27	Fakharabad	S20	Tando Muhammad Khan
B17	Loralai	G2	Diamir	K23	Tank	P28	Rahim Yar Khan	S21	Panipat
B18	Mastung	G3	Gharachi	K24	Upper Dir	P29	Rahimpur	S22	Thatta
B19	Muzakheri	G4	Chozar	P1	Attock	P30	Rawalpindi	S23	Umerkot

**Legend**

- River Zone (MODIS) - September 19, 2010
- Satellite Data (MODIS) - September 19, 2010**
- RGB**
- Red: Band\_1
- Green: Band\_2
- Blue: Band\_1

Source: JICA Study Team  
(Satellite image of the background: NASA)





No.	District Name	No.	District Name	No.	District Name	No.	District Name	No.	District Name
A1	Sahi	B23	Nasirabad	F8	Dighi	P2	Buharwala	P31	Sahiwal
A2	Bhawal	B21	Nasirabad	F6	Swabi	P3	Bahawalpur	P30	Sargodha
A3	Kali	B22	Pargua	F13	Hiro-Koppe	F4	Bhakkar	P33	Sheikhpura
A4	Mirpur	B22	Fisher	F11	Islamabad	P5	Chakwal	P34	Sialkot
A5	Mirafzalabad	B24	Quetta	F10	Azadnagar	F6	Chiniot	P36	Toba Tek Singh
A6	Neelum	B25	Sialkot	K2	Bannu	F7	D. G. Khan	P38	Velvet
A7	Poonch	B26	Zhob	F12	Balochistan	D6	Faisalabad	S1	Badin
A8	Sudhokh	B27	Zawal	F9	Rawal	F9	Gujranwala	S2	Dadu
A9	Bahawal	B28	Wazirabad	F8	Charsadda	F6	Gujrat	S3	Chokhi
A10	Haris	B29	Harris	F8	Chitral	F11	Hokaidad	S4	Hyderabad
B1	Awarak	B30	Shoran	K1	D. I. Khan	F12	Jhang	S5	Jacobabad
B2	Bahawal	D1	Disputed Area	F9	Hangu	F13	Jhelum	S6	Jamshoro
B3	Bahawal	F1	Bajaur Agency	F10	Hatbat	F14	Kasur	S7	Karachi
B4	Chagai	F2	Khyber Agency	K19	Karak	F15	Khanawal	S8	Khatmoon
B5	Geni Dugh	F3	Konum Agency	K11	Korak	F16	Khanke	S9	Khanpur
B6	Gwadar	F4	Mohmand Agency	K12	Kohistan	F17	Lahore	S10	Larkana
B7	Jalalabad	F5	North Waziristan Agency	K13	Laki Marwat	F18	Lawan	S11	Multan
B8	Jhal Magar	F6	Orakzai Agency	K19	Lower Dir	F18	Lodhran	S12	Mirpur Khas
B9	Kabul	F7	South Waziristan Agency	K19	Mardan	F20	Mand Ghanashan	S13	Nawabshah
B10	Kachi	F8	FR Tiricoo	K18	Marsyia	F21	Marsyia	S14	Nawabshah
B11	Kashmir	F9	FR D. I. Khan	K17	Mardan	F22	Multan	S15	Quetta and Sindhupalok
B12	Khuzdar	F10	FR Korak	K19	Nowsheer	F23	Muzaffargarh	S16	Sargha
B13	Kila Abdallah	F11	FR Laki Marwat	K19	Peshawar	F24	Narwan Sahib	S17	Shekhpura
B14	Killa Sukkur	F12	FR Peshawar	K19	Sawal	F25	Narwan	S18	Sukkur
B15	Kohat	F13	FR Tirk	K20	Shangha	F26	Okara	S19	Tando Allahyar
B16	Lasbela	F14	Ashok	K22	Swabi	F27	Pakpattan	S20	Tando Muhammad Khan
B17	Loralai	F15	Diana	K23	Tank	F28	Rahim Yar Khan	S21	Tharparak
B18	Mawaj	F16	Gharcho	K24	Upper Dir	F29	Rashtara	S22	Toba
B19	Muzaffar	F17	Dhok	F11	Attock	F30	Rawalpindi	S23	Umanot

**Legend**

- River Zone (MODIS) - Before 2010 Flooding
- River Zone (MODIS) - August 10, 2010
- River Zone (MODIS) - August 18, 2010
- River Zone (MODIS) - August 27, 2010
- River Zone (MODIS) - September 07, 2010
- River Zone (MODIS) - September 19, 2010

Source: JICA Study Team  
(Satellite image of the background: NASA)




## Appendix 4.8.2 Damage and Loss Assessment Format (1/4)

### DAMAGE AND LOSS ASSESSMENT REPORT FORMAT (1/2)

Situation Report: District Government: District Disaster Management Authority (Weekly Base)

#### 1. General

Nature of Disaster: \_\_\_\_\_ District: \_\_\_\_\_ Province: \_\_\_\_\_

Report: \_\_\_\_\_ Date: \_\_\_\_\_

Reported By: \_\_\_\_\_ Telephone: \_\_\_\_\_ Time: \_\_\_\_\_

#### 2. Affected Area (Family-Based)

# of families: \_\_\_\_\_ # of Villages: \_\_\_\_\_ # of UCs: \_\_\_\_\_ # of Tehsils/Taluka: \_\_\_\_\_

#### 3. No. of Overall Emergencies Condition

N/A		Minor		Significant		Major	
						Total	

#### 4. Casualties (Provide latest Cumulative figures)

Fatalities	Male		Injuries	Male		Missing	Male	
		Female					Female	
	Total			Total			Total	

#### 5. EOC Activation Closed

Status	Date	Status	Date	Status	Date	Status	Date
Established		Alert		Fully Activated		Closed	

Present Status : \_\_\_\_\_

#### 6. Emergency Orders (Emergency Declared, Evacuation Ordered, Relief Camp set up etc)

Status	Date	Status	Date	Status	Date
Emergency Declared		Evacuation Ordered		Relief Camp setup	

Present Status : \_\_\_\_\_

#### 7. Any support received from:

Agency/Dept.	Support?	Description
Police	None / Yes	
CD	None / Yes	
Health	None / Yes	
PHE	None / Yes	
PW	None / Yes	
Fire	None / Yes	
Others 1	Yes	
Others 2	Yes	

#### 8. Relief Camp/Centre Status

Name of Camp/Centre	Location	Present Status		Managed by
		# of Families	Open/Closed	DDMA/PRCS/Others

#### 9. Roads/Bridges Status

Name of Road	Location	Status *1	Length / Points

Note \*1: Blocked/Washed out/Flooded/Closed

## Appendix 4.8.2 Damage and Loss Assessment Format (2/4)

### DAMAGE AND LOSS ASSESSMENT REPORT FORMAT (2/2)

Situation Report: District Government: District Disaster Management Authority (Weekly Base)

#### 10. Damage Reports for Structures

Structure	Description	No. per Degree of Damage *2		
		Minor	Significant	Major
Houses	Pacca			
	Kacha			
Public Buildings				
Private Buildings				
Water supply				
Drainage/Sewerage				
Electricity Outages				
Telephone Outages				
Food Storage				
Irrigation Infrastructure				

Note \*2: See Explanation

#### 11. Agriculture Crop Damaged

Name of Crop	Type of Damage *3	Area of Damage (Acres)	Estimated Damage (PKR)
* Influence in next harvest			

Note: \*3; Washed Out/ Vermination/ Sedimentation Deposits/ Dead by Flood, Drought etc.

#### 12. Livestock Damaged

Name of Livestock	Injured		Died	
	No.	Estimated Damage	No.	Estimated Damage
* Influence in the future				

#### 13. Any Other Vital Information:

--

#### 14. Specify Immediate Needs: (In Quantity)

Item	Needs in Quantity	Descriptions
Food:		
Medical Supplies:		
Tents:		
Others:		

#### 15. Other support to be needed

Item	Description
Technical	
Financial	
Human Resources	

**Appendix 4.8.2 Damage and Loss Assessment Format (3/4)**  
**Explanation of DAMAGE AND LOSS ASSESSMENT REPORT FORMAT (1/2)**

**Instructions for District Government Situation Report Form**

Minor	• Only partial EOC activation, if at all. Local emergency response forces are involved in emergency operations but the situation is clearly manageable at district level. No assistance necessary from province. No declaration of emergency.
	• Damage generally minor. Only small scale shelter operations, if any;
	• Power/telephone outages expected to be of short duration.
Significant	• A significant event which fully involves local emergency response force at district and provincial levels which may include DDMA, PDMA, police, fire department, public works, health, livestock etc).
	• Full scale EOC activation is generally associated with this event level.
	• The support from departments at district level and PDMA needed. A state of emergency is usually declared but can be managed at provincial level.
Major	• Some moderate physical damage, internal displacements, health problems, shelter and food operations, water sanitation issues, livestock vaccination requirements, power/telephone outages etc are usually associated with this event level.
	• Usually in this type of event, major support is needed from the federal government because it is beyond the capacity of provinces to manage this level of emergency.
	• This support may include; possibly some search and rescue operations, resource mobilization, relief assistance and transport support (air and land) etc. In this type of disaster, the chance of significant level of casualties, injuries, disappearance of people, damage to many houses, degradation of infrastructure, major loss of livestock, agricultural crop devastation on large scale, business impairment etc.
	• There is significant level of internal displacement, irrigation structure collapse etc.
	• State of emergency declared. EOC fully activated.
Casualties	• Wide spread power and telephone outages. Some areas inaccessible by vehicle.
	• Provide the accurate estimates of the disaster related casualties.
EOC Activation	• Provide latest cumulative figure, not an update from the previous situation report.
	• Indicate if the local EOC is closed, partially activated or fully activated. Partially activated means that only a few key important agencies are represented in the EOC.
Emergency Order	• Fully activated means all the agencies are represented in the EOC on 24 hours basis.
Shelter Status	• Indicate any emergency orders issued by competent authority (state of emergency declared), evacuation orders.
Water/Sanitation	• Indicate all public shelters that are currently open or give time when shelters will open/close, name and location of shelter, the number of families in shelter and particulars of agency managing the shelter (Red Crescent, district administration etc).
Health	• Indicate the water/sanitation situation in the camps/villages/towns where people are residing during and after disaster.
Status of Roads and Bridges	• Check the health situation particularly any threat of epidemics in the affected area
	• Which roads and bridges have been made impassable by trees downed/washed away, wires, or other debris etc.

## Appendix 4.8.2 Damage and Loss Assessment Format (4/4)

### Explanation of DAMAGE AND LOSS ASSESSMENT REPORT FORMAT (2/2)

#### Instructions for Damage Report

Damage	Minor	Significant	Major
Houses	No significant structural damage. Light cracks in the wall	Few, if any, units severely damaged. Structural damage generally limited to non living space area	Severe structural damage or destruction of many homes
Public/Private Building	No significant structural damage. Light cracks in the wall	Damage to one key or several non critical public buildings. Building used restricted or closed	Severe structural damage or destruction rendering building uninhabitable for an extended period of time
Water Supply	Very light damage to the water supply scheme. Can be managed locally	Significant level damage to public water supply schemes and distribution system of public water supply	Extensive damage to public water system rendering it unusable for several days or longer period
Sewerage Plant/ Drainage	Minor damage to the plant due to electricity fluctuation	Significant level damage to the plant due to power outages/damage to system	Extensive damage to sewer/ drainage plant or distribution system or total loss of system
Electricity Outages	Some homes and individual streets are without electricity	Up to 60% of the houses in village/town are without electricity	Nearly all the towns/ villages are without electricity and electric poles uprooted.
Telephone Outages	Some homes and offices are without telephone system	Telephone system in most of the offices and homes disrupted. Most of the offices and homes and telecommunication system failed	Nearly whole town/city/area without telecommunication. System is completely ruined.
Food Storage	Some houses and government godowns have lost stored stock.	Stocks in most houses and government godowns affected	Majority of the houses and government godowns without any holding.
Fodder Storage	Fodder washed away or afflicted on small scale	Fodder crops in field and the stocks stored in houses affected to a significant extent	Fodder in fields and houses completely written off.
Irrigation Infrastructure	Irrigation Infrastructure	Small scale damage	Major damage





### Appendix 4.9.1 Information and Evacuation Drill in Javed Colony (2/3)

Designated Community Disaster Management Committee of Javed Colony

#### **COMMUNITY DISASTER MANAGEMENT COMMITTEE**

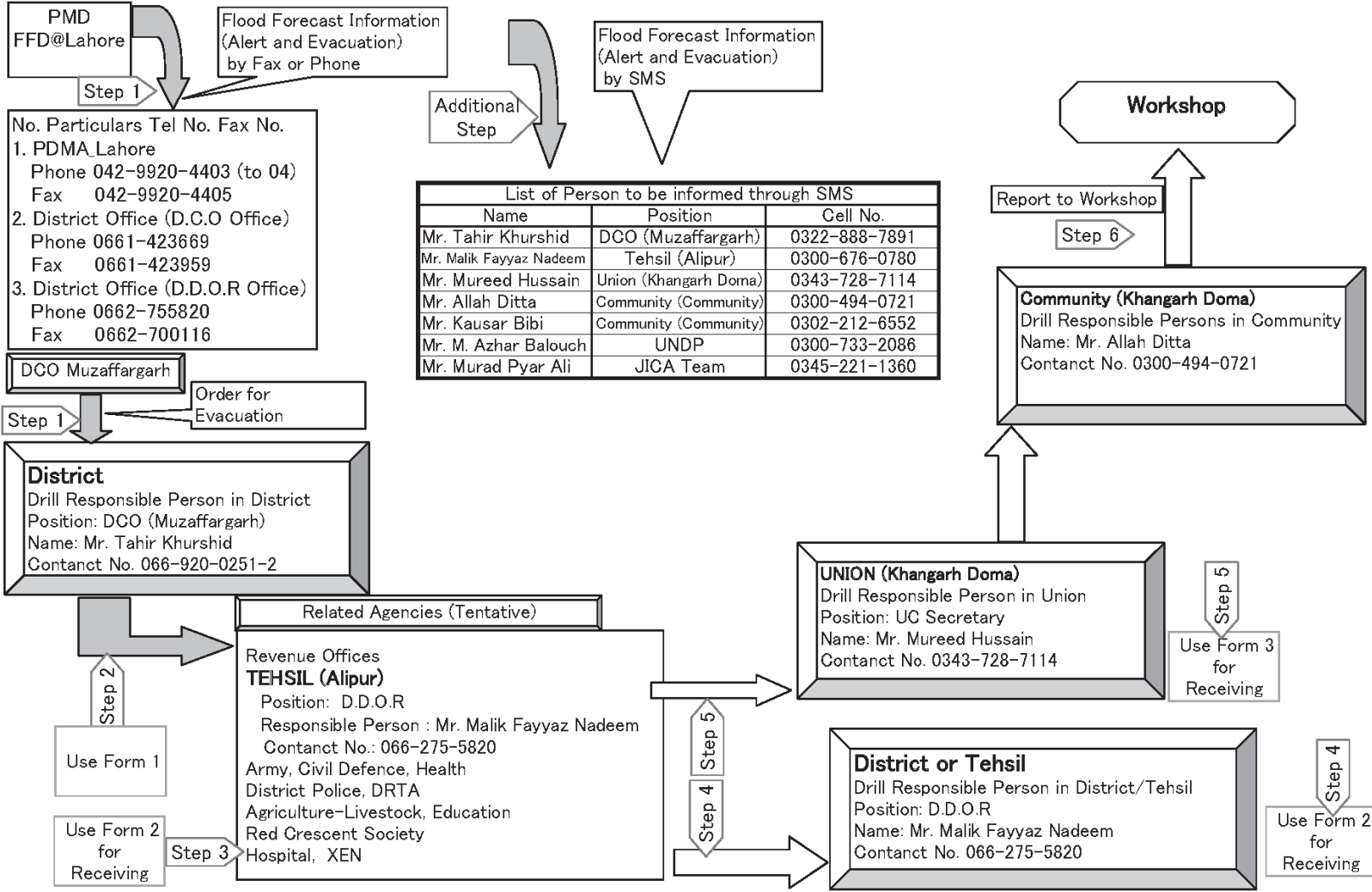
#### **JAVED COLONY UC 45 RAWAL TOWN RAWALPINDI**

<b>S.#</b>	<b>NAMES</b>	<b>DESIGNATION</b>	<b>CONTACT # 1</b>	<b>CONTACT # 2</b>
01	Adnan Rafiq	Team Leader	030155131180	03455351101
02	Mohd Altaf	Asst Team Leader	03336959028	03008753010
03	Aqeel Naseem	Admin/Logistic/Communication Group Leader	03469613917	03455298775
04	Mohd Umer muneer	First Aid Group Leader	03335723882	03215501718
05	Ali Qasim	Fire Fighting Group Leader	03055120072	
06	Jamshaid Khan	Search and Rescue Group Leader	NA	NA
07	Aamir Sohail	Asst Search and Rescue Group Leader	03438549580	03125072108

For Information Drill, Team Leader receives information from UC office.

If the Team Leader cannot be connected, Assistant Team Leader receives information from UC office.





List of Person to be informed through SMS		
Name	Position	Cell No.
Mr. Tahir Khurshid	DCO (Muzaffargarh)	0322-888-7891
Mr. Malik Fayyaz Nadeem	Tehsil (Alipur)	0300-676-0780
Mr. Mureed Hussain	Union (Khangarh Doma)	0343-728-7114
Mr. Allah Ditta	Community (Community)	0300-494-0721
Mr. Kausar Bibi	Community (Community)	0302-212-6552
Mr. M. Azhar Balouch	UNDP	0300-733-2086
Mr. Murad Pyar Ali	JICA Team	0345-221-1360

Figure 1 Procedure of Communication Drill for Muzaffargarh

Figure Flow Chart of Procedure of Information and Evacuation Drill in Khangarh Doma

## Appendix 4.9.2 Information and Evacuation Drill in Khangarh Doma (2/2)

### Focal Persons List for Information Drill

Focal Persons (Responsible Person in the Drill)

Agency	Name	Contact No. (Cell)
PMD FFD	Mr. Mian Muhammad Ajmal Shad	042-9920-0139
District (Muzaffargarh)	Mr. Tahir Khurshid	066-920-0251
Tehsil (Alipur)	Mr. Malik Fayyaz Nadeem	066-275-5820
Union (Khangarh Doma)	Mr. Mureed Hussain	0343-7287114
Community (Community)	Mr. Allah Ditta	0300-494-0721
UNDP	Mr. Muhammad Azhar Balouch	0300-733-2086
JICA Team	Mr. Murad Pyar Ali	0345-221-1360

# APPENDIX TO CHAPTER 5

Completion Report of TOT of DRM Training for TMA Staff

The Project for National Disaster Management Plan

Completion Report  
of  
TOT of DRM Training for TMA Staff

JICA Expert Team

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### Annexure

1. Participants List
2. Agenda for TOT of DRM Training for TMA Staff
3. Pre- and Post- Training Knowledge Assessment
4. Results of Pre- and Post- Training Knowledge Assessment
5. Form of Evaluation by Participants
6. Results of Evaluation by Participants
7. Group Photo of TOT of DRM Training for TMA Staff Participants

## **Acronyms:**

CBDRM:	Community Based Disaster Risk Management
CBOs:	Community Based Organizations
CDD:	Civil Defence Department
CM:	Chief Minister
DRM:	Disaster Risk Management
DCO:	District Coordination Officer
DRR:	Disaster Risk Reduction
DEOC:	District Emergency Operation Centre
DDMA:	District Disaster Management Authority
FATA:	Federally Administered Tribal Areas
FFD:	Flood Forecasting Division
HVCA:	Hazard, Vulnerability and Capacity Assessment
INGO:	International Non Governmental Organization
JICA:	Japan International Cooperation Agency
KP:	Khyber Pukhtoonkhawa
LG&RD:	Local Government and Rural Development
NDMA:	National Disaster Management Authority
NDMC:	National Disaster Management Commission
NEOC:	National Emergency Operation Centre
NIDM:	National Institute of Disaster Management
PMD:	Pakistan Metrology Department
PDMA:	Provincial Disaster Management Authority
PEOC:	Provincial Emergency Operation Centre
PHED:	Public Health Engineering Department
SWD:	Social Welfare Department
SOP:	Standard Operation Procedures
TMA:	Tehsil Municipal Administration
TORs:	Terms of References
UN:	United Nations
WAPDA:	Water and Power Development Authority



## **1. Overview of the Training**

### **1.1. Background of the Training**

Due to its geographical location, Pakistan has witnessed so many disasters for the last eighty years. Pakistan has multiple kinds of hazards like earthquake, floods, Cyclone, drought, land sliding, snow avalanches, diseases and deforestation etc. Likewise, there are also man induced hazards which affect from time to time. Keeping these situations in view, there should be proper system at all levels for disaster risk management.

National Disaster Management Authority (NDMA), with the assistance of Japan International Cooperation Agency (JICA) has been engaged in a study Project “National Disaster Management Plan in the Islamic Republic of Pakistan” to Strengthen Disaster Management System in Pakistan covering the aspects of National Disaster Management Plan, development of Multi-hazard Early Warning System, Human Resource Development Plan and Community Based Disaster Risk Management (CBDRM). In this connection JICA Expert Team is arranging different trainings for the community and Government officials in the targeted areas which are Muzaffargarh, Bhakkar and Rawalpindi of Punjab, Thatta and Karachi of Sindh. Only skillful and well organized men power can play effective and result based response at community and Government level.

In this regard, a three-day training workshop was organized for the District officials of the five districts at National Institute of Disaster Management from 21<sup>st</sup> June to 23<sup>rd</sup> 2011. The main objective of the training was to enhance the capacities of these officials so that they could arrange training for TMA Staff in their respective District regarding Disaster Management. Thus the Tehsil authorities may be able to practice these activities in their concerned Tehsil with Government Officials in particular and for the Public in general. TMA has a key role in the Tehsil level emergencies, so only well prepared officials can manage such emergencies in better ways. For this, the trained officers of the TMA have to train other officials of TMA and impart this awareness also at community level.

### **1.2. Training Name**

The name of the training is “TOT of DRM Training for TMA Staff”.

### **1.3. Objective and Outcomes of the Training**

Objective of the training is: “participants will understand training contents for TMA staff and will become able to conduct the training to TMA staff”. Outcomes of the training were set as follows.

The participants will be able to explain the basic concept of DRM.

The participants will be able to explain roles and responsibilities of TMA staff at disaster management.

The participants will be able to explain what kinds of activities TMA can do for mitigation and preparedness.

The participants will be able to explain about early warning system and emergency response and what TMA staff should do.

The participants will be able to explain the basic concept of CBDRM.

The participants will be able to conduct the training course to TMA staff.

#### **1.4. Participants**

There are 20 participants (basically 4 governmental officers from 5 districts). The participants were supposed to be two district officers, one officer of Rescue 1122, and one officer of Civil Defence from Rawalpindi, Bhakkar and Muzaffargarh districts in Punjab and three district officers and one officer of Civil Defence from Thatta and Karachi districts in Sindh. However, the number of participants from district Muzaffargarh was three and the number of participants from district Rawalpindi was five. Participant list is attached to annexure.

#### **1.5. Trainers**

The training was conducted by highly experienced and qualified trainers who have rich practical experiences at national and international level in training and research. Their names are as below.

Mr. Falak Nawaz (Director NIDM)

Mr. Syed Harir Shah (Consultant)

Mr. Jan Muhammad Khan (PMD)

Ms. Tomoko Shaw (JICA Expert Team)

Dr. Ryo Matsumaru (JICA Expert Team)

#### **1.6. Venue, Timing and Duration**

The training was conducted in NIDM (National Institute of Disaster Management) in Islamabad. The dates of the training were June 21st, 22nd, and 23rd 2011 for three days (from 9:00 to 16:30).

#### **1.7. Contents**

Contents of the training are shown in the table below. Detailed agenda is attached to this report.

Module	Session
1. Concept of DRM	1.1 Hazards, Risk profile in Pakistan 1.2 Disaster Risk Management
2. Roles and responsibilities of TMA staff at disaster management	2.1 Relevant organizations and their roles at disaster management 2.2 Roles and responsibilities of TMA at disaster management
3. Mitigation and preparedness at Tehsil level	3.1 Measures for mitigation and preparedness at Tehsil level 3.2 Public awareness at Tehsil level
4. Early warning system and emergency response at Tehsil level	4.1 Early Warning System (EWS) in Pakistan 4.2 Emergency headquarter and EWS Dissemination System at Tehsil level 4.3 Evacuation and camp management 4.4 Damage assessment and reporting
5. Concept of CBDRM	5.1 CBDRM objectives 5.2 Tehsil and communities 5.3 CBDRM activities 5.4 Outcome of CBDRM 5.5 Establishing mechanism of community involvement in DRM planning 5.6 Up-scaling CBDRM
6. Preparation of Action Plan	6.1 Explanation of Action Plan 6.2 Development of Action Plan 6.3 Presentation of Action Plan

## 2. Programme and activities of the training

### 2.1. General

As a whole, the training was successful as all the participants' participation and interests were very good. They gave valuable input during every session and took assigned task seriously. The activities were adult learning based approach, experiences sharing, questions answers, brain storming, group work and demonstration.

### 2.2. Day One

The first day of the training informally started with the registration of the participants. All the Participants filled the registration form which was given to them.

The proper opening of the training started with the recitation of Holy Quran. JICA Expert Team said welcome to the participants and Mr. Ichiro Kobayashi, team leader JICA Expert Team, in his opening remarks made a brief introduction of the project explaining its different components. He told the participants about the importance of the training and expecting outcomes. He hoped that participants would spread the acquired knowledge their respective districts. The participants were given pre training knowledge assessment form to know their knowledge about DRM. Then after group photo session was arranged, the participants were briefed about the framework of the training by power point presentation.

### Session 1.1

Mr. Falak Nawaz, Director NIDM, started his session on “Hazards and Risk Situation in Pakistan”. He explained the objectives of the session. He involved the participants by questions and answers to make clear their concept about different terms such as hazards, risk and disaster etc. He asked the participants for brainstorming about the hazards which were existed in their respective areas. The participants also gave valuable inputs about the hazards. He explained the types, nature and different scenarios of hazards. He discussed geological, hydrological, hydrometrological, biological and man induced hazards like fire, bomb blasting, chemical and so many others. He asked the participants regarding secondary hazards which are common in case of earthquake and floods. The participants also explained the secondary hazards. The participants also asked questions about mitigational measures regarding different hazards. Some of the participants said that poor construction and use of low materials caused severe damages in earthquake. The participants had also viewed lack of dams caused heavy losses in the flood of 2010.

### Session1.2

The second session was on “Disaster Risk Management”. The resource person asked questions and made discussion involving the participants to make clear the difference of disaster management and disaster risk management. Some of participants answered and cleared the difference explaining all the activities which are carried out after a disaster are called disaster management and measures which are taken before a disaster are called disaster risk management. Again participants were given different coloured cards to write about the different phases of disaster. The trainer explained disaster management cycle and disaster management model, when the trainer asked about response the participants shared their experiences regarding different emergencies. The resource person told that the disaster risk management is a collective approach which can be done involving all the stake holders.

### Session 2.1

After lunch Mr. Syed Harir Shah started his session, “Relevant Organizations and their roles at DRM”. He explained the objectives of the session and gave three forms about the responsibilities of the organizations/departments at Federal, Provincial and District level for DRM. The participants were divided into three groups and assigned group work; each group had to make a chart of organization/Departments at Federal, Provincial and District level. The participants prepared charts and presented by each group. Then the trainer explained the roles and responsibilities of Federal, Provincial and District Govt. During the participants asked different questions about the roles and responsibilities of different departments. Some of the participants criticized different departments for not fulfilling their responsibilities .They gave examples of specific departments in this regard. All the participants were insisting that each department roles should be defined clearly and those who are not should be treated according to law.

## Session 2.2

The last session of the day was about “Roles and responsibilities of TMA”. The participants took part actively and discussed the responsibilities of TMA. The main responsibilities of TMA are prevention, mitigation, preparedness, responsibilities, rehabilitation and development.



Opening Address by Mr. Ichiro Kobayashi



Mr. Falak Nawaz



Group Work by the participants



Mr. Syed Harir Shah

## 2.3. Day Two

### Session 3.1

The second day of the training started on 9:15, as the participants reached at that time instead of 9:00am. The session was about “Measures for mitigation and preparedness”. Mr. Syed Harir Shah explained the objectives of the session and participants were given a format to tick the measures for mitigation and preparedness at TMA level. The participants then made a detailed discussion about the measures for mitigations and preparedness at TMA level. Most of the participants told that there is difference between theory and practice in TMA roles.

### Session 3.2

The second session of the day was about “Public awareness. After explaining the objectives of the session the trainer asked to the participants for brainstorming how public awareness could be raised regarding disaster risk management. Public awareness can be spread through newspapers, radio, TV, public meeting and mosques etc. Different recreational activities such as games, quiz competition and walk are also helpful in creating awareness among the people.

### Session 4.1

The third session was on “Early warning system in Pakistan” Mr. Jan Muhammad Khan, Director Pakistan Metrological Department delivered a comprehensive presentation explaining the objectives of early warning, history of PMD and data collection for forecasting system in PMD. He explained the different sources of data collection and information dissemination system in PMD for early warning to departments concerned. He elaborated the importance of effective early warning system and timely dissemination of authentic information. The participants asked so many questions about early warning system in Pakistan. He answered all the questions satisfactorily.

### Session 4.2/4.3

The sessions about “Emergency Headquarter/ Evacuation and Camp management” were very interesting one because here the participants made a practical demonstration, which in a very large extent cleared their concept about camp management and evacuation. After explaining the objectives of the session, the trainer gave a scenario of earthquake to the participants for practice. The participants were divided into different groups covering coordination, information, search and Rescue, medical first aid and admin/logistics. After exercise the activity was evaluated and found quite well.

### Session 4.4

The last session of the day was about “Damage assessment and reporting” the participants were given a list of questions where only one question was ticked for the participants’ answer. All the participants answered the only one question and later on discussed them in a joint way. The session was about the importance, objectives, types of damage assessment etc. The participants asked many questions which were cleared by the resource person.



Mr. Jan Muhammad Khan



Emergency Management Exercise

## 2.4. Day Three

### Session 5.1

The first session of the third day was “Community Based Disaster Risk Management” and Ms. Tomoko Shaw was the resource person. She explained the objectives of the session, and the participants asked a few questions about CBDRM. She explained the importance of CBDRM, its process and methodology.

### Session 5.2/5.3

These sessions were also relevant to CBDRM and in it the resource person highlighted the CBDRM process at Tehsil and community level; how it can be given a linkage at “Tehsil and communities” level. The CBDRM activities were also discussed in detail. She also discussed the CBDRM activities explaining its different steps.

### Session 5.4/5.5/5.6

As all these sessions were about CBDRM therefore, there was a close link between all the sessions. In this regard a group work was done by the participants giving them a map. The participants highlighted all the important areas in the map with their existing vulnerabilities and capacities. The participants were given forms for future action regarding CBDRM, which they filled and returned.

### Session 6.1

In this session, which was about the “Preparation of Action Plan,” Dr. Ryo Matsumaru briefed the participants how an action plan is prepared, who would prepare it and how it could be implemented.

The participants asked so many questions about the application of the plan and all the questions were answered.

After lunch break Mr. Falak Nawaz discussed about “Adult Learning and teaching/facilitation skills” the main objective of the session was how the TOT participants would make effective presentations when they would arrange training for the TMA staff. He explained all the techniques of effective teaching.

Then after the activities of district level were discussed as the participants had to conduct training at their respective districts. All the participating districts gave a tentative schedule for coming trainings.

Here most of the activities had been completed, and the participants were given post knowledge assessment form for post knowledge survey and right answers of the post knowledge form were also given to them. To evaluate the training, an evaluation forms were distributed among the participants and completed and handed over back.

Finally a simple but graceful ceremony was organized for certificates distribution. Three persons among the participants gave their remarks about the training. All of them praised and appreciate JICA, NDMA and NIDM efforts for arranging such useful training and also stressed for further trainings. Mr. Falak Nawaz and Dr. Ryo Matsumaru distributed certificates among the participants. In his concluding remarks Mr. Falak Nawaz stressed upon the participants to spread the acquired knowledge at all level where there is possible because disaster risk can be minimized by collective efforts. At last Dr. Matsumaru thanked all the participants.



Group Work



Certificate distribution

### **3. Evaluation and Suggestions for the Future Training**

Two types of training evaluation were implemented for the training. The one is assessment and the other is evaluation by participants.

The purpose of assessment was to assess participants’ understanding level about training contents before and after the training and therefore, the same assessment was distributed before and after the



training. Results of the assessment are included in annexure. The assessment of the Pre and Post training knowledge of the participants show that all the participants have made improvement according to their level of knowledge. As this was the first training for some of the participants, it is a great improvement in their knowledge in short time.

The questions no 1, 2, 4, 6, and 10 seemed to be relatively a little bit difficult for the participants to answer properly in pre knowledge assessment. These questions were related to NDMA framework, the concept of Disaster, TMA mitigational responsibilities, TMA preparedness, CBDRM and First responders. The results for these questions improved in post training knowledge assessment and particular knowledge improvements were found in question no 1 and 10.

Some of the questions in the pre knowledge assessment were better answered by the participants, particularly the question no 3 which was about common hazards in Pakistan. This shows that the occurrence of different events like earthquake 2005, flood 2010 etc have given the people a self realization of hazards in Pakistan. Likewise questions no 5, 7 and 8 were also answered relatively better. These questions were regarding TMA responsibilities in emergency, public awareness and importance of early warning system. The participants made further improvement answering the questions in the post training knowledge assessment specially question no 3.

Keeping in view the above assessment, the contents of the training can be improved in following way.

- The topic should be cleared about the institutional framework of Disaster Management system in the country,
- TMA roles and Tehsil level DRM setup should be illustrated.
- CBDRM importance and local community roles need further explanation.

The purpose of evaluation by participants was to know how participants consider about the training contents and what can be done to improve the training. Detailed results are attached to this report. Overall results of the evaluation are very good, but still there is a room for improvements. According to the evaluation results, timeframe for the training should be modified as five to seven days in the future because the contents are much more compare to the time. Training Hall should be sufficient for all sorts of indoor activities. Reading materials, handout etc should be properly printed. Materials should be in simple language if possible Urdu also.

Regarding the evaluation results that analyze which sessions were most interesting, the participants graded sessions no 1.1, 1.2, 3.2 1 and 4.1 the most interesting ones. These sessions were Hazards and risk profile of Pakistan, Disaster Risk management, Public awareness and early warning system in Pakistan. Meanwhile, some of the sessions called least interesting, whose sessions numbers were no 2.1, 2.2, 3.2, 4.2, 5.5, etc. These sessions were regarding relevant organizations and their roles in DRM, Measures for mitigation and preparedness at Tehsil level, Emergency headquarter and EWS dissemination system at Tehsil level, Evacuation and camp management system, Damage assessment and CBDRM. According to what is inferred from the observation of the training, the reasons why these sessions were low-graded were; firstly, these topics were basically new to most of the participants and they were first time to know about these things. Therefore they termed these sessions least interesting. Secondly, all the participants did not understand English properly. Although sometimes the explanation

was done in Urdu, the participants still found it difficult to understand. Thirdly, some of the topics were technical like Damage assessment, Evacuation and Camp management and CBDRM. Fourth, the session related to relevant organizations and their roles in DRM was very lengthy and narrative.

To improve the quality of the contents and training in the future, we have to take care of following things. Firstly, the level of participants' knowledge and relevancy in her or his nature of job to the contents should be considered. Secondly, as for the practical elements, group work activities, demonstration, brain storming and sufficient time for each topic can make the contents more understandable for the participants. Thirdly, sessions which have technical aspect should be explained through questions and answers methods. Fourth, minimize rather theoretical topics to keep the participants alert and active. Related to this matter, theoretical and narrative topics should be before lunch because after lunch majority of the participants lost their interest in the sessions while practical work and exercises should be done after lunch break. Fifth, lengthy sessions often make participants bored, so to avoid this some ice breaker and exercises involving the participants is very necessary. Finally, time management and given schedule follow up also must be done for getting better results from any training, because most of non punctual participant did not understand a topic due to lack of interest and time wastage.

## Annexure

### 1. Participants list

#### 1. District Bhakkar, Punjab

SN	Name	Department	Designation	Contact
1	Ms Azra Shahid	Rescue 1122	Community safety officer	0333-8041122
2	Mr. Syed Ak hlaq Ali Shah	Civil Defence	District Officer	0333-6198908
3	Mr .Mian Asim Shad	TMA	Tehsil Officer	0300-4643192
4	Ashfaq Ahmad	TMA	TMO	0333-6840878

#### 2. District Rawalpindi, Punjab

SN	Name	Department	Designation	Contact
1	Ms Deebea Shanaz	Rescue 1122	Public Relation Officer	0321-5543699
2	Mr Tayyaman Raza	Civil Defence	District Officer	0333-5292572
3	Dr Abdul Rehman	Fire Fighting (CDGP)	District Officer	0333-4471122
4	Mr. Sajjid Minhas	Civil Defence	Senior Instructor	0333-5443520
5	Mr Nadeem Ahmad Cheema	TMA	ATO	0333-5130209

#### 3. District Muzaffargarh, Punjab

SN	Name	Department	Designation	Contact
1	Dr.Irshad-ul-Haq	Rescue 1122	District Emergency Officer	0334-4238012 0321-6871122
2	Mr. Shakaib Ahmad	Civil Defence	District Officer	0345-7257258 0333-7644363
3	Mr Zafar-ul-Islam	District Govt	Additional District Collector/Administrator	0343-9993999

#### 4. District Thatta, Sindh

SN	Name	Department	Designation	Contact
1	Mr Mirza Khurshid Baig	Civil Defence	Deputy Controller	0321-9204654
2	Mr. Hassan Haren Hote(DMG)	Revenue	Deputy District officer	0300-8502253
3	Mr.Muhammad Saleem Jokhio	Local Govt Department	District Officer(M&E)	0345-2218980
4	Mr. Abdul Latif Brohi	Revenue	Deputy District Officer	0333-3203602

5. District Karachi City Urban Area, Sindh

SN	Name	Department	Designation	Contact
1	Mr Altaf Hussain	Civil Defence	Deputy Controller	0321-8921004
2	Mr. Amanullah Shaikh	Health Group of Offices CDGK	District Officer	03333952279
3	Mr. Naeem Yousaf	Municipal Services of Offices CDGK	Team Leader	0333-2275615
4	Qazi Abdul Waheed	Works and Services Group of Offices CDGK	District Officer	03002953021

## 2. Agenda for TOT of DRM Training for TMA Staff

Day 1 (21st June 2011)

Time	Session	Facilitator
9:00-10:30	Registration Opening Session Recitation of Holy Quran Opening remarks (JICA, NIDM) Introduction of participants Pre-training Knowledge Assessment. Explanation of framework of the training	JICA Team
10:30-10:45	Tea Break	-
Module 1: Introduction to Disaster Management		
10:45-12:00	1.1 Hazards, Risk profile in Pakistan	Mr. Falak
12:00-12:30	1.2 Disaster Risk Management	Mr. Falak
12:30-13:45	Lunch/Prayer	-
13:45-14:30	1.2 Disaster Risk Management (Cont'd)	Mr. Falak
Module 2: Roles and Responsibilities of TMA Staff at Disaster Management		
14:30-15:20	2.1 Relevant organizations and their roles at DRM	Mr. Harir
15:20-15:40	Tea Break	-
15:40-16:30	2.2 Roles and responsibilities of TMA	Mr. Harir

Day 2 (22nd June 2011)

Time	Session	Facilitator
Module 3: Public Awareness		
9:00-10:00	3.1 Measures for mitigation and preparedness	Mr. Harir
10:00-10:30	3.2 Public awareness	Mr. Harir
10:30-10:45	Tea Break	-
10:45-11:10	3.2 Public awareness (cont'd)	Mr. Harir
Module 4: Early Warning System and Emergency Response at Tehsil Level		
11:10-12:10	4.1 Early warning system in Pakistan	Mr Jan M Khan
12:10-13:30	Lunch/Prayer	-
13:30-14:25	4.2 Emergency headquarter	Mr. Harir
14:25-15:15	4.3 Evacuation and camp management	Mr. Harir
15:15-15:35	Tea Break	-
15:35-16:30	4.4 Damage assessment and reporting	Mr. Harir

Day 3 (23rd June 2011)

Time	Session	Facilitator
<b>Module 5: Community Based Disaster Risk Management (CBDRM)</b>		
9:00-10:30	5.1 CBDRM objectives 5.2 Tehsil and communities 5.3 CBDRM activities 5.4 Outcome of CBDRM	Ms. Shaw
10:30-10:45	Tea Break	-
10:45-11:45	5.5 Community involvement in DRM planning 5.6 Up-scaling CBDRM	Ms. Shaw
<b>Module 6: Preparation of Action Plan</b>		
11:45-12:45	6.1 Explanation of Action Plan 6.2 Development of Action Plan 6.3 Presentation of Action Plan	Dr. Matsumaru
12:45-13:45	Lunch/Prayer	-
13:45-14:45	Adult learning and teaching/facilitation skills	Mr. Falak
14:45-15:30	Explanation of activities after the training at each district	Dr. Matsumaru
15:30-15:45	Tea Break	-
15:45-16:15	Evaluation of the training Post-training knowledge Assessment Evaluation (NIDM, JICA)	JICA Team
16:15-16:45	Closing Session Certificate distribution Closing remarks (NIDM, JICA)	JICA Team

### 3. Pre- and Post Training Knowledge Assessment

#### Post Training Knowledge Assessment Form with Answers.

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Q1: What is the structure of Disaster Risk Management in Pakistan?

Ans: NDMA at national level, PDMA at Provincial level, DDMA at District level and TDMC at Tehsil level.

Q2: Define Disaster?

Ans: The serious disruption of existing infrastructure, losses of lives and damages of property which exceed beyond the coping capacity of a community, society or state.

Q3: Name only five hazards which are very common in Pakistan?

Ans: 1 Floods (River Floods (along Indus Major Rivers), Flash Floods (incl. Hill Torrents))  
2. Landslides (incl. Mass Movement and Slope Failure)  
3. Cyclones with Storm Surges  
4 .Droughts, and  
5. Earthquakes and Tsunamis

Q4: What type of mitigations TMA can make at Tehsil level for disaster risk management?

Ans: TMA can make structural and non-structural mitigations .In structural it can integrate DRR in construction of link roads, bridges and retaining wall etc. In non structural it can train and educate government officials and community.

Q5: Mention three main responsibilities of TMA during emergency?

Ans: 1.Dessimination of Early Warning 2.Response 3.Relief

Q6: What type of preparedness TMA can make for early response?

Ans: TMA can enhance capacities of Tehsil administration and give awareness to general public for better response.

Q.7: How public awareness plays role in Disaster Management?

Ans: When the public get awareness regarding the existing hazards then they prepare themselves and play great role in disaster management.

Q8: What is the importance of Early Warning system?

Ans: Early Warning System helps timely evacuation of hazards prone community and helps to minimize losses of lives.

Q9: What is CBDRM?

Ans: CBDRM stands for community based disaster risk management. In this process community can be involved in risk identification, planning and implementation.

Q10: Who are the first responders to any emergency?

Ans: Communities are the first responders

Name\_\_\_\_\_

Sign\_\_\_\_\_



#### 4. Results of Pre- and Post- Training Knowledge Assessment

Differences of each participant's result before and after the training

Participant	Pre-Training	Post-Training
1	25	59
2	8	17
3	9	20
4	22	Absent
5	48	50
6	39	70
7	42	Absent
8	30	64
9	6	22
10	33	56
11	24	31
12	13	15
13	1	22
14	4	33
15	45	61
16	11	35
17	50	72
18	49	Absent
19	63	76
20	12	50
Average	26.7	44.3

Differences of average score of each question before and after the training

Question	Pre-Training	Average	Post-Training	Average
1	42	2.1	79	4.7
2	46	2.3	73	4.3
3	72	3.6	133	7.8
4	44	2.2	53	3.1
5	56	2.8	78	4.5
6	48	2.4	74	4.3
7	61	3.0	71	4.1
8	57	2.8	69	4.0
9	45	2.2	67	3.9
10	33	1.6	62	3.6

Pre training assessment there were twenty participants and post training seventeen participants were present.

## 5. Form of Evaluation by Participants

### Evaluation of *(TOT of DRM for TMA Staffs in Islamabad)* by Participants

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Date:

Please rate or write your comments on each question.

For questions to be rated, please consider them as 1: Fair, 2: Satisfactory, 3: Good, 4: Very Good, 5: Excellent.

<Section 1: Contents of the Training>

1-1: Were the contents understandable?

1      2      3      4      5

1-2: Did the contents meet your expectation?

1      2      3      4      5

1-3: Which sessions were the most interesting? (Please select up to Five.)

Title of the session	✓ Tick any Five
1.1 Hazards and Risk Profile in Pakistan	
1.2 Disaster Risk management	
2.1 Relevant organizations and their roles at Disaster Management	
2.2 Roles and responsibilities of TMA at Disaster Management	
3.1 Measures for mitigation and preparedness at Tehsil level	
3.2 Public awareness at Tehsil level	
4.1 Early warning System in Pakistan	
4.2 Emergency headquarter and EWS Dissemination system at Tesil level.	
4.3 Evacuation and Camp Management	
4.4 Damage assessment and reporting	
5.1 CBDRM Objectives	
5.2 Tehsil and Communities	
5.3 CBDRM Activities	

5.4 Outcome of CBDRM	
5.5 Establishing mechanism of community involvement in DRM Planning	
5.6 Up scaling CBDRM	

1-4: Which sessions were the least interesting? (Please select up to Five.)

Title of the session	✓ Tick any Five
1.11 Hazards and Risk Profile in Pakistan	
1.2 Disaster Risk management	
2.1 Relevant organizations and their roles at Disaster Management	
2.2 Roles and responsibilities of TMA at Disaster Management	
3.1 Measures for mitigation and preparedness at Tehsil level	
3.2 Public awareness at Tehsil level	
4.1 Early warning System in Pakistan	
4.2 Emergency headquarter and EWS Dissemination system at Tesil level.	
4.3 Evacuation and Camp Management	
4.4 Damage assessment and reporting	
5.1 CBDRM Objectives	
5.2 Tehsil and Communities	
5.3 CBDRM Activities	
5.4 Outcome of CBDRM	
5.5 Establishing mechanism of community involvement in DRMPanning	
5.6 Up scaling CBDRM	

1-5: Are the contents applicable to your current jobs?

1      2      3      4      5

1-6: Any comments and suggestions on the contents

<Section 2: Handouts>

2-1: Were the handouts understandable?

1      2      3      4      5

2-2: Were the handouts useful to help you understand the training?

1      2      3      4      5

2-3: Any comments and suggestions on the handouts

<Section 3: Trainers/Facilitators>

3-1: Did the trainers/facilitators explain the contents clearly?

1      2      3      4      5

3-2: Were the teaching methods suitable?

1      2      3      4      5

3-3: Was the facilitation of the trainers/facilitators effective?

1      2      3      4      5

3-4: Were the trainers/facilitators friendly?

1      2      3      4      5

3-5: Any comments and suggestions on the trainers/facilitators and teaching method.

<Section 4: Training Facilities, Learning Environment>

4-1: Was the space of the training room sufficient?

1      2      3      4      5

4-2: Were there sufficient space for group works?

1      2      3      4      5

4-3: Was the arrangement of the training room suitable?

1      2      3      4      5

4-4: Any suggestions on the training room and facilities.

<Section 5: Timing and Schedule>

5-1: Was the timing of the training suitable for you?

1      2      3      4      5

5-2: How are you satisfied with the training schedule? (length of the whole training, length of each session, timing of breaks, etc)

1      2      3      4      5

5-3: How can we improve the training schedule? Please write your suggestions.

## 6. Results of Evaluation by Participants

### Section 1: Contents of the Training

Q1: Were the contents understandable?

Mark	Number	Percentage
5 (Excellent)	2	11.8%
4 (Very Good)	8	47.1%
3 (Good)	4	23.5%
2 (Satisfactory)	2	11.8%
1 (Fair)	1	5.9%

Q2: Did the contents meet your expectation?

Mark	Number	Percentage
5 (Excellent)	1	5.9%
4 (Very Good)	9	52.9%
3 (Good)	4	23.5%
2 (Satisfactory)	3	17.7%
1 (Fair)	0	0%

Q3: Which sessions were the most interesting?

Title of the session	Vote	Grade
1.1 Hazards and Risk Profile in Pakistan	09	C
1.2 Disaster Risk management	13	A
2.1 Relevant organizations and their roles at Disaster Management	08	D
2.2 Roles and responsibilities of TMA at Disaster Management	06	F
3.1 Measures for mitigation and preparedness at Tehsil level	06	F
3.2 Public awareness at Tehsil level	11	B
4.1 Early warning System in Pakistan	09	C
4.2 Emergency headquarter and EWS Dissemination system at Tehsil level.	01	J
4.3 Evacuation and Camp Management	04	G
4.4 Damage assessment and reporting	01	J
5.1 CBDRM Objectives	07	E
5.2 Tehsil and Communities	01	J
5.3 CBDRM Activities	02	I
5.4 Outcome of CBDRM	01	J
5.5 Establishing mechanism of community involvement in DRM Planning	03	H
5.6 Up scaling CBDRM	02	I

Q4: Which sessions were the least interesting?

Title of the session	Vote	Grade
1.1 Hazards and Risk Profile in Pakistan	03	D
1.2 Disaster Risk management	01	E
2.1 Relevant organizations and their roles at Disaster Management	06	A
2.2 Roles and responsibilities of TMA at Disaster Management	05	B
3.1 Measures for mitigation and preparedness at Tehsil level	03	D
3.2 Public awareness at Tehsil level	04	C
4.1 Early warning System in Pakistan	01	E
4.2 Emergency headquarter and EWS Dissemination system at Tehsil level.	05	B
4.3 Evacuation and Camp Management	04	C
4.4 Damage assessment and reporting	04	C
5.1 CBDRM Objectives	04	C
5.2 Tehsil and Communities	03	D
5.3 CBDRM Activities	04	C
5.4 Outcome of CBDRM	06	A
5.5 Establishing mechanism of community involvement in DRM Planning	05	B
5.6 Up scaling CBDRM	04	C

Q5: Are the contents applicable to your current jobs?

Mark	Number	Percentage
5 (Excellent)	1	5.9%
4 (Very Good)	7	41.2%
3 (Good)	3	17.7%
2 (Satisfactory)	2	11.8%
1 (Fair)	2	11.8%
No answer	2	-

Q6: Any comments and suggestions on the contents

- (I) Printing of presentation booklet not clear and readable, it must be very much clear for future record or study.
- (II) If you want to conduct any training in Pakistan, kindly make your materials in Urdu. Most of the people cannot understand English.
- (III) All the contents are interesting and having useful knowledge.
- (IV) Improvement is always there.
- (V) Contents can be improved by consulting the expected participants via phone or mail so that their feedback /suggestions might be incorporated in the materials to make it more realistic.
- (VI) Practically in the field it is not always very easy to implement the contents learnt during training workshops.

(VII) The overall performance of lectures was remained satisfactory .The contents shown in the letter are in accordance with the roles of NGOs.

(VIII) I am satisfied from your training staff; they have delivered lectures in friendly way.

## Section 2: Handouts

Q1: Were the handouts understandable?

Mark	Number	Percentage
5 (Excellent)	3	17.7%
4 (Very Good)	7	41.2%
3 (Good)	2	11.8%
2 (Satisfactory)	1	5.9%
1 (Fair)	2	11.8%
No answer	2	-

Q2: Were the handouts useful to help you understand the training?

Mark	Number	Percentage
5 (Excellent)	3	17.7%
4 (Very Good)	5	29.4%
3 (Good)	5	29.4%
2 (Satisfactory)	2	11.8%
1 (Fair)	1	5.9%
No answer	1	-

Q3: Any comments and suggestions on the handouts?

- (I) Thanks for this useful materials.
- (II) Must be read able.
- (III) Handouts were not proper. Printing was not good.
- (IV) Further improvement is needed.
- (V) May be simplifier further.
- (VI) Having back to back printout can help reduce usage of paper
- (VII) Presentations should be provided to the participants in soft.



### Section 3: Trainers /Facilitators

Q1: Did the trainers/ Facilitators explain the contents clearly?

Mark	Number	Percentage
5 (Excellent)	4	23.5%
4 (Very Good)	8	47.1%
3 (Good)	3	17.7%
2 (Satisfactory)	1	5.9%
1 (Fair)	0	0%
No answer	1	-

Q2: Were the teaching methods suitable?

Mark	Number	Percentage
5 (Excellent)	4	23.5%
4 (Very Good)	6	35.3%
3 (Good)	3	17.7%
2 (Satisfactory)	2	11.8%
1 (Fair)	0	0%
No answer	2	-

Q3: Was the facilitation of the trainers/ facilitators effective?

Mark	Number	Percentage
5 (Excellent)	3	17.7%
4 (Very Good)	9	52.9%
3 (Good)	1	5.9%
2 (Satisfactory)	3	17.7%
1 (Fair)	0	0%
No answer	1	-

Q4: Were the trainers/ facilitators friendly?

Mark	Number	Percentage
5 (Excellent)	9	52.9%
4 (Very Good)	4	23.5%
3 (Good)	1	5.9%
2 (Satisfactory)	1	5.9%
1 (Fair)	1	5.9%
No answer	1	-

Q.5: Any comments and suggestions on the trainers/facilitators and teaching method.

- (I) The facilitators were very friendly and delivered their lectures in a very good environment.
- (II) Practical experienced trainers should be called for subject training. Trainers ground realities instead of roles and responsibilities, knowledge available on internet. Practical demonstration with clear scenarios should be arranged to sensitize upcoming training.
- (III) All the things were done in very good manners.

- (IV) Relate the theory with practical.
- (V) Excellent facilitators.
- (VI) Trainers were so good but modules were so much, therefore minimize modules.
- (VII) It should be more lively and with more authentic knowledge.
- (VIII) Trainers/facilitators were very nice, polite and coherent.
- (IX) Mr Falak, Mr Harir and JICA staff have given their lectures satisfactorily. I understand their lectures carefully and enjoyed my entire three days with them.
- (X) Timings of class should be strictly followed.
- (XI) I have request your training head, please conduct this training in Karachi division.

Section 4: Training facilities, learning environment

Q1: Was the space of the training room sufficient?

Mark	Number	Percentage
5 (Excellent)	4	23.5%
4 (Very Good)	4	23.5%
3 (Good)	3	17.7%
2 (Satisfactory)	1	5.9%
1 (Fair)	4	23.5%
No answer	1	-

Q2: Were there sufficient space for group works?

Mark	Number	Percentage
5 (Excellent)	1	5.9%
4 (Very Good)	3	17.7%
3 (Good)	6	35.3%
2 (Satisfactory)	2	11.8%
1 (Fair)	4	23.5%
No answer	1	-

Q3: Was the arrangement of the training room suitable?

Mark	Number	Percentage
5 (Excellent)	2	11.8%
4 (Very Good)	6	35.3%
3 (Good)	2	11.8%
2 (Satisfactory)	3	17.7%
1 (Fair)	3	17.7%
No answer	1	-

Q 4: Any suggestions on the training room and facilities.

- (I) For group work separate space should be provided.
- (II) Training room must be bigger in size.
- (III) Arrange proper place for training.
- (IV) The training room is very small; There is a need of a large training hall with further facilities.
- (V) The training room was in a very good condition. All the requirements were available in the room.
- (VI) For group work and discussion space was not sufficient.
- (VII) You improved your training facilities and environment.

Section 5: Timing and schedule

Q1: Was the timing of the training suitable for you?

Mark	Number	Percentage
5 (Excellent)	1	5.9%
4 (Very Good)	6	35.3%
3 (Good)	2	11.8%
2 (Satisfactory)	6	35.3%
1 (Fair)	1	5.9%
No answer	1	-

Q2: How are you satisfied with the training schedule?

Mark	Number	Percentage
5 (Excellent)	1	5.9%
4 (Very Good)	6	35.3%
3 (Good)	2	11.8%
2 (Satisfactory)	6	35.3%
1 (Fair)	1	5.9%
No answer	1	-

Q.3: How can we improve the training schedule? Please write your suggestions?

- (I) Instead of having three days training we could have four days of training with lesser training hours per days.
- (II) Add field visit in schedule
- (III) We can improve the training schedule by adding more days.
- (IV) It must be the minimum five days schedule.

- (V) Training days increase
- (VI) The ToT of DRM for TMA is very important training course, keeping in view of the syllabus, one week training is suggested.
- (VII) Three days training is not a suitable time for any training. We can improve the training of increasing time schedule at least fifteen days.
- (VIII) Lodging and boarding are not satisfactory.
- (IX) Training days could be increased while the training hours could be reduced from 9:00am to 3:30Pm.
- (X) Adding an extra day can ease the daily schedule.
- (XI) I am satisfied with training schedule. (XII) Time frame should be strictly followed.
- (XII) I am also request please arrange this training for all concerned departments.

#### **7. Group Photo of ToT of DRM Training for TMA Staff Participants**



## APPENDIX TO CHAPTER 7

Appendix 7.1.1	Questionnaire
Appendix 7.1.2	Results towards M&P Officers
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**Appendix 7.1.1. Questionnaire**  
**National Disaster Management Plan**

Organization :	Position :		
Name :			
Date :	Male	Female	
:			

Category (1)	Category (2)	National Disaster Management Plan		
	Background		No questions (Counterparts already have a plenty of knowledge of background and unwise to make them spend a lot of time)	
Planning and Revising Abilities	Hazard Assessment	1	In formulation of this plan, a hazard assessment would be one of key component. Have you ever received training or seminar regarding the hazard assessment?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
		2	Have you ever participated in work regarding the hazard assessment?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
		3	Regarding the Hazard Assessment, What kind of knowledge do you want to complement or need to acquire?	
		4	With respect to characteristic of the disaster, which disaster's characteristic do you feel you need to deepen (earthquake, tsunami, flood, cyclone, drought etc)?	
		5	To analyse the characteristic, what kind of information or skill do you need to obtain?	
Planning and Revising Abilities	Training, Awareness and Education	6	How many times have you ever participated (received) in trainings or seminars in respect to disaster management?	<input type="checkbox"/> None <input type="checkbox"/> A few times (1-3 times) <input type="checkbox"/> A lot of times (4-10 times)
		7	How many times have you implemented (hosted) trainings or seminars with regards to disaster management?	<input type="checkbox"/> None <input type="checkbox"/> A few times (1-3 times) <input type="checkbox"/> A lot of times (4-10 times)
		8	Have you ever visited schools to observe disaster management education?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
		9	Have you participated in work of formulating school education plan with respect to disaster management?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
Planning and Revising Abilities	Community Based Disaster Management	10	How many times have you ever participated (received) in trainings or seminars regarding to community based disaster management?	<input type="checkbox"/> None <input type="checkbox"/> A few times (1-3 times) <input type="checkbox"/> A lot of times (4-10 times)
		11	Have you participated in work of formulating community based disaster management plan?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
Planning and Revising Abilities	Guidelines for Disaster Management Plan	12	Regarding Earthquake, Tunami, Flood, Sediment, Cyclone, Drought, or any other natural disaster, have you participated in work of formulating guidelines for disaster management plan?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
		13	Have you ever participated (received) in trainings or seminars in respect to formulating the guidelines?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
P & R and Implementation Abilities	Formulation of the Plan	14	Have you already had methods of monitoring and revise this plan?	<input type="checkbox"/> Yes <input type="checkbox"/> Some (More or less) <input type="checkbox"/> No
P & R and Implementation Abilities	Action Plan	15	Have you already had concrete image of action plan?	<input type="checkbox"/> Yes <input type="checkbox"/> Some (More or less) <input type="checkbox"/> No
Planning and Revising Abilities	Formulation of the Plan	16	To decide the goal, what kind of ability or knowledge do you need to deepen?	
Planning and Revising Abilities	Formulation of the Plan	17	To revise the goal, what kind of ability or knowledge do you need to deepen?	

## Appendix 7.1.2. Results towards M&P Officers

### National Disaster Management Plan

Organization :	Position :	Target 1: Mitigation and Preparedness (M&P) officers 4 persons			
Name :					
Date :	Male				
<b>National Disaster Management Plan</b>					

Category (1)	Category (2)		No questions (Counterparts already have a plenty of knowledge of background and unwise to make them spend a lot of time)				
	Background	1	In formulation of this plan, a hazard assessment would be one of key component. Have you ever received training or seminar regarding the hazard assessment?	Yes	No		
Planning and Revising Abilities	Hazard Assessment			75%	25%		
		2	Have you ever participated in work regarding the hazard assessment?	Yes	No		
				50%	50%		
		3	Regarding the Hazard Assessment, What kind of knowledge do you want to complement or need to acquire?	Methods of Analysis	General Knowledge	No answer or no idea	
				50%	25%	25%	
		4	With respect to characteristic of the disaster, which disaster's characteristic do you feel you need to deepen (earthquake, tsunami, flood, cyclone, drought etc)?	Earthquake, Floods and Cyclone	Landsliding	All disaster	No answer or no idea
				25%	25%	25%	25%
		5	To analyse the characteristic, what kind of information or skill do you need to obtain?	Basic Knowledge of HA	Fundamental reasons of disaster	No answer or no idea	
		25%	25%	50%			
Planning and Revising Abilities	Training, Awareness and Education	6	How many times have you ever participated (received) in trainings or seminars in respect to disaster management?	None	A few times (1-3 times)	A lot of times (4-10 times)	
				0%	50%	50%	
		7	How many times have you implemented (hosted) trainings or seminars with regards to disaster management?	None	A few times (1-3 times)	A lot of times (4-10 times)	
				25%	25%	50%	

Planning and Revising Abilities	Training, Awareness and Education	8	Have you ever visited schools to observe disaster management education?	Yes	No		
				25%	75%		
		9	Have you participated in work of formulating school education plan with respect to disaster management?	Yes	No		
				25%	75%		
Planning and Revising Abilities	Community Based Disaster Management	10	How many times have you ever participated (received) in trainings or seminars regarding to community based disaster management?	None	A few times (1-3 times)	A lot of times (4-10 times)	
				25%	50%	25%	
		11	Have you participated in work of formulating community based disaster management plan?	Yes	No		
				50%	50%		
Planning and Revising Abilities	Guidelines for Disaster Management Plan	12	Regarding Earthquake, Tunami, Flood, Sediment, Cyclone, Drought, or any other natural disaster, have you participated in work of formulating guidelines for disaster management plan?	Yes	No		
				50%	50%		
		13	Have you ever participated (received) in trainings or seminars in respect to formulating the guidelines?	Yes	No		
				50%	50%		
P & R and Implementation Abilities	Formulation of the Plan	14	Have you already had methods of monitoring and revise this plan?	Yes	Some (More or less)	No	
				0%	25%	75%	
P& R and Implementation Abilities	Action Plan	15	Have you already had concrete image of action plan?	Yes	Some (More or less)	No	
				0%	50%	50%	
Planning and Revising Abilities	Formulation of the Plan	16	To decide the goal, what kind of ability or knowledge do you need to deepen?	Hazard Assessment	Basic knowledge of HA	No answer or no idea	
				50%	25%	25%	
Planning and Revising Abilities	Formulation of the Plan	17	To revise the goal, what kind of ability or knowledge do you need to deepen?	HA including current situation of disaster	Basic knowledge of HA	No answer or no idea	
				50%	25%	25%	



### Appendix 7.1.3 Results towards NDMA Officers

#### National Disaster Management Plan

<b>Organization</b> :	<b>Position</b> :	Target 2: NDMA officers 10 persons (Mitigation and Preparedness (M&P) –4, Monitoring and Evaluation (M&E) –1, adm/procurement–1, Human Resource –1, Finance– 1, Operation–1, Reconstruction and Rehabilitation(R&R) – 1)
<b>Name</b> :		
<b>Date</b> :	<b>Male</b> <b>Female</b>	

#### National Disaster Management Plan

Category (1)	Category (2)		No questions (Counterparts already have a plenty of knowledge of background and unwise to make them spend a lot of time)				
	Background	1	In formulation of this plan, a hazard assessment would be one of key component. Have you ever received training or seminar regarding the hazard assessment?	Yes	No		
				40%	60%		
		2	Have you ever participated in work regarding the hazard assessment?	Yes	No		
				30%	70%		
Planning and Revising Abilities	Hazard Assessment	3	Regarding the Hazard Assessment, What kind of knowledge do you want to complement or need to acquire?	Methods of Analysis	General Knowledge	GIS	No answer or no idea
				20%	60%	10%	10%
		4	With respect to characterictic of the disaster, which disaster's characteristic do you feel you need to deepen (earthquake, tsunami,flood, cyclone, drought etc)?	Earthquake,Floods and Cyclone	Landsliding	All disaster	No answer or no idea
				70%	10%	10%	10%
		5	To analyse the characteristic, what kind of information or skill do you need to obtain?	Basic Knowledge of HA	Fundamental reasons of disaster	GIS	No answer or no idea
				40%	10%	20%	30%
Planning and Revising Abilities	Training, Awareness and Education	6	How many times have you ever participated (received) in trainings or seminars in respect to disaster management?	None	A few times (1-3 times)	A lot of times (4-10 times)	
				20%	40%	40%	
		7	How many times have you implemented (hosted) trainings or seminars with regards to disaster management?	None	A few times (1-3 times)	A lot of times (4-10 times)	
				50%	30%	20%	

Planning and Revising Abilities	Training, Awareness and Education	8	Have you ever visited schools to observe disaster management education?	Yes	No		
				20%	80%		
		9	Have you participated in work of formulating school education plan with respect to disaster management?	Yes	No		
				10%	90%		
Planning and Revising Abilities	Community Based Disaster Management	10	How many times have you ever participated (received) in trainings or seminars regarding to community based disaster management?	None	A few times (1-3 times)	A lot of times (4-10 times)	
				50%	40%	10%	
		11	Have you participated in work of formulating community based disaster management plan?	Yes	No		
				30%	70%		
Planning and Revising Abilities	Guidelines for Disaster Management Plan	12	Regarding Earthquake, Tunami, Flood, Sediment, Cyclone, Drought, or any other natural disaster, have you participated in work of formulating guidelines for disaster management plan?	Yes	No		
				30%	70%		
		13	Have you ever participated (received) in trainings or seminars in respect to formulating the guidelines?	Yes	No		
				40%	60%		
P & R and Implementation Abilities	Formulation of the Plan	14	Have you already had methods of monitoring and revise this plan?	Yes	Some (More or less)	No	
				0%	10%	90%	
P& R and Implementation Abilities	Action Plan	15	Have you already had concrete image of action plan?	Yes	Some (More or less)	No	
				0%	20%	80%	
Planning and Revising Abilities	Formulation of the Plan	16	To decide the goal, what kind of ability or knowledge do you need to deepen?	Hazard Assessment	Basic knowledge of HA	Strengthening Institutions like NIDM, Province and District	No answer or no idea
				20%	20%	10%	50%
Planning and Revising Abilities	Formulation of the Plan	17	To revise the goal, what kind of ability or knowledge do you need to deepen?	HA including current situation of disaster	Basic knowledge of HA	Strengthening Institutions like NIDM, Province and District	No answer or no idea
				20%	20%	10%	50%

## Appendix 7.3.1 Questionnaire / Hazard Assessment

### In the Project for Formulation of National Disaster Management Plan

<b>Organization</b> :	<b>Position</b> :	Towards NDMA officers (8 persons) who attended in the Workshop of Hazard Assessment	
<b>Name</b> :			
<b>Date</b> :	<b>Male</b> : <input type="checkbox"/> <b>Female</b> : <input type="checkbox"/>		

Category (1)	Category (2)	Hazard Assessment				
<b>Basics of Hazard Assessment</b>	<b>Definition</b>	1	Did you understand definitions of the Hazard, the Vulnerability and the Risk?	<input type="checkbox"/> Yes	<input type="checkbox"/> Some (More or less)	<input type="checkbox"/> No
		2	If you answered Some (More or less) or No in the above, which was difficult for you to understand? Hazard, Vulnerability or Risk?			
	3	Did you understand an objective of the Hazard Assessment?	<input type="checkbox"/> Yes	<input type="checkbox"/> Some (More or less)	<input type="checkbox"/> No	
	4	Did you grasp the Hazard and the Risk in each area? (in which area the Hazard and the Risk exist?)	<input type="checkbox"/> Yes	<input type="checkbox"/> Some (More or less)	<input type="checkbox"/> No	
<b>Methods of HA</b>	<b>Methods</b>	5	Did you comprehend how the high level Hazard and Risk areas (districts) were decided?	<input type="checkbox"/> Yes	<input type="checkbox"/> Some (More or less)	<input type="checkbox"/> No
		6	If you answered Some (More or less) or No in the above, what kind of thing was difficult for you to understand? Freely describe.			
	7	Did you understand the calculation methods of Hazard and Risk?	<input type="checkbox"/> Yes	<input type="checkbox"/> Some (More or less)	<input type="checkbox"/> No	
	8	In the Hazard Assessment, collection of scientific data in the disaster prone area is one of the important factors. Did you grasp how the data was collected?	<input type="checkbox"/> Yes	<input type="checkbox"/> Some (More or less)	<input type="checkbox"/> No	
<b>General</b>	<b>General</b>	9	If any comments on the Hazard Assessment, Freely describe.			

## Appendix 7.3.2 Questionnaire / Hazard Assessment

### In the Project for Formulation of National Disaster Management Plan

Organization :	Position :	Towards NDMA officers (8 persons) who attended in the Workshop of Hazard Assessment	
Name :			
Date :	Male : Female :		

Category (1)	Category (2)	Hazard Assessment				
<b>Basics of Hazard Assessment</b>	<b>Definition</b>	1	Did you understand definitions of the Hazard, the Vulnerability and the Risk?	Yes	Some (More or less)	No
				6	2	0
	<b>Objective</b>	2	If you answered Some (More or less) or No in the above, which was difficult for you to understand? Hazard, Vulnerability or Risk?		Characteristics and its Linkage between Hazard, Vulnerability and Risk.	No Answer/ No Idea
					1	1
	<b>Area</b>	3	Did you understand an objective of the Hazard Assessment?	Yes	Some (More or less)	No
				6	2	0
<b>Methods of HA</b>	<b>Methods</b>	4	Did you grasp the Hazard and the Risk in each area? (in which area the Hazard and the Risk exist?)	Yes	Some (More or less)	No
				0	8	0
		5	Did you comprehend how the high level Hazard and Risk areas (districts) were decided?	Yes	Some (More or less)	No
			2	4	2	
	<b>Calculation Method</b>	6	If you answered Some (More or less) or No in the above, what kind of thing was difficult for you to understand? Freely describe.	How the scientific data was collected	How the areas were analyzed and decided	Distinctions between low and high level (of hazard and risk)
				2	2	2
<b>Data Collection</b>	7	Did you understand the calculation methods of Hazard and Risk?	Yes	Some (More or less)	No	
			0	3	5	
<b>General</b>	<b>General</b>	8	In the Hazard Assessment, collection of scientific data in the disaster prone area is one of the important factors. Did you grasp how the data was collected?	Yes	Some (More or less)	No
				2	4	2
		9	If any comments on the Hazard Assessment, Freely describe.	The workshop was very fruitful and informative.	This is very scientific and technical analysis, therefore, it was difficult to comprehend.	Data would be collected from communities, and the data should be reliable.
				3	3	2

### Appendix 7.3.3 Questionnaire / Hazard Assessment

#### In the Project for Formulation of National Disaster Management Plan

<b>Organization</b> :	<b>Position</b> :	Towards NDMA officers (8 persons) who attended in the Workshop of Hazard Assessment
<b>Name</b> :		
<b>Date</b> :	<b>Male</b> : <b>Female</b> :	

Category (1)	Category (2)	Hazard Assessment					
<b>Basics of Hazard Assessment</b>	<b>Definition</b>	1	Did you understand definitions of the Hazard, the Vulnerability and the Risk?	Yes	<b>Some (More or less)</b>	<b>No</b>	
				75%	25%		
		2	If you answered Some (More or less) or No in the above, which was difficult for you to understand? Hazard, Vulnerability or Risk?		Characteristics and its Linkage between Hazard, Vulnerability and Risk.	No Answer/ No Idea	
				50%	50%		
	<b>Objective</b>	3	Did you understand an objective of the Hazard Assessment?	Yes	<b>Some (More or less)</b>	<b>No</b>	
				75%	25%	0%	
<b>Area</b>	4	Did you grasp the Hazard and the Risk in each area? (in which area the Hazard and the Risk exist?)	Yes	<b>Some (More or less)</b>	<b>No</b>		
				100%			
<b>Methods of HA</b>	<b>Methods</b>	5	Did you comprehend how the high level Hazard and Risk areas (districts) were decided?	Yes	<b>Some (More or less)</b>	<b>No</b>	
				25%	50%	25%	
		6	If you answered Some (More or less) or No in the above, what kind of thing was difficult for you to understand? Freely describe.	How the scientific data was collected	How the areas were analyzed and decided	Distinctions between low and high level (of hazard and risk)	
			33%	33%	33%		
	<b>Calculation Method</b>	7	Did you understand the calculation methods of Hazard and Risk?	Yes	<b>Some (More or less)</b>	<b>No</b>	
					37.50%	62.50%	
<b>Data Collection</b>	8	In the Hazard Assessment, collection of scientific data in the disaster prone area is one of the important factors. Did you grasp how the data was collected?	Yes	<b>Some (More or less)</b>	<b>No</b>		
			25%	50%	25%		
<b>General</b>	<b>General</b>	9	If any comments on the Hazard Assessment, Freely describe.	<b>The workshop was very fruitful and informative.</b>	This is very scientific and technical analysis, therefore, it was difficult to comprehend.	Data would be collected from communities, and the data should be reliable.	
				37.50%	37.50%	25%	