

APPENDICES

Appendix 1. Survey participants

in I.R. Iran

Alireza Haji Ashrafi (team leader)	Deputy of Common Pest Management, PPO, I.R. Iran
M/s Hamed Ali	Entomologist DPP Sukkar, Pakistan
Bizhan Rafiei	Technical Deputy Director, Sistan & Baluchistan, I.R. Iran
M/s Mohammad Bakhsh Malik	Asst. Entomologist, DPP, Multan, Pakistan
Mohammadali Hadi Zadeh	Maintenance Assistant, Kerman, I.R. Iran
Noor Mohammad	Maintenance Assistant, DPP, Karachi, Pakistan
Mohammadali Keykhah	Driver, Sistan & Baluchistan, I.R. Iran
Seyed Hassan Mir Mostafa	Driver, PPO, I.R. Iran
Yaddollah Taghizadeh	Driver, Kerman, I.R. Iran
Amir Salari	Driver, Hormozgan, I.R. Iran

in Pakistan

M/s Hamed Ali (team leader)	Entomologist, DPP, Sukkar, Pakistan
Alireza Haji Ashrafi	Deputy of Common Pest Management, PPO, I.R. Iran
M/s Syed Akhlaq Hussain	Asst. Entomologist, DPP, Peshawar, Pakistan
Bizhan Rafiei	Technical Deputy Director, Sistan & Baluchistan, I.R. Iran
Ghulam Farid	Maintenance Assistant, DPP, Quetta, Pakistan
Mohammadali Hadi Zadeh	Maintenance Assistant, Kerman, I.R. Iran
Niaz Hussain	Driver, DPP, Quetta, Pakistan
Mohammad Afsar	Driver, DPP, Turbat, Pakistan
Musharaf Hussain	Driver, DPP, Karachi, Pakistan
Mohammad Qadar	Driver, DPP, Karachi, Pakistan

Appendix 2. Itinerary and distance

Day	Date	Route	Night halt	Km
1	1 Apr 01	Pakistani team cross Taftan/Mirjaveh border; Zahedan-Saravan	Saravan	556
2	2 Apr 01	Saravan areas	Saravan	155
3	3 Apr 01	Saravan-Iranshahr; Iranshahr areas (Memari area)	Iranshahr	309
4	4 Apr 01	Iranshahr areas (Sardegala area)	Iranshahr	140
5	5 Apr 01	Iranshahr-Chabahar; Chabahar areas (Vashnam area)	Chabahar	426
6	6 Apr 01	Chabahar areas (Zarabad, Kahir, Poshti areas)	Chabahar	370
7	7 Apr 01	Chabahar areas (Negur, Pasabandar, Guatr areas)	Chabahar	210
8	8 Apr 01	Chabahar areas (Pirsohrab, Torkani, Daj areas)	Chabahar	220
9	9 Apr 01	Chabahar-Jask and Jask areas (Gabrik, Jegin, Hojdan area)	Jask	405
10	10 Apr 01	Jask-Minab-Kahnuj-Jiroft; Minab & Kahnuj areas	Jiroft	486
11	11 Apr 01	Jazmurian area	Jiroft	489
12	12 Apr 01	Jiroft-Kahnuj-Golmurti	Golmurti	253
13	13 Apr 01	Golmurti-Iranshahr	Iranshahr	267
14	14 Apr 01	Iranshahr-Zahedan	Zahedan	350
15	15 Apr 01	Zahedan areas; sent results to FAO, Pakistan PPD, Iran PPO	Zahedan	254
16	16 Apr 01	I.R. Iran and Pakistan teams cross Taftan/Mirjaveh border	-	210
			I.R. Iran	5100
16	16 Apr 01	-	Taftan	0
17	17 Apr 01	Taftan-Nushki	Nushki	520
18	18 Apr 01	Nushki-Kharan	Kharan	280
19	19 Apr 01	Kharan areas (Naroo)	Kharan	140
20	20 Apr 01	Kharan-Panjgur	Panjgur	350
21	21 Apr 01	Panjgur areas (Prome)	Panjgur	98
22	22 Apr 01	Panjgur-Turbat	Turbat	332
23	23 Apr 01	Turbat-Pasni	Pasni	230
24	24 Apr 01	Pasni-Gawadar via Kulamch area	Gawadar	210
25	25 Apr 01	Gawadar-Turbat via Suntsar & Shooli	Turbat	280
26	26 Apr 01	Turbat-Khuzdar via Bela	Khuzdar	640
27	27 Apr 01	Khuzdar-Quetta	Quetta	324
28	28 Apr 01	-	Quetta	0
29	29 Apr 01	Quetta-Taftan	Taftan	800
30	30 Apr 01	I.R. Iran teams cross Taftan/Mirjaveh border	-	0
			Pakistan	4204
			Total	9304

Appendix 3. Survey results

SURVEY STOP		1	2	3	4	5	6
1-1	date	2 Apr 01	2 Apr 01	2 Apr 01	3 Apr 01	3 Apr 01	3 Apr 01
1-2	name	Shandan	Dourbon	Nourabad	Khushab	Azizabad	Kankehur
1-3	latitude (N)	272254	272343	272503	270850	270854	270654
1-4	longitude (E or W)	615423	615335	615124	614835	613310	615039
2 ECOLOGY							
2-1	area (ha) of survey	100	150	300	150	250	100
2-2	habitat (wadi, plains, dunes, crops)	dunes	sandy plain	sandy plain	Plain	wadi	sandy plain
2-3	date of last rain	25 Mar 01	25 Mar 01	25 Mar 01	25 Mar 01	25 Mar 01	20 Mar 01
2-4	rain amount (mm or Low Moderate High)	L	L	L	L	L	L
2-5	vegetation (dry, greening, green, drying)	dry	dry	dry	Dry	dry	dry
2-6	vegetation density (Low Medium Dense)	L	M	L	L	L	L
2-7	soil moisture (wet/dry)	D	D	D	D	D	D
3 LOCUSTS							
3-1	present or absent	A	A	A	A	A	A
3-2	area infested (ha)						
4 HOPPERS							
4-1	hopper stages (H123456F)						
4-2	appearance (solitary, transiens, gregarious)						
4-3	behaviour (isolated, scattered, groups)						
4-4	hopper density (/site or /m2)						
5 BANDS							
5-1	band stage (H12345F)						
5-2	band density (/m2 or Low Medium High)						
5-3	band sizes (m2 or ha)						
5-4	number of bands						
6 ADULTS							
6-1	maturity (immature, mature)						
6-2	appearance (solitary, transiens, gregarious)						
6-3	behaviour (isolated, scattered, groups)						
6-4	adult density (/transect or /ha)						
6-5	breeding (copulating, laying)						
7 SWARMS							
7-1	maturity (immature, mature)						
7-2	swarm density (/m2 or Low Medium High)						
7-3	swarm size (km2 or ha)						
7-4	number of swarms						
7-5	breeding (copulating, laying)						
7-6	flying (direction, time passing)						
7-7	flying height (Low Medium High)						
8 CONTROL							
8-1	pesticide name & formulation						
8-2	application rate (l/ha or kg/ha))						
8-3	quantity (l)						
8-4	area treated (ha)						
8-5	ground or air						
8-6	estimated % kill						
9 COMMENTS							

1	SURVEY STOP	7	8	9	10	11	12
1-1	date	3 Apr 01	3 Apr 01	3 Apr 01	3 Apr 01	4 Apr 01	4 Apr 01
1-2	name	Ghaderabad	Motordavar	Memari	Naigoun	Bampour	Sardegal
1-3	latitude (N)	270821	270737	270650	270655	271658	271414
1-4	longitude (E or W)	613419	604341	604034	604307	602549	602412
2	ECOLOGY						
2-1	area (ha) of survey	120	200	300	500	500	400
2-2	habitat (wadi, plains, dunes, crops)	plain	dunes	dunes	dunes	plain	plain, dune
2-3	date of last rain	25 Mar 01	25 Mar 01	25 Mar 01	25 Mar 01	25 Mar 01	25 Mar 01
2-4	rain amount (mm or Low Moderate High)	L	L	L	L	L	L
2-5	vegetation (dry, greening, green, drying)	dry	dry	dry	dry	dry	dry
2-6	vegetation density (Low Medium Dense)	L	L	L	L	L	L
2-7	soil moisture (wet/dry)	D	D	D	D	D	D
3	LOCUSTS						
3-1	present or absent	A	A	A	A	A	A
3-2	area infested (ha)						
4	HOPPERS						
4-1	hopper stages (H123456F)						
4-2	appearance (solitary, transiens, gregarious)						
4-3	behaviour (isolated, scattered, groups)						
4-4	hopper density (/site or /m2)						
5	BANDS						
5-1	band stage (H12345F)						
5-2	band density (/m2 or Low Medium High)						
5-3	band sizes (m2 or ha)						
5-4	number of bands						
6	ADULTS						
6-1	maturity (immature, mature)						
6-2	appearance (solitary, transiens, gregarious)						
6-3	behaviour (isolated, scattered, groups)						
6-4	adult density (/transect or /ha)						
6-5	breeding (copulating, laying)						
7	SWARMS						
7-1	maturity (immature, mature)						
7-2	swarm density (/m2 or Low Medium High)						
7-3	swarm size (km2 or ha)						
7-4	number of swarms						
7-5	breeding (copulating, laying)						
7-6	flying (direction, time passing)						
7-7	flying height (Low Medium High)						
8	CONTROL						
8-1	pesticide name & formulation						
8-2	application rate (l/ha or kg/ha)						
8-3	quantity (l)						
8-4	area treated (ha)						
8-5	ground or air						
8-6	estimated % kill						
9	COMMENTS						

1	SURVEY STOP	13	14	15	16	17	18
1-1	date	4 Apr 01	4 Apr 01	4 Apr 01	5 Apr 01	5 Apr 01	5 Apr 01
1-2	name	Shamsabad	Pishakabd I	Piskakbd II	Brejder	Maleki	Vashnam
1-3	latitude (N)	271326	271017	271009	252622	252711	252656
1-4	longitude (E or W)	602114	601623	601626	604327	604226	604159
2	ECOLOGY						
2-1	area (ha) of survey	500	600	600	500	500	500
2-2	habitat (wadi, plains, dunes, crops)	dunes	plain, dune	plain, dune	plain	plain	plain
2-3	date of last rain	25 Mar 01	25 Mar 01	25 Mar 01	10 Jan 01	10 Jan 01	10 Jan 01
2-4	rain amount (mm or Low Moderate High)	L	L	L	L	L	L
2-5	vegetation (dry, greening, green, drying)	dry	dry	dry	dry	dry	dry
2-6	vegetation density (Low Medium Dense)	L	L	L	L	L	L
2-7	soil moisture (wet/dry)	D	D	D	D	D	D
3	LOCUSTS						
3-1	present or absent	A	A	A	A	A	A
3-2	area infested (ha)						
4	HOPPERS						
4-1	hopper stages (H123456F)						
4-2	appearance (solitary, transiens, gregarious)						
4-3	behaviour (isolated, scattered, groups)						
4-4	hopper density (/site or /m2)						
5	BANDS						
5-1	band stage (H12345F)						
5-2	band density (/m2 or Low Medium High)						
5-3	band sizes (m2 or ha)						
5-4	number of bands						
6	ADULTS						
6-1	maturity (immature, mature)						
6-2	appearance (solitary, transiens, gregarious)						
6-3	behaviour (isolated, scattered, groups)						
6-4	adult density (/transect or /ha)						
6-5	breeding (copulating, laying)						
7	SWARMS						
7-1	maturity (immature, mature)						
7-2	swarm density (/m2 or Low Medium High)						
7-3	swarm size (km2 or ha)						
7-4	number of swarms						
7-5	breeding (copulating, laying)						
7-6	flying (direction, time passing)						
7-7	flying height (Low Medium High)						
8	CONTROL						
8-1	pesticide name & formulation						
8-2	application rate (l/ha or kg/ha))						
8-3	quantity (l)						
8-4	area treated (ha)						
8-5	ground or air						
8-6	estimated % kill						
9	COMMENTS						
				By vehicle			By vehicle

1	SURVEY STOP	19	20	21	22	23	24
1-1	date	5 Apr 01	5 Apr 01	6 Apr 01	6 Apr 01	6 Apr 01	6 Apr 01
1-2	name	Send	Vashnam	Kaki	Kahir	Bir	Birdaf
1-3	latitude (N)	252644	252639	252955	253554	252929	252800
1-4	longitude (E or W)	604123	604251	592811	600818	595337	595012
2	ECOLOGY						
2-1	area (ha) of survey	400	500	500	500	100	100
2-2	habitat (wadi, plains, dunes, crops)	plain	plain	dunes	wadi	dunes	Dunes
2-3	date of last rain	10 Jan 01	10 Jan 01	20 Mar 01	20 Mar 01	20 Mar 01	20 Mar 01
2-4	rain amount (mm or Low Moderate High)	L	L	L	L	L	L
2-5	vegetation (dry, greening, green, drying)	dry	dry	dry	dry	dry	dry
2-6	vegetation density (Low Medium Dense)	L	L	L	L	L	L
2-7	soil moisture (wet/dry)	D	D	D	D	D	D
3	LOCUSTS						
3-1	present or absent	A	A	A	A	A	A
3-2	area infested (ha)						
4	HOPPERS						
4-1	hopper stages (H123456F)						
4-2	appearance (solitary, transiens, gregarious)						
4-3	behaviour (isolated, scattered, groups)						
4-4	hopper density (/site or /m2)						
5	BANDS						
5-1	band stage (H12345F)						
5-2	band density (/m2 or Low Medium High)						
5-3	band sizes (m2 or ha)						
5-4	number of bands						
6	ADULTS						
6-1	maturity (immature, mature)						
6-2	appearance (solitary, transiens, gregarious)						
6-3	behaviour (isolated, scattered, groups)						
6-4	adult density (/transect or /ha)						
6-5	breeding (copulating, laying)						
7	SWARMS						
7-1	maturity (immature, mature)						
7-2	swarm density (/m2 or Low Medium High)						
7-3	swarm size (km2 or ha)						
7-4	number of swarms						
7-5	breeding (copulating, laying)						
7-6	flying (direction, time passing)						
7-7	flying height (Low Medium High)						
8	CONTROL						
8-1	pesticide name & formulation						
8-2	application rate (l/ha or kg/ha)						
8-3	quantity (l)						
8-4	area treated (ha)						
8-5	ground or air						
8-6	estimated % kill						
9	COMMENTS						
			surveyed by vehicle			surveyed by vehicle	surveyed by vehicle

1	SURVEY STOP	25	26	27	28	29	30
1-1	date	6 Apr 01	6 Apr 01	7 Apr 01	7 Apr 01	7 Apr 01	7 Apr 01
1-2	name	Poshti I	Poshti II	Baladsar	Kachoo	Beris-Negor	Gwader
1-3	latitude (N)	252859	250357	251628	251322	251125	250954
1-4	longitude (E or W)	592240	592355	604754	605827	610627	613006
2	ECOLOGY						
2-1	area (ha) of survey	200	700	600	200	100	250
2-2	habitat (wadi, plains, dunes, crops)	plain	plain	plain, dune	dunes	coast plain	costal plain
2-3	date of last rain	20 Mar 01	20 Mar 01	20 Mar 01	20 Mar 01	20 Mar 01	20 Mar 01
2-4	rain amount (mm or Low Moderate High)	L	L	L	L	L	L
2-5	vegetation (dry, greening, green, drying)	dry	dry	dry	dry	dry	dry
2-6	vegetation density (Low Medium Dense)	L	L	L	L	L	L
2-7	soil moisture (wet/dry)	D	D	D	D	D	D
3	LOCUSTS						
3-1	present or absent	A	A	A	A	A	A
3-2	area infested (ha)						
4	HOPPERS						
4-1	hopper stages (H123456F)						
4-2	appearance (solitary, transiens, gregarious)						
4-3	behaviour (isolated, scattered, groups)						
4-4	hopper density (/site or /m2)						
5	BANDS						
5-1	band stage (H12345F)						
5-2	band density (/m2 or Low Medium High)						
5-3	band sizes (m2 or ha)						
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6	ADULTS						
6-1	maturity (immature, mature)						
6-2	appearance (solitary, transiens, gregarious)						
6-3	behaviour (isolated, scattered, groups)						
6-4	adult density (/transect or /ha)						
6-5	breeding (copulating, laying)						
7	SWARMS						
7-1	maturity (immature, mature)						
7-2	swarm density (/m2 or Low Medium High)						
7-3	swarm size (km2 or ha)						
7-4	number of swarms						
7-5	breeding (copulating, laying)						
7-6	flying (direction, time passing)						
7-7	flying height (Low Medium High)						
8	CONTROL						
8-1	pesticide name & formulation						
8-2	application rate (l/ha or kg/ha))						
8-3	quantity (l)						
8-4	area treated (ha)						
8-5	ground or air						
8-6	estimated % kill						
9	COMMENTS						
			by vehicle				

1	SURVEY STOP	31	32	33	34	35	36
1-1	date	8 Apr 01	8 Apr 01	8 Apr 01	8 Apr 01	8 Apr 01	8 Apr 01
1-2	name	Pirsohrab	Beryani	Nookabad	Ballad I	Ballad II	Konarak
1-3	latitude (N)	254021	253713	253509	252709	252553	252045
1-4	longitude (E or W)	605636	605913	610055	600648	605507	604741
2	ECOLOGY						
2-1	area (ha) of survey	200	200	400	200	100	100
2-2	habitat (wadi, plains, dunes, crops)	plain	plain	wadi	plain, crops	crops	crops
2-3	date of last rain	20 Mar 01	20 Mar 01	20 Mar 01	20 Mar 01	20 Mar 01	20 Mar 01
2-4	rain amount (mm or Low Moderate High)	L	L	L	L	L	L
2-5	vegetation (dry, greening, green, drying)	dry	dry	dry	dry	dry	dry
2-6	vegetation density (Low Medium Dense)	L	M	M	M	L	L
2-7	soil moisture (wet/dry)	D	D	D	D	D	D
3	LOCUSTS						
3-1	present or absent	A	A	A	A	A	A
3-2	area infested (ha)						
4	HOPPERS						
4-1	hopper stages (H123456F)						
4-2	appearance (solitary, transiens, gregarious)						
4-3	behaviour (isolated, scattered, groups)						
4-4	hopper density (/site or /m2)						
5	BANDS						
5-1	band stage (H12345F)						
5-2	band density (/m2 or Low Medium High)						
5-3	band sizes (m2 or ha)						
5-4	number of bands						
6	ADULTS						
6-1	maturity (immature, mature)						
6-2	appearance (solitary, transiens, gregarious)						
6-3	behaviour (isolated, scattered, groups)						
6-4	adult density (/transect or /ha)						
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7	SWARMS						
7-1	maturity (immature, mature)						
7-2	swarm density (/m2 or Low Medium High)						
7-3	swarm size (km2 or ha)						
7-4	number of swarms						
7-5	breeding (copulating, laying)						
7-6	flying (direction, time passing)						
7-7	flying height (Low Medium High)						
8	CONTROL						
8-1	pesticide name & formulation						
8-2	application rate (l/ha or kg/ha)						
8-3	quantity (l)						
8-4	area treated (ha)						
8-5	ground or air						
8-6	estimated % kill						
9	COMMENTS						

1	SURVEY STOP	37	38	39	40	41	42
1-1	date	9 Apr 01	9 Apr 01	9 Apr 01	9 Apr 01	9 Apr 01	9 Apr 01
1-2	name	?	Birdaf II	Balak	Gabrik	Jegin	Hojdan
1-3	latitude (N)	252620	252649	253902	254620	254433	254211
1-4	longitude (E or W)	594600	594703	592137	582653	581258	575421
2	ECOLOGY						
2-1	area (ha) of survey	100	200	400	500	600	300
2-2	habitat (wadi, plains, dunes, crops)	plain	plain	plain	plain	plain	plain
2-3	date of last rain	20 Mar 01	20 Mar 01	20 Mar 01	20 Mar 01	20 Mar 01	23 Mar 01
2-4	rain amount (mm or Low Moderate High)	L	L	L	L	L	L
2-5	vegetation (dry, greening, green, drying)	dry	dry	dry	dry	dry	dry
2-6	vegetation density (Low Medium Dense)	M	M	M	M	M	M
2-7	soil moisture (wet/dry)	D	D	D	D	D	D
3	LOCUSTS						
3-1	present or absent	A	A	A	A	A	A
3-2	area infested (ha)						
4	HOPPERS						
4-1	hopper stages (H123456F)						
4-2	appearance (solitary, transiens, gregarious)						
4-3	behaviour (isolated, scattered, groups)						
4-4	hopper density (/site or /m2)						
5	BANDS						
5-1	band stage (H12345F)						
5-2	band density (/m2 or Low Medium High)						
5-3	band sizes (m2 or ha)						
5-4	number of bands						
6	ADULTS						
6-1	maturity (immature, mature)						
6-2	appearance (solitary, transiens, gregarious)						
6-3	behaviour (isolated, scattered, groups)						
6-4	adult density (/transect or /ha)						
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7-2	swarm density (/m2 or Low Medium High)						
7-3	swarm size (km2 or ha)						
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7-5	breeding (copulating, laying)						
7-6	flying (direction, time passing)						
7-7	flying height (Low Medium High)						
8	CONTROL						
8-1	pesticide name & formulation						
8-2	application rate (l/ha or kg/ha)						
8-3	quantity (l)						
8-4	area treated (ha)						
8-5	ground or air						
8-6	estimated % kill						
9	COMMENTS						

1	SURVEY STOP	43	44	45	46	47	48
1-1	date	9 Apr 01	10 Apr 01	10 Apr 01	10 Apr 01	11 Apr 01	11 Apr 01
1-2	name	Lash	?	?	?	Chahlak	Chahreza
1-3	latitude (N)	253714	254244	261126	271501	272426	272021
1-4	longitude (E or W)	592157	575600	571438	570235	575606	581004
2	ECOLOGY						
2-1	area (ha) of survey	100	100	200	200	700	500
2-2	habitat (wadi, plains, dunes, crops)	plain	plain	plain	plain	plain	plain
2-3	date of last rain	20 Mar 01	23 Mar 01	23 Mar 01	23 Mar 01	20 Jan 01	20 Jan 01
2-4	rain amount (mm or Low Moderate High)	L	L	L	L	L	L
2-5	vegetation (dry, greening, green, drying)	dry	dry	dry	dry	dry	dry
2-6	vegetation density (Low Medium Dense)	M	L	L	L	L	L
2-7	soil moisture (wet/dry)	D	D	D	D	D	D
3	LOCUSTS						
3-1	present or absent	A	A	A	A	A	A
3-2	area infested (ha)						
4	HOPPERS						
4-1	hopper stages (H123456F)						
4-2	appearance (solitary, transiens, gregarious)						
4-3	behaviour (isolated, scattered, groups)						
4-4	hopper density (/site or /m2)						
5	BANDS						
5-1	band stage (H12345F)						
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6-3	behaviour (isolated, scattered, groups)						
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6-5	breeding (copulating, laying)						
7	SWARMS						
7-1	maturity (immature, mature)						
7-2	swarm density (/m2 or Low Medium High)						
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7-4	number of swarms						
7-5	breeding (copulating, laying)						
7-6	flying (direction, time passing)						
7-7	flying height (Low Medium High)						
8	CONTROL						
8-1	pesticide name & formulation						
8-2	application rate (l/ha or kg/ha))						
8-3	quantity (l)						
8-4	area treated (ha)						
8-5	ground or air						
8-6	estimated % kill						
9	COMMENTS						

1	SURVEY STOP	49	50	51	52	53	54
1-1	date	11 Apr 01	11 Apr 01	11 Apr 01	11 Apr 01	11 Apr 01	11 Apr 01
1-2	name	Kalatmalek	Salmaniyeh	Chahdadkh	Ghalehgnj I	Ghalehgnj II	
1-3	latitude (N)	271428	271254	275818	273121	271756	272031
1-4	longitude (E or W)	581745	582049	581321	575229	581419	580342
2	ECOLOGY						
2-1	area (ha) of survey	700	600	600	300	400	100
2-2	habitat (wadi, plains, dunes, crops)	plain	plain	plain	plain	plain	plain
2-3	date of last rain	20 Jan 01	20 Jan 01	20 Jan 01	20 Jan 01	20 Jan 01	20 Jan 01
2-4	rain amount (mm or Low Moderate High)	L	L	L	L	L	L
2-5	vegetation (dry, greening, green, drying)	dry	dry	dry	dry	dry	dry
2-6	vegetation density (Low Medium Dense)	L	L	L	L	L	L
2-7	soil moisture (wet/dry)	D	D	D	D	D	D
3	LOCUSTS						
3-1	present or absent	A	A	A	A	A	A
3-2	area infested (ha)						
4	HOPPERS						
4-1	hopper stages (H123456F)						
4-2	appearance (solitary, transiens, gregarious)						
4-3	behaviour (isolated, scattered, groups)						
4-4	hopper density (/site or /m2)						
5	BANDS						
5-1	band stage (H12345F)						
5-2	band density (/m2 or Low Medium High)						
5-3	band sizes (m2 or ha)						
5-4	number of bands						
6	ADULTS						
6-1	maturity (immature, mature)						
6-2	appearance (solitary, transiens, gregarious)						
6-3	behaviour (isolated, scattered, groups)						
6-4	adult density (/transect or /ha)						
6-5	breeding (copulating, laying)						
7	SWARMS						
7-1	maturity (immature, mature)						
7-2	swarm density (/m2 or Low Medium High)						
7-3	swarm size (km2 or ha)						
7-4	number of swarms						
7-5	breeding (copulating, laying)						
7-6	flying (direction, time passing)						
7-7	flying height (Low Medium High)						
8	CONTROL						
8-1	pesticide name & formulation						
8-2	application rate (l/ha or kg/ha)						
8-3	quantity (l)						
8-4	area treated (ha)						
8-5	ground or air						
8-6	estimated % kill						
9	COMMENTS						

1	SURVEY STOP	55	56	57	58	59	60
1-1	date	12 Apr 01	12 Apr 01	12 Apr 01	12 Apr 01	13 Apr 01	13 Apr 01
1-2	name	Roodbar	Zehkalut	Dalgan	Golmurti	Chegerdak	Emam area
1-3	latitude (N)	275901	274724	273257	272908	270429	272032
1-4	longitude (E or W)	580126	583540	581841	592528	590815	591012
2	ECOLOGY						
2-1	area (ha) of survey	200	150	500	300	1200	200
2-2	habitat (wadi, plains, dunes, crops)	plain	plain	plain	plain	plain	crops
2-3	date of last rain	19 Mar 01	19 Mar 01	19 Mar 01	19 Mar 01	19 Mar 01	19 Mar 01
2-4	rain amount (mm or Low Moderate High)	L	L	L	L	L	L
2-5	vegetation (dry, greening, green, drying)	day	day	day	day	day	day
2-6	vegetation density (Low Medium Dense)	M	M	L	L	L	L
2-7	soil moisture (wet/dry)	D	D	D	D	D	W
3	LOCUSTS						
3-1	present or absent	A	A	A	A	A	A
3-2	area infested (ha)						
4	HOPPERS						
4-1	hopper stages (H123456F)						
4-2	appearance (solitary, transiens, gregarious)						
4-3	behaviour (isolated, scattered, groups)						
4-4	hopper density (/site or /m2)						
5	BANDS						
5-1	band stage (H12345F)						
5-2	band density (/m2 or Low Medium High)						
5-3	band sizes (m2 or ha)						
5-4	number of bands						
6	ADULTS						
6-1	maturity (immature, mature)						
6-2	appearance (solitary, transiens, gregarious)						
6-3	behaviour (isolated, scattered, groups)						
6-4	adult density (/transect or /ha)						
6-5	breeding (copulating, laying)						
7	SWARMS						
7-1	maturity (immature, mature)						
7-2	swarm density (/m2 or Low Medium High)						
7-3	swarm size (km2 or ha)						
7-4	number of swarms						
7-5	breeding (copulating, laying)						
7-6	flying (direction, time passing)						
7-7	flying height (Low Medium High)						
8	CONTROL						
8-1	pesticide name & formulation						
8-2	application rate (l/ha or kg/ha)						
8-3	quantity (l)						
8-4	area treated (ha)						
8-5	ground or air						
8-6	estimated % kill						
9	COMMENTS						

1	SURVEY STOP	61	62	63	64	65	66
1-1	date	13 Apr 01	14 Apr 01	14 Apr 01	15 Apr 01	15 Apr 01	15 Apr 01
1-2	name	?	Abkhan	Irandegan	Kalateh	Lar	Hemmahbd
1-3	latitude (N)	271145	280112	285552	293131	293318	293123
1-4	longitude (E or W)	600346	605436	610430	605340	605356	605327
2	ECOLOGY						
2-1	area (ha) of survey	200	200	300	100	150	50
2-2	habitat (wadi, plains, dunes, crops)	plain	plain, dune	plain	wadi	wadi	plain
2-3	date of last rain	19 Mar 01	18 Mar 01	18 Mar 01	4 Apr 01	4 Apr 01	4 Apr 01
2-4	rain amount (mm or Low Moderate High)	L	L	L	L	L	L
2-5	vegetation (dry, greening, green, drying)	day	day	day	dry	dry	dry
2-6	vegetation density (Low Medium Dense)	L	L	L	L	L	L
2-7	soil moisture (wet/dry)	D	D	D	D	D	D
3	LOCUSTS						
3-1	present or absent	A	A	A	A	A	A
3-2	area infested (ha)						
4	HOPPERS						
4-1	hopper stages (H123456F)						
4-2	appearance (solitary, transiens, gregarious)						
4-3	behaviour (isolated, scattered, groups)						
4-4	hopper density (/site or /m2)						
5	BANDS						
5-1	band stage (H12345F)						
5-2	band density (/m2 or Low Medium High)						
5-3	band sizes (m2 or ha)						
5-4	number of bands						
6	ADULTS						
6-1	maturity (immature, mature)						
6-2	appearance (solitary, transiens, gregarious)						
6-3	behaviour (isolated, scattered, groups)						
6-4	adult density (/transect or /ha)						
6-5	breeding (copulating, laying)						
7	SWARMS						
7-1	maturity (immature, mature)						
7-2	swarm density (/m2 or Low Medium High)						
7-3	swarm size (km2 or ha)						
7-4	number of swarms						
7-5	breeding (copulating, laying)						
7-6	flying (direction, time passing)						
7-7	flying height (Low Medium High)						
8	CONTROL						
8-1	pesticide name & formulation						
8-2	application rate (l/ha or kg/ha)						
8-3	quantity (l)						
8-4	area treated (ha)						
8-5	ground or air						
8-6	estimated % kill						
9	COMMENTS						

1	SURVEY STOP	67	68	69	70	71	72
1-1	Date	17 Apr 01	17 Apr 01	17 Apr 01	18 Apr 01	19 Apr 01	19 Apr 01
1-2	Name	Yakmach	Dalbandin	Noukcha	Patkin	Naroz Qalat	Naroo
1-3	Latitude (N)	284459	285309	285755	290328	284716	282258
1-4	Longitude (E or W)	634222	642344	644946	654700	653635	653339
2	ECOLOGY						
2-1	area (ha) of survey	400	400	500	1000	500	1000
2-2	habitat (wadi, plains, dunes, crops)	plain	Plain	Dunes	Plain	Plain	Dunes
2-3	date of last rain	16 Apr 01	16 Apr 01	17 Apr 01	27 Feb 01	17 Apr 01	18 Apr 01
2-4	rain amount (mm or Low Moderate High)	L	L	L	M	L	M
2-5	Vegetation (dry, greening, green, drying)						
2-6	Vegetation density (Low Medium Dense)	D	M	D	D	D	D
2-7	soil moisture (wet/dry)	D	D	D	D	D	W
3	LOCUSTS						
3-1	present or absent	A	A	A	A	A	A
3-2	area infested (ha)						
4	HOPPERS						
4-1	hopper stages (H123456F)						
4-2	Appearance (solitary, transiens, gregarious)						
4-3	Behaviour (isolated, scattered, groups)						
4-4	hopper density (/site or /m2)						
5	BANDS						
5-1	band stage (H12345F)						
5-2	band density (/m2 or Low Medium High)						
5-3	band sizes (m2 or ha)						
5-4	number of bands						
6	ADULTS						
6-1	maturity (immature, mature)						
6-2	appearance (solitary, transiens, gregarious)						
6-3	behaviour (isolated, scattered, groups)						
6-4	adult density (/transect or /ha)						
6-5	breeding (copulating, laying)						
7	SWARMS						
7-1	maturity (immature, mature)						
7-2	swarm density (/m2 or Low Medium High)						
7-3	swarm size (km2 or ha)						
7-4	number of swarms						
7-5	breeding (copulating, laying)						
7-6	flying (direction, time passing)						
7-7	flying height (Low Medium High)						
8	CONTROL						
8-1	pesticide name & formulation						
8-2	application rate (l/ha or kg/ha))						
8-3	quantity (l)						
8-4	area treated (ha)						
8-5	ground or air						
8-6	estimated % kill						
9	COMMENTS						

1	SURVEY STOP	73	74	75	76	77	78
1-1	Date	20 Apr 01	20 Apr 01	20 Apr 01	20 Apr 01	21 Apr 01	21 Apr 01
1-2	Name	Droug	Patak	Hussain zai	Loope	Musa bazar	Drug drup
1-3	Latitude (N)	280511	274459	273845	272512	265306	264804
1-4	Longitude (E or W)	654556	653632	652814	650318	635852	635034
2	ECOLOGY						
2-1	area (ha) of survey	500	500	1000	1000	1000	500
2-2	habitat (wadi, plains, dunes, crops)	Wadi	Wadi	Plains	Plains	Wadi	Wadi
2-3	date of last rain	18 Apr 01	18 Apr 01	18 Apr 01	18 Apr 01	18 Apr 01	18 Apr 01
2-4	rain amount (mm or Low Moderate High)	L	L	L	L	H	H
2-5	Vegetation (dry, greening, green, drying)						
2-6	Vegetation density (Low Medium Dense)	D	D	D	D	D	D
2-7	soil moisture (wet/dry)	D	W	W	D	W	W
3	LOCUSTS						
3-1	present or absent	A	A	A	A	A	A
3-2	area infested (ha)						
4	HOPPERS						
4-1	hopper stages (H123456F)						
4-2	Appearance (solitary, transiens, gregarious)						
4-3	Behaviour (isolated, scattered, groups)						
4-4	hopper density (/site or /m2)						
5	BANDS						
5-1	band stage (H12345F)						
5-2	band density (/m2 or Low Medium High)						
5-3	band sizes (m2 or ha)						
5-4	number of bands						
6	ADULTS						
6-1	maturity (immature, mature)						
6-2	appearance (solitary, transiens, gregarious)						
6-3	behaviour (isolated, scattered, groups)						
6-4	adult density (/transect or /ha)						
6-5	breeding (copulating, laying)						
7	SWARMS						
7-1	maturity (immature, mature)						
7-2	swarm density (/m2 or Low Medium High)						
7-3	swarm size (km2 or ha)						
7-4	number of swarms						
7-5	breeding (copulating, laying)						
7-6	flying (direction, time passing)						
7-7	flying height (Low Medium High)						
8	CONTROL						
8-1	pesticide name & formulation						
8-2	application rate (l/ha or kg/ha)						
8-3	quantity (l)						
8-4	area treated (ha)						
8-5	ground or air						
8-6	estimated % kill						
9	COMMENTS						

1	SURVEY STOP	79	80	81	82	83	84
1-1	Date	21 Apr 01	22 Apr 01	22 Apr 01	22 Apr 01	22 Apr 01	22 Apr 01
1-2	Name	Sorvan	Singa qalat	Rai nigor	Tash	Sahki	Hushab
1-3	Latitude (N)	266518	264056	263835	261520	261022	260054
1-4	Longitude (E or W)	635102	635947	635546	635915	640211	635445
2	ECOLOGY						
2-1	area (ha) of survey	500	1000	1000	500	500	500
2-2	habitat (wadi, plains, dunes, crops)	Plain	Dunes	Plains	Plains	Plains	Wadi
2-3	date of last rain	?	18 Apr 01	18 Apr 01	20 Apr 01	20 Apr 01	20 Apr 01
2-4	rain amount (mm or Low Moderate High)	M	H	H	M	M	L
2-5	Vegetation (dry, greening, green, drying)						
2-6	Vegetation density (Low Medium Dense)	D	D	D	D	D	M
2-7	soil moisture (wet/dry)	W	W	W	W	W	D
3	LOCUSTS						
3-1	present or absent	A	A	A	A	A	A
3-2	area infested (ha)						
4	HOPPERS						
4-1	hopper stages (H123456F)						
4-2	Appearance (solitary, transiens, gregarious)						
4-3	Behaviour (isolated, scattered, groups)						
4-4	hopper density (/site or /m2)						
5	BANDS						
5-1	band stage (H12345F)						
5-2	band density (/m2 or Low Medium High)						
5-3	band sizes (m2 or ha)						
5-4	number of bands						
6	ADULTS						
6-1	maturity (immature, mature)						
6-2	appearance (solitary, transiens, gregarious)						
6-3	behaviour (isolated, scattered, groups)						
6-4	adult density (/transect or /ha)						
6-5	breeding (copulating, laying)						
7	SWARMS						
7-1	maturity (immature, mature)						
7-2	swarm density (/m2 or Low Medium High)						
7-3	swarm size (km2 or ha)						
7-4	number of swarms						
7-5	breeding (copulating, laying)						
7-6	flying (direction, time passing)						
7-7	flying height (Low Medium High)						
8	CONTROL						
8-1	pesticide name & formulation						
8-2	application rate (l/ha or kg/ha))						
8-3	quantity (l)						
8-4	area treated (ha)						
8-5	ground or air						
8-6	estimated % kill						
9	COMMENTS						

1	SURVEY STOP	85	86	87	88	89	90
1-1	Date	22 Apr 01	23 Apr 01	23 Apr 01	23 Apr 01	23 Apr 01	23 Apr 01
1-2	Name	Sami	Pidarak	Garok	Shadi kaur	Gorani chah	Chur
1-3	Latitude (N)	260150	255055	253409	253036	251606	251507
1-4	Longitude (E or W)	632535	631239	632301	632552	632048	631405
2	ECOLOGY						
2-1	area (ha) of survey	400	50	200	400	1000	1000
2-2	habitat (wadi, plains, dunes, crops)	Wadi	Wadi	Wadi	Wadi	Dunes	Plain
2-3	date of last rain	Dec 2000	19 Dec 00	19 Dec 00	19 Dec 00	16 Dec 00	16 Dec 00
2-4	rain amount (mm or Low Moderate High)	L	L	L	L	L	L
2-5	Vegetation (dry, greening, green, drying)		Dry	Dry	Dry	Dry	Dry
2-6	Vegetation density (Low Medium Dense)	D	L	L	L	M	L
2-7	soil moisture (wet/dry)	D	W	D	D	D	D
3	LOCUSTS						
3-1	present or absent	A	A	A	A	A	A
3-2	area infested (ha)						
4	HOPPERS						
4-1	hopper stages (H123456F)						
4-2	Appearance (solitary, transiens, gregarious)						
4-3	Behaviour (isolated, scattered, groups)						
4-4	hopper density (/site or /m2)						
5	BANDS						
5-1	band stage (H12345F)						
5-2	band density (/m2 or Low Medium High)						
5-3	band sizes (m2 or ha)						
5-4	number of bands						
6	ADULTS						
6-1	maturity (immature, mature)						
6-2	appearance (solitary, transiens, gregarious)						
6-3	behaviour (isolated, scattered, groups)						
6-4	adult density (/transect or /ha)						
6-5	breeding (copulating, laying)						
7	SWARMS						
7-1	maturity (immature, mature)						
7-2	swarm density (/m2 or Low Medium High)						
7-3	swarm size (km2 or ha)						
7-4	number of swarms						
7-5	breeding (copulating, laying)						
7-6	flying (direction, time passing)						
7-7	flying height (Low Medium High)						
8	CONTROL						
8-1	pesticide name & formulation						
8-2	application rate (l/ha or kg/ha))						
8-3	quantity (l)						
8-4	area treated (ha)						
8-5	ground or air						
8-6	estimated % kill						
9	COMMENTS						

1	SURVEY STOP	91	92	93	94	95	96
1-1	Date	23 Apr 01	24 Apr 01	24 Apr 01	24 Apr 01	24 Apr 01	24 Apr 01
1-2	Name	Taladi	Gano	Korage	Kalag	Belar	Vandinigur
1-3	Latitude (N)	251938	252538	252703	252635	252508	252450
1-4	Longitude (E or W)	631759	631106	630535	625503	625126	624623
2	ECOLOGY						
2-1	area (ha) of survey	500	500	1000	1000	1000	500
2-2	habitat (wadi, plains, dunes, crops)	Plain	Wadi	Plain	Plain	Plain	Plain
2-3	date of last rain	16 Dec 00	21 Mar 01	21 Mar 01	Dec 2000	Dec 2000	
2-4	rain amount (mm or Low Moderate High)	M	L	L	L	L	L
2-5	Vegetation (dry, greening, green, drying)	Dry					
2-6	Vegetation density (Low Medium Dense)	L	D	D	D	D	D
2-7	soil moisture (wet/dry)	D	D	D	D	D	D
3	LOCUSTS						
3-1	present or absent	A	A	A	A	A	A
3-2	area infested (ha)						
4	HOPPERS						
4-1	hopper stages (H123456F)						
4-2	Appearance (solitary, transiens, gregarious)						
4-3	Behaviour (isolated, scattered, groups)						
4-4	hopper density (/site or /m2)						
5	BANDS						
5-1	band stage (H12345F)						
5-2	band density (/m2 or Low Medium High)						
5-3	band sizes (m2 or ha)						
5-4	number of bands						
6	ADULTS						
6-1	maturity (immature, mature)						
6-2	appearance (solitary, transiens, gregarious)						
6-3	behaviour (isolated, scattered, groups)						
6-4	adult density (/transect or /ha)						
6-5	breeding (copulating, laying)						
7	SWARMS						
7-1	maturity (immature, mature)						
7-2	swarm density (/m2 or Low Medium High)						
7-3	swarm size (km2 or ha)						
7-4	number of swarms						
7-5	breeding (copulating, laying)						
7-6	flying (direction, time passing)						
7-7	flying height (Low Medium High)						
8	CONTROL						
8-1	pesticide name & formulation						
8-2	application rate (l/ha or kg/ha)						
8-3	quantity (l)						
8-4	area treated (ha)						
8-5	ground or air						
8-6	estimated % kill						
9	COMMENTS						

1	SURVEY STOP	97	98	99	100	101	102
1-1	Date	24 Apr 01	25 Apr 01	25 Apr 01	25 Apr 01	25 Apr 01	25 Apr 01
1-2	Name	Chelcanitar	Ganadar	Nigor sharf	Garok	Saiji	Suntsar
1-3	Latitude (N)	251416	251138	251618	251932	252548	253053
1-4	Longitude (E or W)	622358	622027	621331	620643	620219	615940
2	ECOLOGY						
2-1	area (ha) of survey	1000	1000	1000	1000	1000	1000
2-2	habitat (wadi, plains, dunes, crops)	Plain	Plain	Plain	Plain	Plain	Wadi
2-3	date of last rain		16 Dec 00	16 Dec 00	16 Dec 00	16 Dec 00	?
2-4	rain amount (mm or Low Moderate High)	L	L	L	L	L	?
2-5	Vegetation (dry, greening, green, drying)		Dry	Dry	Dry	Dry	Dry
2-6	Vegetation density (Low Medium Dense)	D	D	D	D	D	D
2-7	soil moisture (wet/dry)	D	D	D	D	D	D
3	LOCUSTS						
3-1	present or absent	A	A	A	A	A	A
3-2	area infested (ha)						
4	HOPPERS						
4-1	hopper stages (H123456F)						
4-2	Appearance (solitary, transiens, gregarious)						
4-3	Behaviour (isolated, scattered, groups)						
4-4	hopper density (/site or /m2)						
5	BANDS						
5-1	band stage (H12345F)						
5-2	band density (/m2 or Low Medium High)						
5-3	band sizes (m2 or ha)						
5-4	number of bands						
6	ADULTS						
6-1	maturity (immature, mature)						
6-2	appearance (solitary, transiens, gregarious)						
6-3	behaviour (isolated, scattered, groups)						
6-4	adult density (/transect or /ha)						
6-5	breeding (copulating, laying)						
7	SWARMS						
7-1	maturity (immature, mature)						
7-2	swarm density (/m2 or Low Medium High)						
7-3	swarm size (km2 or ha)						
7-4	number of swarms						
7-5	breeding (copulating, laying)						
7-6	flying (direction, time passing)						
7-7	flying height (Low Medium High)						
8	CONTROL						
8-1	pesticide name & formulation						
8-2	application rate (l/ha or kg/ha)						
8-3	quantity (l)						
8-4	area treated (ha)						
8-5	ground or air						
8-6	estimated % kill						
9	COMMENTS						

1	SURVEY STOP	103	104	105	106	107	108
1-1	Date	25 Apr 01	25 Apr 01	25 Apr 01	25 Apr 01	25 Apr 01	26 Apr 01
1-2	Name	?	Shooli I	Shooli II	Chatti	Sulika	Bedrang
1-3	Latitude (N)	253241	253525	253532	253724	255020	260359
1-4	Longitude (E or W)	620510	620652	620818	621504	624216	641025
2	ECOLOGY						
2-1	area (ha) of survey	1000	1000	500	1000	500	1000
2-2	habitat (wadi, plains, dunes, crops)	Plain			Dunes	Plain	Plain
2-3	date of last rain	?	?	?	June 2000	18 Apr 01	16 Apr 01
2-4	rain amount (mm or Low Moderate High)	?	?	?	L	L	M
2-5	Vegetation (dry, greening, green, drying)	Dry	Dry	Dry	Dry		
2-6	Vegetation density (Low Medium Dense)	D	D	D	L	D	D
2-7	soil moisture (wet/dry)	D	D	D	D	D	D
3	LOCUSTS						
3-1	present or absent	A	A	A	A	A	A
3-2	area infested (ha)						
4	HOPPERS						
4-1	hopper stages (H123456F)						
4-2	Appearance (solitary, transiens, gregarious)						
4-3	Behaviour (isolated, scattered, groups)						
4-4	hopper density (/site or /m2)						
5	BANDS						
5-1	band stage (H12345F)						
5-2	band density (/m2 or Low Medium High)						
5-3	band sizes (m2 or ha)						
5-4	number of bands						
6	ADULTS						
6-1	maturity (immature, mature)						
6-2	appearance (solitary, transiens, gregarious)						
6-3	behaviour (isolated, scattered, groups)						
6-4	adult density (/transect or /ha)						
6-5	breeding (copulating, laying)						
7	SWARMS						
7-1	maturity (immature, mature)						
7-2	swarm density (/m2 or Low Medium High)						
7-3	swarm size (km2 or ha)						
7-4	number of swarms						
7-5	breeding (copulating, laying)						
7-6	flying (direction, time passing)						
7-7	flying height (Low Medium High)						
8	CONTROL						
8-1	pesticide name & formulation						
8-2	application rate (l/ha or kg/ha))						
8-3	quantity (l)						
8-4	area treated (ha)						
8-5	ground or air						
8-6	estimated % kill						
9	COMMENTS						

1	SURVEY STOP	109	110	111	112	113	114
1-1	Date	26 Apr 01	26 Apr 01	26 Apr 01	27 Apr 01	27 Apr 01	27 Apr 01
1-2	Name	Dandhar	Gishkor	Bela	Baghbana	Pishak	Sorab
1-3	Latitude (N)	260901	261521	261139	275758	280830	283506
1-4	Longitude (E or W)	642725	644530	661350	663218	662101	661812
2	ECOLOGY						
2-1	area (ha) of survey	500	500	1000	500	500	500
2-2	habitat (wadi, plains, dunes, crops)	Plain	Plain	Plain	Wadi	Wadi	Wadi
2-3	date of last rain	16 Apr 01	16 Apr 01	16 Apr 01	18 Apr 01	18 Apr 01	18 Apr 01
2-4	rain amount (mm or Low Moderate High)	L	M	M	H	M	M
2-5	Vegetation (dry, greening, green, drying)						
2-6	Vegetation density (Low Medium Dense)	D	D	D	D	D	D
2-7	soil moisture (wet/dry)	D	D	D	D	D	D
3	LOCUSTS						
3-1	present or absent	A	A	A	A	A	A
3-2	area infested (ha)						
4	HOPPERS						
4-1	hopper stages (H123456F)						
4-2	Appearance (solitary, transiens, gregarious)						
4-3	Behaviour (isolated, scattered, groups)						
4-4	hopper density (/site or /m2)						
5	BANDS						
5-1	band stage (H12345F)						
5-2	band density (/m2 or Low Medium High)						
5-3	band sizes (m2 or ha)						
5-4	number of bands						
6	ADULTS						
6-1	maturity (immature, mature)						
6-2	appearance (solitary, transiens, gregarious)						
6-3	behaviour (isolated, scattered, groups)						
6-4	adult density (/transect or /ha)						
6-5	breeding (copulating, laying)						
7	SWARMS						
7-1	maturity (immature, mature)						
7-2	swarm density (/m2 or Low Medium High)						
7-3	swarm size (km2 or ha)						
7-4	number of swarms						
7-5	breeding (copulating, laying)						
7-6	flying (direction, time passing)						
7-7	flying height (Low Medium High)						
8	CONTROL						
8-1	pesticide name & formulation						
8-2	application rate (l/ha or kg/ha)						
8-3	quantity (l)						
8-4	area treated (ha)						
8-5	ground or air						
8-6	estimated % kill						
9	COMMENTS						

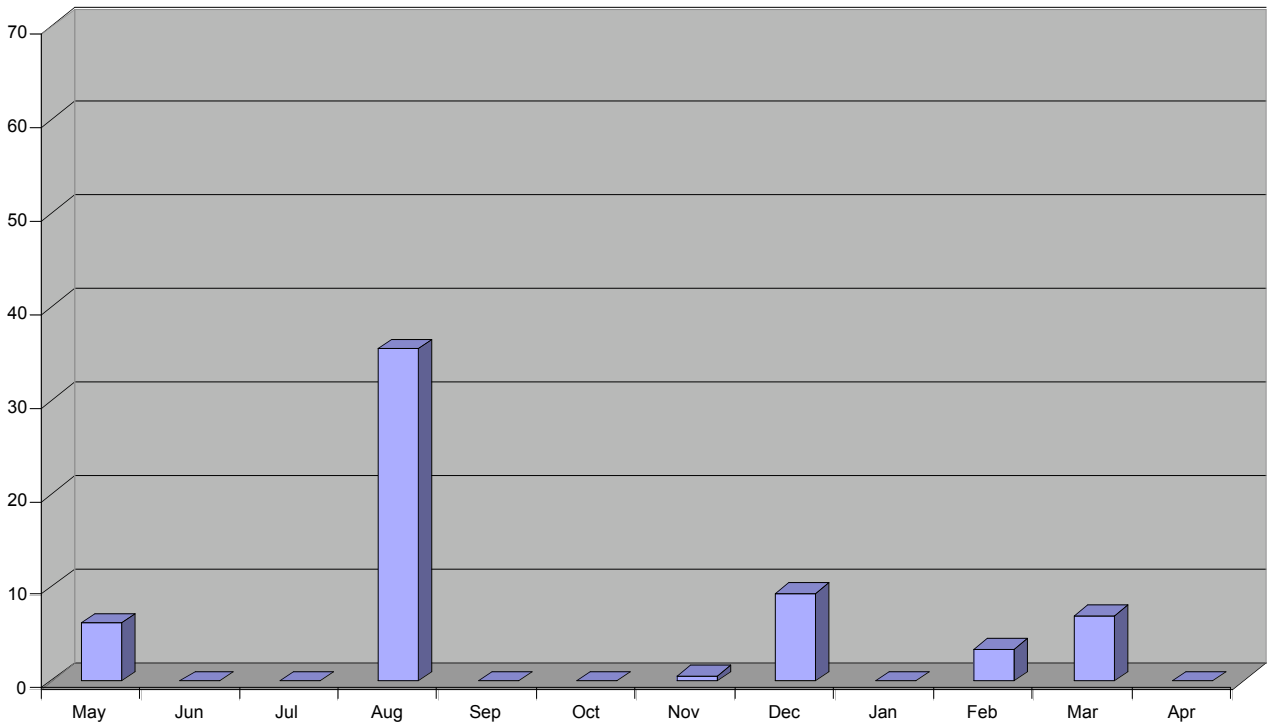
Appendix 4. Rainfall data

Date	Saravan	Iranshahr	Chabahar	Jask	Kahnuj	Zahedan	Nushki	Kharan	Khuzdar	Quetta	Panjgur	Jiwani	Turbat
12/05/00	5.6												
13/05/00									27				
14/05/00										14			
16/05/00	0.6												
17/05/00									10				
May	6.2	0	0	0	0	0	0	0	37	0	14	0	0
Jun	0	0	0	0	0	0	0	0	0	0	0	0	0
04/07/00									15				
12/07/00									16				
14/07/00									10				
Jul	0	0	0	0	0	0	0	0	41	0	0	0	0
04/08/01	35.6	2.8											
05/08/00									5				
11/08/00									14				
14/08/00									9				
Aug	35.6	2.8	0	0	0	0	0	0	28	0	0	0	0
21/09/00					3								
Sep	0	0	0	0	3	0	0	0	0	0	0	0	0
04/10/00					31.4								
Oct	0	0	0	0	31.4	0	0	0	0	0	0	0	0
04/11/00						0.1							
07/11/00	0.2						10						
09/11/00	0.2						8.8						
10/11/00	0.2			1.4		0.3	8.8						
Nov	0.6	0	0	1.4	0	0.4	27.6	0	0	0	0	0	0
12/12/00			12.6	6.6									
15/12/00	4.8	0.9	30.4	5.2	22.6	2.1	5			7		50	37
16/12/00	4.6	9.5				0.2	16	7		15	2		30
17/12/00										26			
28/12/00							5			17			
30/12/00												2	
Dec	9.4	10.4	43	11.8	22.6	2.3	26	7	0	65	2	52	67
09/01/01			0.3	34.3	7	1.1							
10/01/01				6.6									
27/01/01						0.5	10						
28/01/01						0.5	10						
31/01/01										4.3			
Jan	0	0	0.3	40.9	7	2.1	20	0	0	4.3	0	0	0
12/02/01	3.5	1.2				2.9	15				7.2		
13/02/01							10			12			
14/02/01									15	14			
18/02/01							7						
19/02/01							5						
20/02/01									2	13			
21/02/01							20						
23/02/01										6			
24/02/01										1			
25/02/01										5			

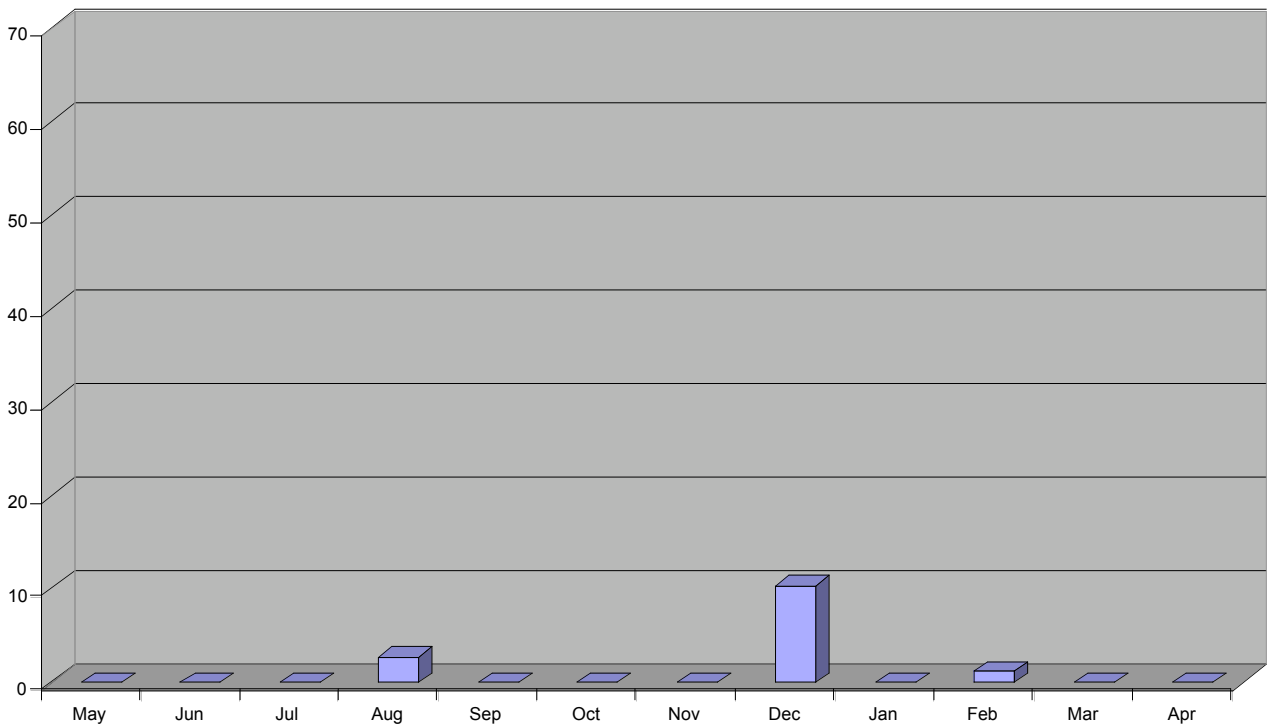
Date	Saravan	Transhahr	Chabahar	Jask	Kahnuj	Zahedan	Nushki	Kharan	Khuzdar	Quetta	Panjgur	Jiwani	Turbat
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Feb	3.5	1.2	0	0	0	2.9	57	0	17	51	7.2	0	0
11/03/01	0.2				0.1								
16/03/01	2.4				2.8	3.6							
18/03/01	2.4					1.5							
25/03/01	2												
26/03/01											3		
Mar	7	0	0	0	2.9	5.1	0	0	0	0	3	0	0
16/04/01							22	5	28		22.2		22
Apr	0	0	0	0	0	0	22	5	28	0	22.2	0	22
Ground total	62.3	14.4	43.3	54.1	66.9	12.8	153	12	151	120	48.4	52	89

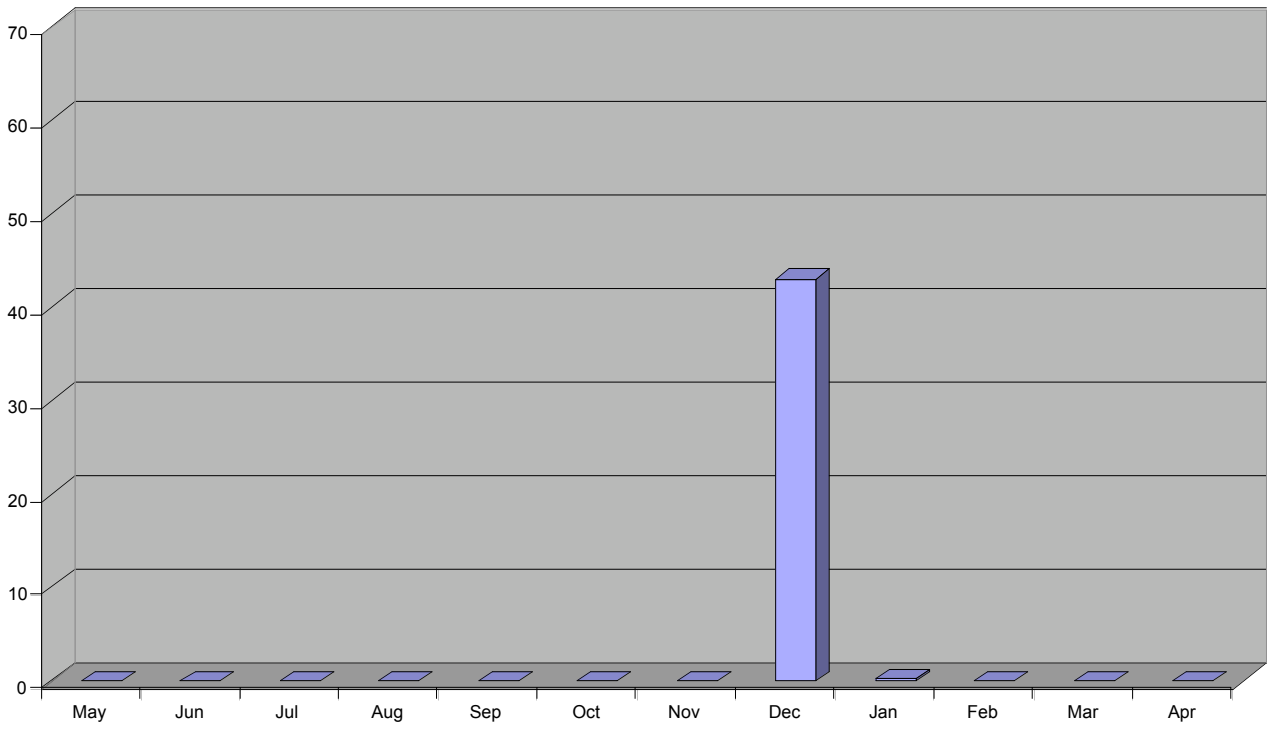
Data Rainfall in Saravan



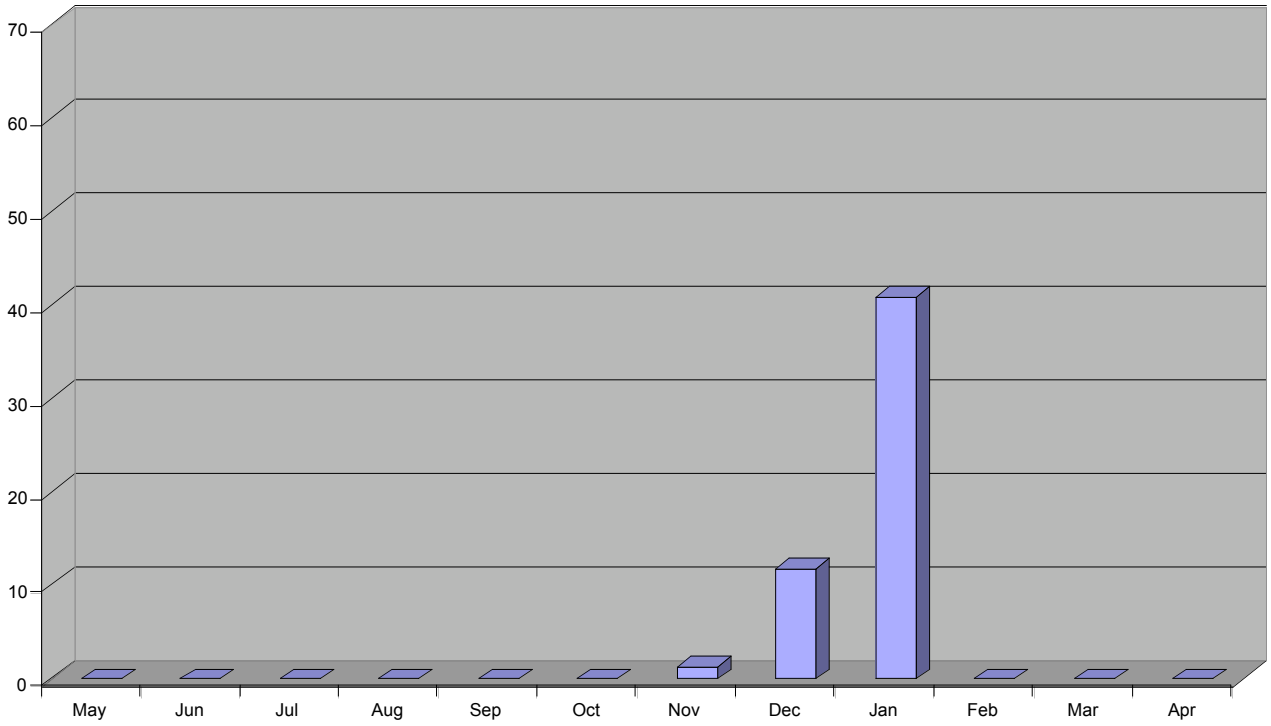
Data Rainfall in Iranshahr



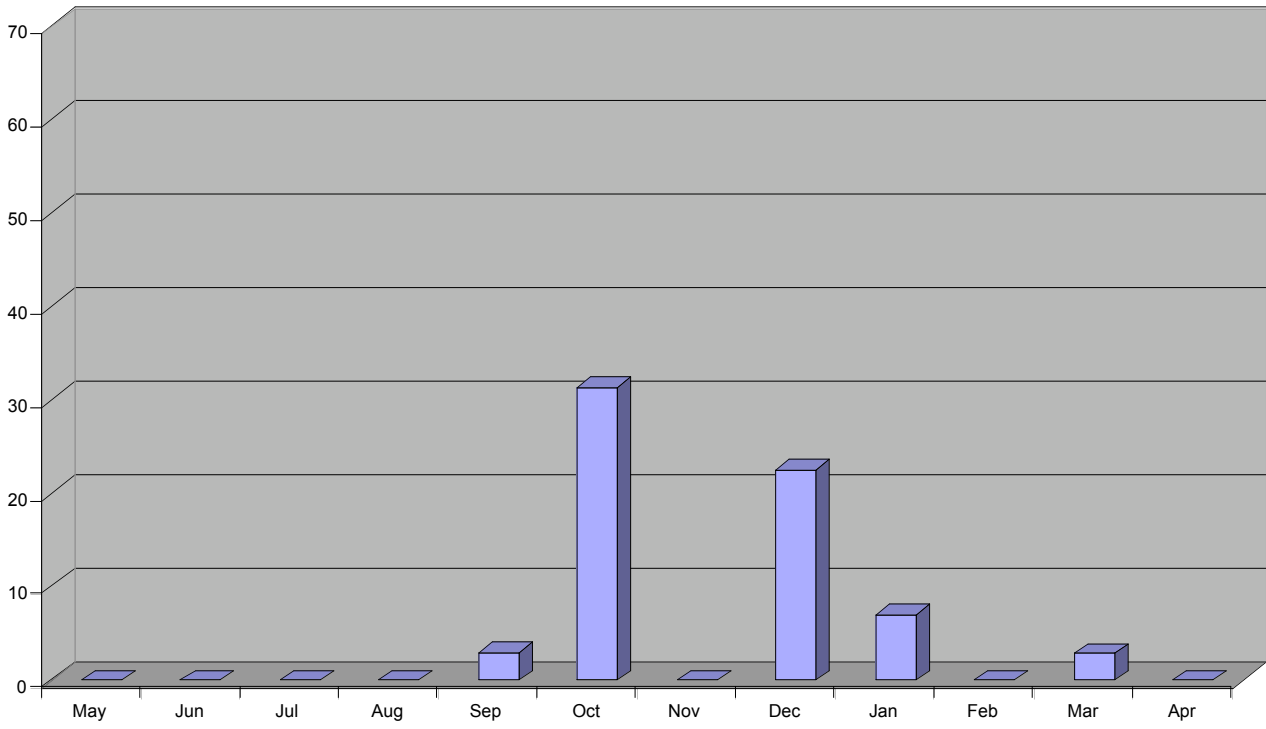
Data Rainfall in Chabahar



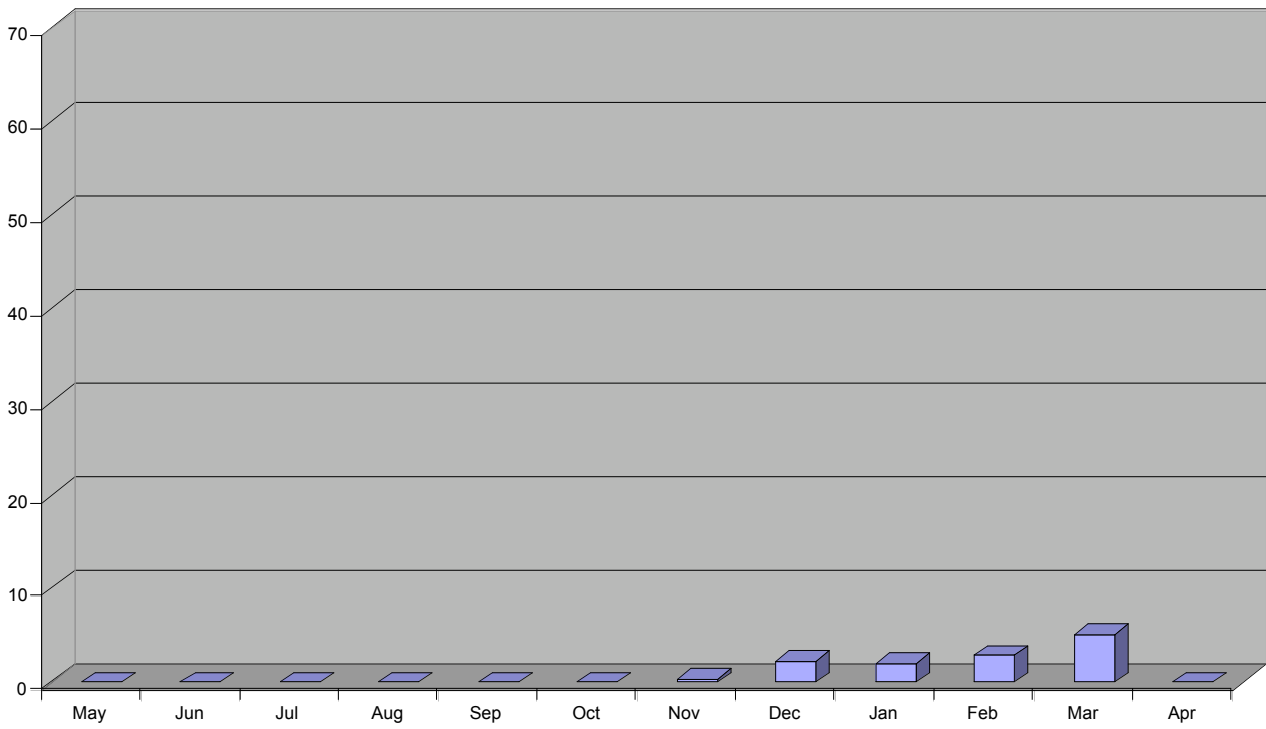
Data Rainfall in Jask



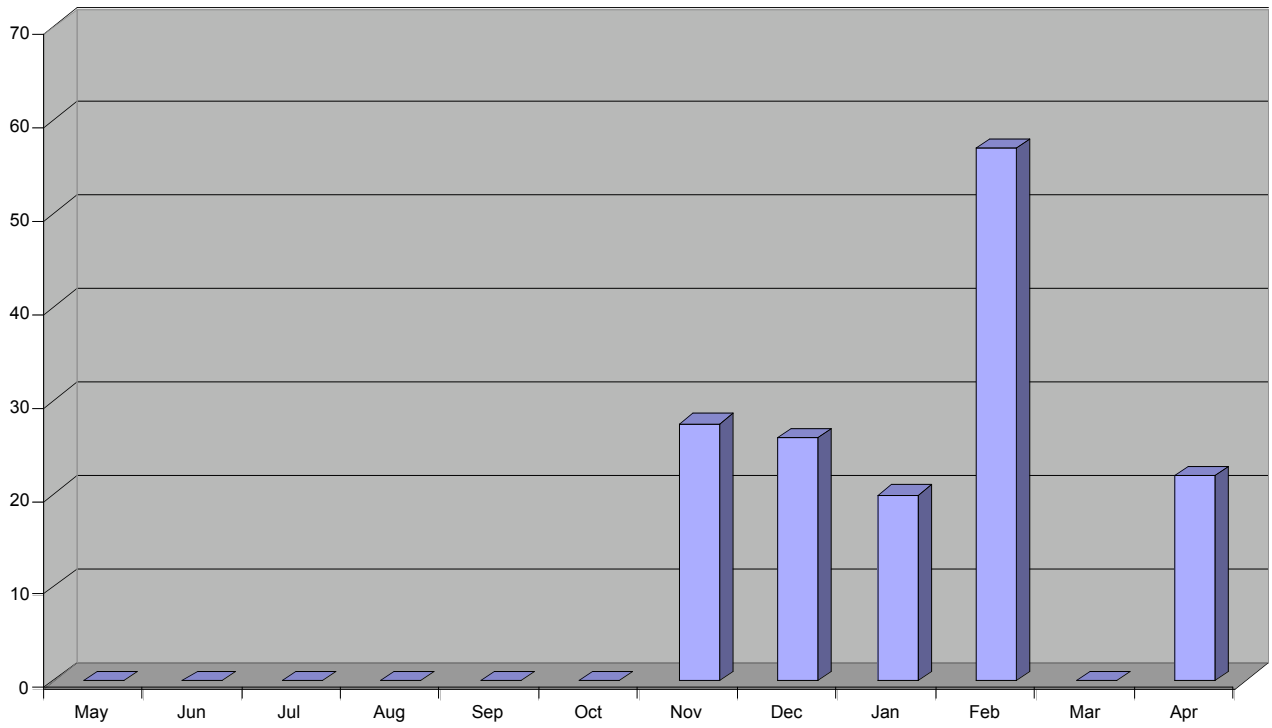
Data Rainfall in Kahnuj



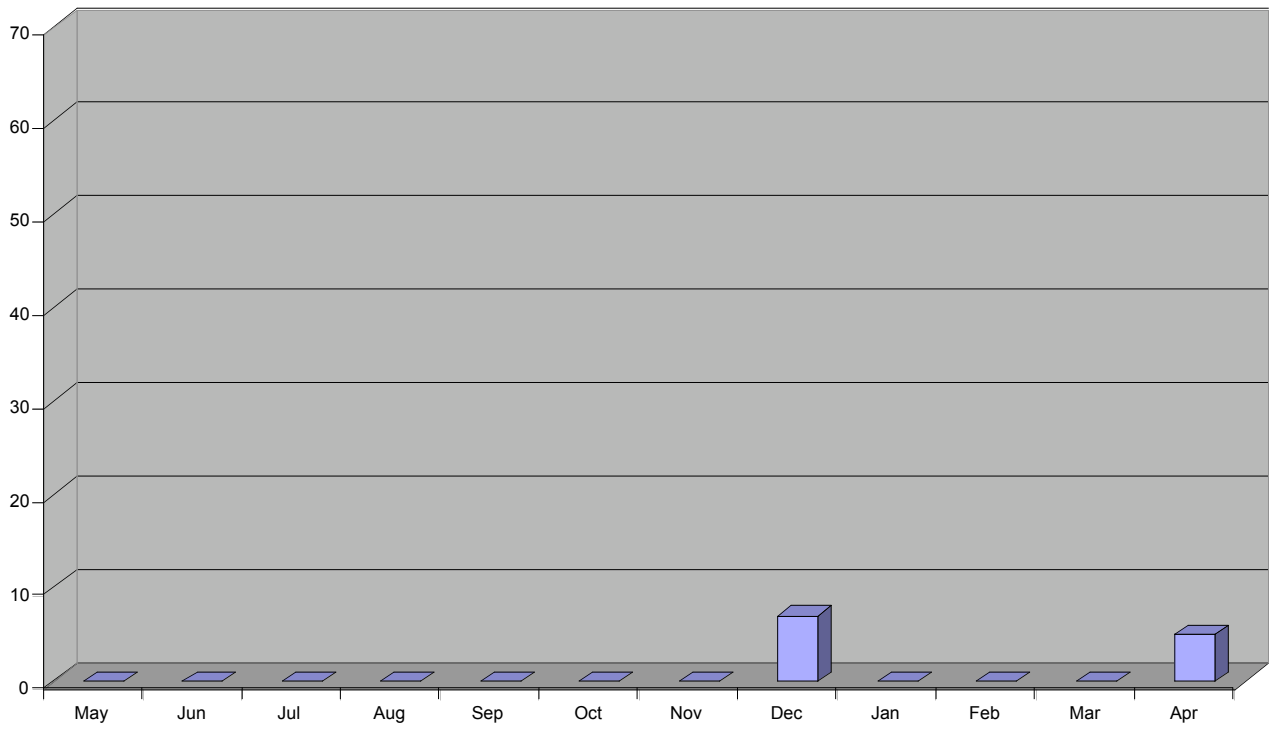
Data Rainfall in Zahedan



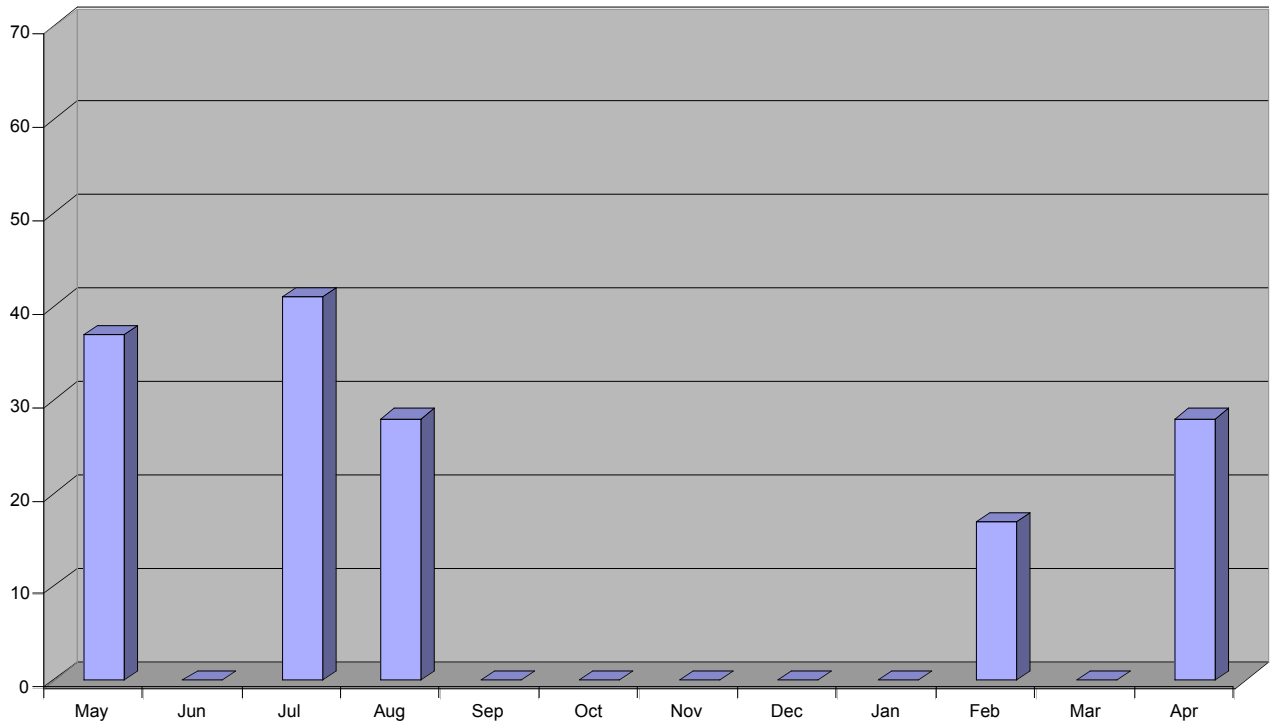
Data Rainfall in Nushki



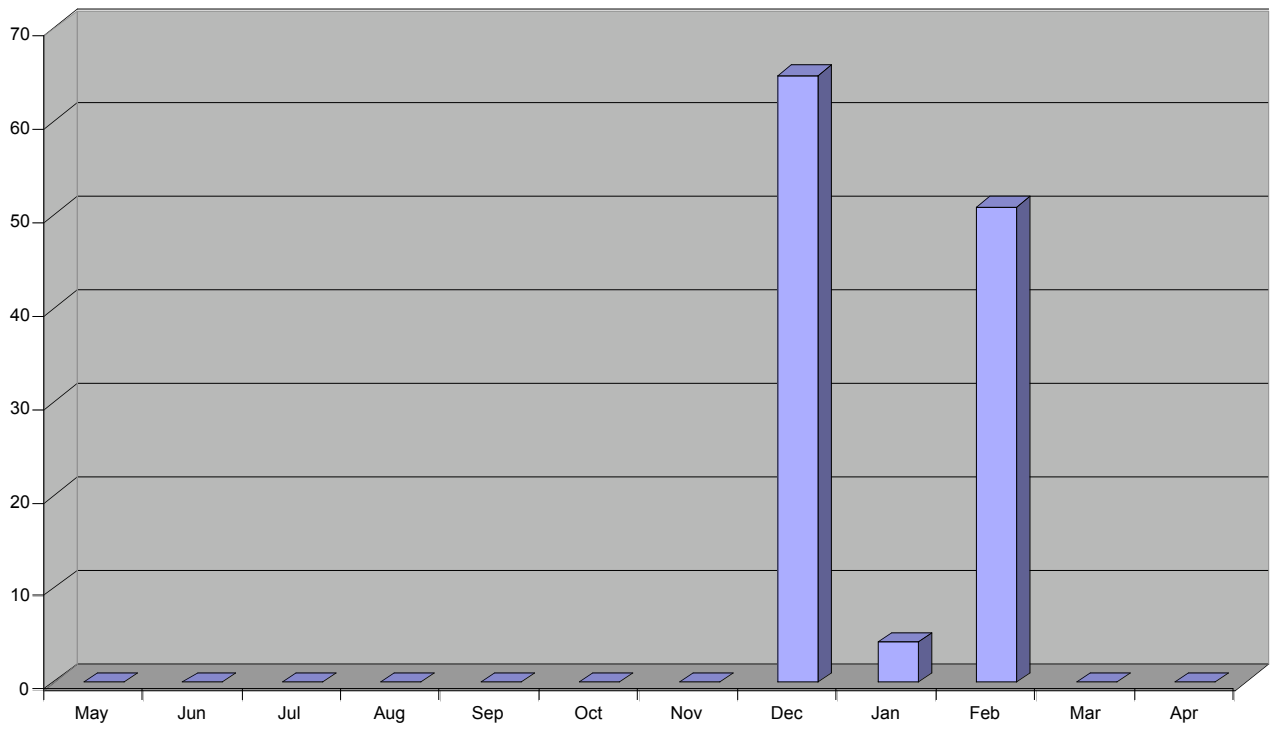
Data Rainfall in Kharan



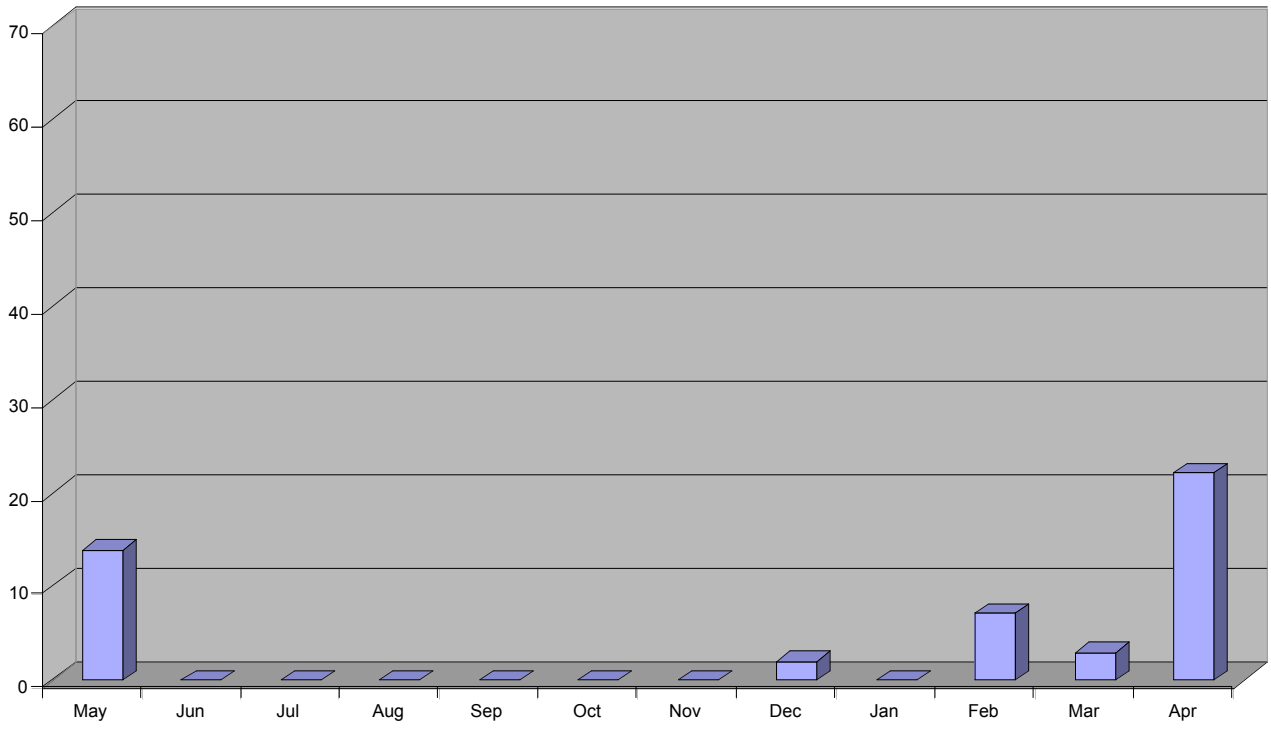
Data Rainfall in Khuzdar



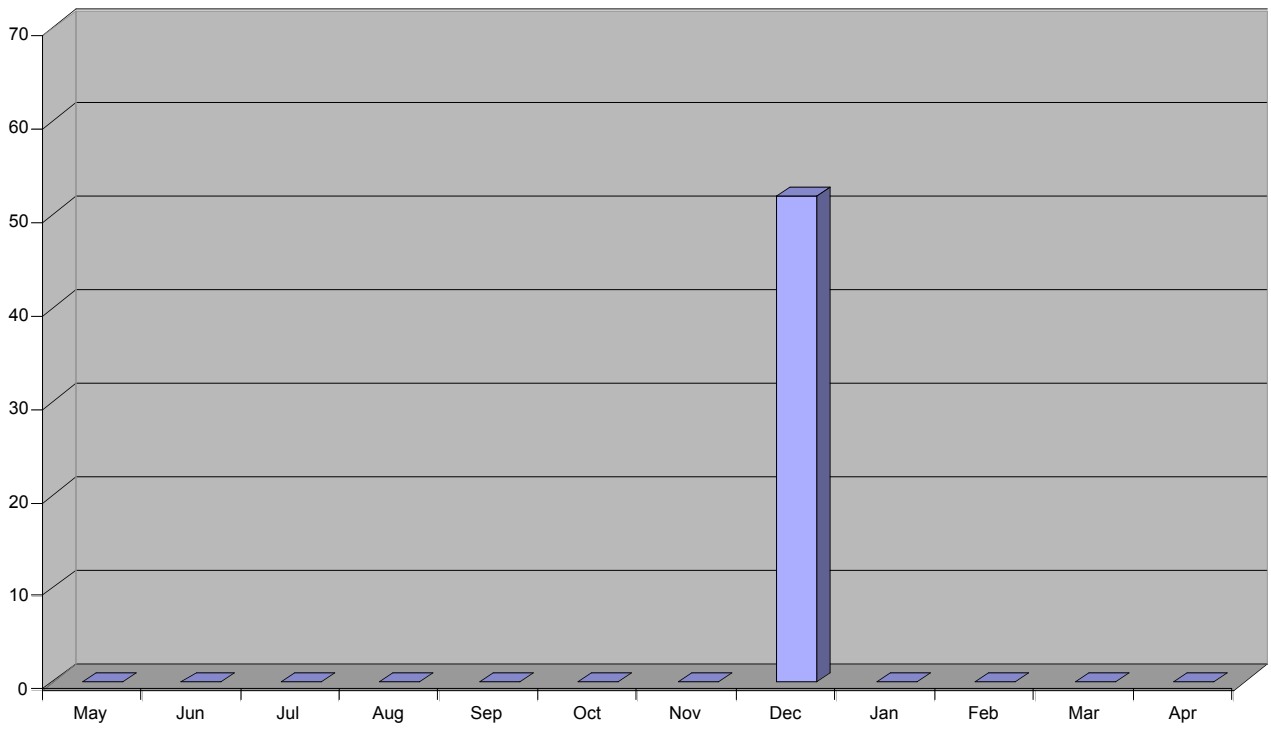
Data Rainfall in Quetta



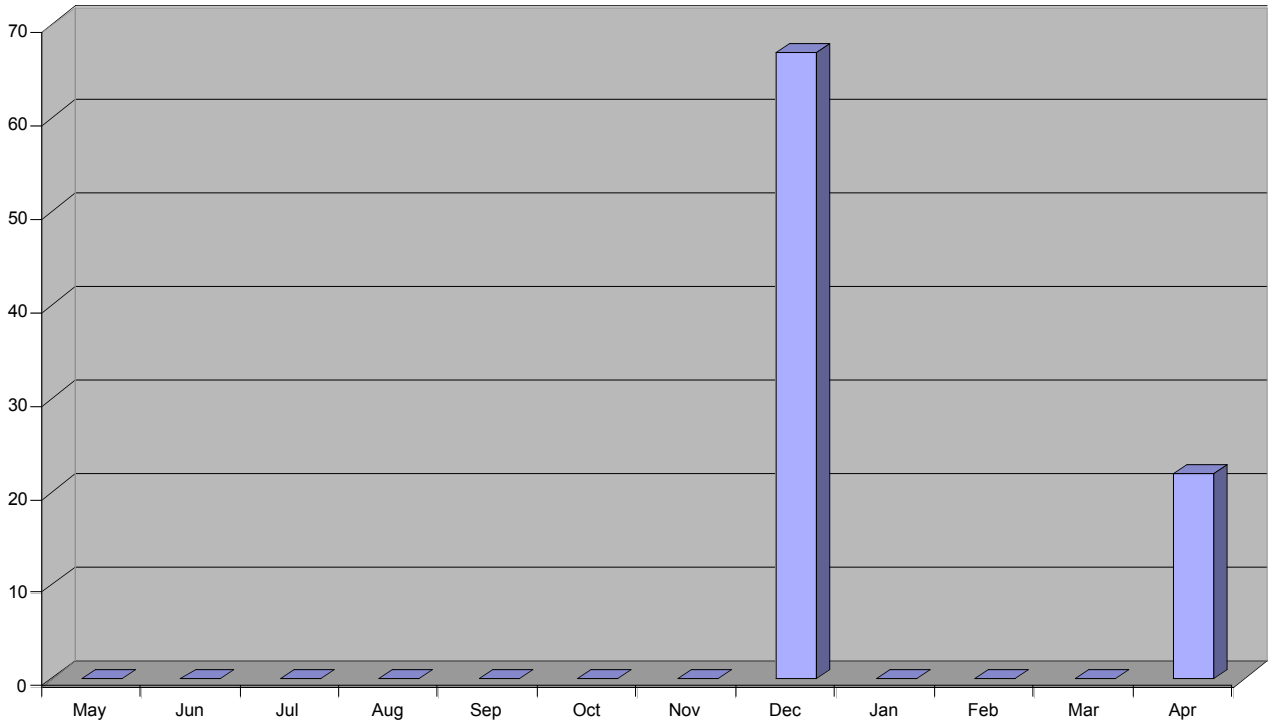
Data Rainfall in Panjgur



Data Rainfall in Jiwani



Data Rainfall in Turbat



Appendix 5. Meteorological observations (I.R. Iran)

Date	Hour	Place	Coordinates	Alt (m)	Temp (C)	RH%	Wind	Direction	Remarks
2 Apr 01	09:15	Shandan	272254/615423	1190	27	74	calm	S to N	rain on 25-03-01
2 Apr 01	10:26	Dourban	272343/615335	1200	29.5	62	calm	S to N	rain on 25-03-01
3 Apr 01	09:35	Khushab	270850/614835	1270	26	83	H	N to S	rain on 25-03-01
3 Apr 01	09:55	Azizabad	270854/613310	?	29	74	?	?	rain on 25-03-01
3 Apr 01	10:30	Kankehur	270654/615039	1270	26	54	H	N to S	rain on 25-03-01
3 Apr 01	11:55	Ghaderabad	270821/613419	1327	32	55	mild	N to S	rain on 25-03-01
3 Apr 01	17:35	Motor davari	270737/604341	604	35	84	calm	S to N	rain on 25-03-01
3 Apr 01	18:30	Memari	270650/604034	601	32	85	calm	W to E	rain on 25-03-01
3 Apr 01	19:00	Naigoun	270655/604307	?	34	84	calm	W to E	rain on 25-03-01
4 Apr 01	08:40	Bampur folk	271658/602549	532	30	78	calm	E to W	rain on 25-03-01
4 Apr 01	09:15	Sardegal	271414/602412	535	29	83	calm	S to N	rain on 25-03-01
4 Apr 01	10:15	Shamsabad	271326/602114	514	32	72	calm	E to W	rain on 25-03-01
4 Apr 01	11:05	Pishakabad	271017/601623	505	33	30	calm	S to N	rain on 25-03-01
5 Apr 01	17:15	Brijdar	252622/604327	43	31	36	calm	S to N	rain on 10-01-01
5 Apr 01	18:10	Maleki	252711/604226	45	29	46	calm	S to N	rain on 10-01-01
5 Apr 01	18:35	Send	252644/604123	23	28	66	calm	S to N	rain on 10-01-01
6 Apr 01	09:25	Kahir	253554/600818	57	36	18	calm	E to W	rain on 20-03-01
6 Apr 01	10:50	Kaki	252955/592711	45	36	26	calm	S to N	rain on 20-03-01
6 Apr 01	11:20	Poshti	252859/502240	31	38	25	calm	S to N	rain on 20-03-01
7 Apr 01	08:45	Baladsar	251628/604754	58	30	58	mild	N to S	rain on 20-03-01
7 Apr 01	09:30	Kachoo	251322/605827	48	31	60	calm	N to S	rain on 20-03-01
8 Apr 01	09:50	Pirsohrab	254021/605636	65	35	22	calm	E to W	rain on 20-03-01
8 Apr 01	10:15	Beryani	253713/605913	55	35	22	calm	E to W	rain on 20-03-01
8 Apr 01	10:30	Nookabad	253509/610055	58	37	29	calm	E to W	rain on 20-03-01
8 Apr 01	11:40	Balad I	252709/600648	64	35	30	calm	E to W	rain on 20-03-01
8 Apr 01	11:55	Balad II	252553/605507	56	35	20	calm	E to W	rain on 20-03-01
8 Apr 01	12:10	Konarak	252045/604741	39	35	20	calm	E to W	rain on 20-03-01
9 Apr 01	10:30	Birdaf II	252649/594703	122	32	60	calm	SW to NE	rain on 23-03-01
9 Apr 01	11:30	Balak	253902/592137	42	37	69	calm	SW to NE	rain on 23-03-01
9 Apr 01	16:00	Gabrik	254620/582653	52	38	72	calm	S to N	rain on 23-03-01
9 Apr 01	16:30	Jegin	254433/581258	43	36	80	mild	S to N	rain on 23-03-01
9 Apr 01	17:00	Hojdan	254211/575421	34	34	84	calm	S to N	rain on 23-03-01
11 Apr 01	08:10	Chahlak	272426/575606	435	25	48	mild	W to E	rain on 20-01-01
11 Apr 01	09:45	Chahreza	272021/581054	418	31	22	calm	W to E	rain on 20-01-01
11 Apr 01	10:05	Kalatmalek	271428/581745	424	27	20	calm	E to W	rain on 20-01-01
11 Apr 01	10:30	Salmaniyeh	271254/582049	427	28	26	calm	E to W	rain on 20-01-01
12 Apr 01	08:50	Roodbar	275901/580126	492	28	46	calm	N to S	rain on 19-03-01
12 Apr 01	11:05	Dalgan	273257/581841	396	35	43	calm	N to S	rain on 19-03-01
12 Apr 01	14:25	Golmurti	272908/592528	408	40	10	calm	S to N	rain on 19-03-01
13 Apr 01	08:00	Chegerdak	270429/590815	423	37	3	calm	S to N	rain on 19-03-01
13 Apr 01	09:05	Emam complex	272032/591012	434	37	70	mild	S to N	rain on 19-03-01
14 Apr 01	10:22	Abkhan	280112/605436	1433	27	36	calm	S to N	rain on 18-03-01

15 Apr 01	10:08	Kalateh	293131/605340	1360	28	22	calm	S to N	rain on 04-04-01
15 Apr 01	10:45	Lar	293318/605356	1327	31	34	calm	S to N	rain on 04-04-01
15 Apr 01	11:05	Hemmatabad	293123/605327	1370	35	16	calm	N to S	rain on 04-04-01

Appendix 6. Meteorological observations (Pakistan)

Date	Hour	Place	Coordinates	Alt (m)	Temp (C)	RH%	Wind	Direction	Remarks
17 Apr 01		Yakmach	284459/634222		38	15		S to N	rain on 16-04-01
17 Apr 01		Dalbandin	285309/642344		35	21		S to N	rain on 16-04-01
17 Apr 01		Noukcha	285755/644946		28	44		NW to SE	rain on 17-04-01
18 Apr 01		Patkin	290328/654700		27	50		S to N	Rain on 27-02-01
19 Apr 01		Nauroz Qalat	284716/653635		32	68		S to N	Rain on 17-04-01
19 Apr 01		Naroo	282258/653339		26	57		N to S	Rain on 18-04-01
20 Apr 01		Droug	280511/654556		24	40		N to S	Rain on 18-04-01
20 Apr 01		Patak	274459/653632		25	42		N to S	Rain on 18-04-01
20 Apr 01		Hussain zai	273845/652814		25	24		N to S	Rain on 18-04-01
20 Apr 01		Loope	272512/650318		28	24		W to E	Rain on 18-04-01
21 Apr 01		Musa bazar	265306/635852		26	62		W to E	Rain on 18-04-01
21 Apr 01		Drug drup	264804/635034		30	58		W to E	Rain on 18-04-01
21 Apr 01		Sorvan	266518/635102		28	48		W to E	?
22 Apr 01		Singa qalat	264056/635947		28	44		Nil	Rain on 18-04-01
22 Apr 01		Rai nigor	263835/635546		28	38		Nil	Rain on 18-04-01
22 Apr 01		Tash	261520/635915		32	77		Nil	Rain on 20-04-01
22 Apr 01		Sahki	261022/640211		35	24		N to S	Rain on 20-04-01
22 Apr 01		Hushab	260054/635445		34	24		E to W	Rain on 20-04-01
22 Apr 01		Sami	260150/632535		36.5	14		E to W	Dec 2000
23 Apr 01		Pidarak	255055/631239		33	38			Rain on 19-12-00
23 Apr 01		Garok	253409/632301		36	32			Rain on 19-12-00
23 Apr 01		Shadi kaur	253036/632552		35.5	30			Rain on 19-12-00
23 Apr 01		Gorani chah	251606/632048		29	70			Rain on 16-12-00
23 Apr 01		Chur	251507/631405		28	75			Rain on 16-12-00
23 Apr 01		Taladi	251938/631759		28	68			Rain on 16-12-00
24 Apr 01		Gano	252538/631106		31	52			Rain on 21-03-01
24 Apr 01		Korage	252703/630535		32	54			Rain on 21-03-01
24 Apr 01		Kalag	252635/625503		35	45			Dec 2000
24 Apr 01		Belar	252508/625126		35	46			Dec 2000
24 Apr 01		Vandinigur	252450/624623		34	40			
24 Apr 01		Chelicani tar	251416/622358		33	52			
25 Apr 01		Ganadar	251138/622027		30	66		W to E	Rain on 16-12-00
25 Apr 01		Nigor sharif	251618/621331		32	62		W to E	Rain on 16-12-00
25 Apr 01		Garok	251932/620643		32	56		N to S	Rain on 16-12-00
25 Apr 01		Saiji	252548/620219		34	39		N to S	Rain on 16-12-00
25 Apr 01		Suntsar	253053/615940		37	34			
25 Apr 01			253241/620510		38	31			
25 Apr 01		Shooli I	253525/620652		39	25			
25 Apr 01		Shooli II	253532/620818		39	33			
25 Apr 01		Chatti	253724/621504		41	18			Rain June 2000
25 Apr 01		Sulika	255020/624216		40				Rain on 18-04-01
26 Apr 01		Bedrang	260359/641025		35	45		S to N	Rain on 16-04-01
26 Apr 01		Dandhar	260901/642725		36	18			Rain on 16-04-01
26 Apr 01		Gishkor	261521/644530		36	32			Rain on 16-04-01

26 Apr 01	Bala	261139/661350	38	24		Rain on 16-04-01
27 Apr 01	Baghbana	275758/663218	32	20	N to S	Rain on 18-04-01
27 Apr 01	Pishak	280830/662101	30	12	S to E	Rain on 18-04-01
27 Apr 01	Sorab	283506/661812	31	10	S to E	Rain on 18-04-01

Appendix 7. Itinerary for 2002

Day	Date	Route	Night halt
1	1 Apr 02	I.R. Iran teams cross Taftan/Mirjaveh border; Taftan-Nushki	Nushki
2	2 Apr 02	Nushki-Kharan	Kharan
3	3 Apr 02	Kharan areas (Naroo)	Kharan
4	4 Apr 02	Kharan-Panjgur	Panjgur
5	5 Apr 02	Panjgur areas	Panjgur
6	6 Apr 02	Panjgur areas	Panjgur
7	7 Apr 02	Panjgur-Turbat	Turbat
8	8 Apr 02	Turbat-Pasni	Pasni
9	9 Apr 02	Pasni-Gawadar via Kulamch area	Gawadar
10	10 Apr 02	Gawadar-Turbat via Suntsar	Suntsar
11	11 Apr 02	Shooli area	Turbat
12	12 Apr 02	Turbat-Khuzdar via Bela	Khuzdar
13	13 Apr 02	Khuzdar-Quetta	Quetta
14	14 Apr 02	-	Quetta
15	15 Apr 02	Quetta-Taftan	Taftan
-	16 Apr 02	I.R. Iran team cross Taftan/Mirjaveh border	
-	17 Apr 02		
-	18 Apr 02		
-	19 Apr 02		
-	20 Apr 02		
-	21 Apr 02		
-	22 Apr 02		
-	23 Apr 02		
-	24 Apr 02		
-	25 Apr 02		
16	26 Apr 02	Pakistani team cross Taftan/Mirjaveh border; Zahedan-Saravan	Saravan
17	27 Apr 02	Saravan areas	Saravan
18	28 Apr 02	Saravan-Iranshahr; Iranshahr areas	Iranshahr
19	29 Apr 02	Iranshahr areas	Iranshahr
20	30 Apr 02	Iranshahr-Chabahar; Chabahar areas	Chabahar
21	1 May 02	Chabahar areas	Chabahar
22	2 May 02	Chabahar areas	Chabahar
23	3 May 02	Chabahar areas	Chabahar
24	4 May 02	Chabahar-Jask and Jask areas	Jask
25	5 May 02	Jask-Minab-Kahnuj-Jiroft; Minab & Kahnuj areas	Jiroft
26	6 May 02	Jazmurian area	Jiroft
27	7 May 02	Jiroft-Kahnuj-Golmurti	Golmurti
28	8 May 02	Golmurti-Iranshahr	Iranshahr
29	9 May 02	Iranshahr-Zahedan	Zahedan
30	10 May 02	-	Zahedan
	11 May 02	Pakistan teams cross Taftan/Mirjaveh border	

