#### List of khettaras

No.	Commune	Ksar	Khettara	Cordination	n (X, Y)
G-1	G-2	N4	G-3	G-4-1	G-4-2
A-001	Mellaab	Taoutoutoute	Taoutoutout	550,627	99,700
A-002	Mellaab	Iminkine	Iminkine	563,359	94,570
A-003	Mellaab	Ait Oulhou	Ait Oulhou	556,179	95,350
A-004	Mellaab	Ait khlifa	Toufaghanta	556,552	93,306
A-005	Mellaab	Akkerouz	Akkerouz	549,333	98,221
A-006	Mellaab	Amgane	Amgane	561,274	91,662
A-007	Mellaab	Tighramt	Tighramt	556,831	96,302
A-008	Mellaab	Ighrane	Ighrane	559,540	104,299
A-009	Mellaab	Ikachrane	lkachrane	559,413	98,560
A-010	Mellaab	Ouine Oufroukh	Ouine Oufro	552,599	96,596
A-011	Mellaab	Ouinigui	Ouinigui	572,092	86,710
A-012	Mellaab	Oukhite	Oukhite	571,612	97,534
A-013	Mellaab	El Galta	Ami Ali	547,900	114,967
	Mellaab	Tiguida	Tiguida	546,076	113,437
	Mellaab	Aghroud	Aghroud	546,073	113,988
	Mellaab	Mellaab	Mellab	552,146	105,991
A-017	Mellaab	Tighadouine	Tighadouine	552,201	104,997
	Mellaab	Igli	Ferfra	547,878	107,045
	Mellaab	Igli	Tamalalete	546,975	107,247
	Mellaab	Tighazdiste	Tighazdiste	547,816	95,186
	Mellaab	Akerouz	Talghachite	549,431	97,667
	Mellaab	Ignaoune	Ignaoune	545,458	113,597
	Mellaab	Aghroud	Ami Ahmed	547,158	114,184
	Mellaab	Tighrane N Amar ou B	Tighraute	556,980	96,013
	Mellaab	Khattart Oughroud	Darte Dghou	559,443	104,582
	Mellaab	Ikachrane	Ikchrene	559,250	98,857
	Mellaab	Ait Oulhou	Touflguir	557,747	97,188
	Mellaab	Taldounte	Igr N'outta	559,980	101,261
	Mellaab	Ait Addi	Tikoua	556,237	94,306
	Mellaab	Talghoumt	Talghoumte	562,806	93,880
	Mellaab	Bou Ougdoud	Bou ouguiss	554,553	92,741
	Mellaab	Ait Addi	Tilila Ait	556,847	91,636
	Mellaab	Amaguane	N'touna	562,004	92,011
	Mellaab	Amaguane	Noumgan	561,707	91,393
	Mellaab	Amaguane	Bouyzemrane	555,389	89,764
	Mellaab	Amaguane	Tigratine	561,501	91,737
	Mellaab	Touroug	Tourougue	565,289	107,421
	Mellaab	Assellab	Assallab	565,397	107,043
	Mellaab	Assatif	Astif	556,006	107,015
	Mellaab	Merroutcha	Merroucha	548,614	106,928
	Ferkla Soufla	Tizagaghine	Bakassia	542,760	112,079
	Ferkla Soufla	Tizagaghine	Maamrya	542,943	112,505
	Ferkla Soufla	Tizagaghine	Ami Hassan	543,340	112,303
	Ferkla Soufla	Tizagaghine	Lakbira	542,231	112,112
	Ferkla Soufla	Tizagaghine	El Mehdia	543,181	112,323
A-043	Ferkla Soufla	Tizagaghine	Atti kaida	542,390	112,401

No.	Commune	Ksar	Khettara	Cordination	(X, Y)
G-1	G-2	N4	G-3	G-4-1	G-1
A-047	Ferkla Soufla	Ait Ba Maati	Regaga	541,387	112,569
A-048	Ferkla Soufla	Ait Ba Maati	Mouyjna	541,891	112,602
A-049	Ferkla Soufla	Ait My Mamoun	Ait My Mamo	534,205	102,975
A-050	Ferkla Soufla	Laksiba	Litama	536,244	111,089
A-051	Ferkla Soufla	Dar Oumira	Ait Oulghem	533,236	111,103
A-052	Ferkla Soufla	Dar Oumira	Dar Oumira	532,046	111,241
A-053	Ferkla Soufla	Dar Oumira	Ikhf N'lghi	532,218	111,025
A-054	Ferkla Soufla	Dar Oumira	Dar Oumira Jdida	529,905	109,660
A-055	Ferkla Oulia	Azag N'ouchen	Azag N'ouch	516,357	103,206
A-056	Ferkla Soufla	lzilf	lzilf	540,707	104,157
A-057	Ferkla Soufla	Ksiba	Charbate Ma	535,768	107,175
A-058	Ferkla Soufla	Ksiba	Diba	535,108	107,050
A-059	Ferkla Soufla	Ait Ben Amar	Ait Ben Ama	533,608	106,404
A-060	Ferkla Soufla	Ktaa Oued	Cheikh	533,497	104,706
A-061	Ferkla Oulia	Tamagourte	Tamagourte	537,165	108,757
A-062	Ferkla Soufla	Tahria	Tahria	536,541	108,653
A-063	Ferkla Soufla	Ktaa Oued	Khamssine	534,324	106,009
A-064	Ferkla Soufla	Ait Ben Omar	El Mach	535,768	107,175
A-065	Ferkla Oulia	Ait M'hmed	Ait M'hmed	537,330	95,689
A-066	Ferkla Oulia	Ihandar	Ihandar	536,470	92,809
A-067	Ferkla Soufla	Tighfarte	Tighfarte	534,080	103,258
A-068	Ferkla Soufla	Lakdima (Ait Maamer)	Lakdima (Ai	536,346	103,450
A-069	Ferkla Soufla	Tarfanya	Tarfanya	537,666	108,879
A-070	Ferkla Soufla	Ami Lhoussain	Ami Lhoussa	533,293	105,731
A-071	Ferkla Soufla	Laayoune	Laayoune	536,349	108,434
A-072	Ferkla Soufla	Labdau	Labdit	558,297	116,344
A-073	Ferkla Oulia	Taghouchte	Taghouchte	536,273	87,254
A-074	Ferkla Oulia	Taghya	Taghya	536,612	89,969
A-075	Ferkla Oulia	Ait Said	Ait Said	534,224	89,902
A-076	Ferkla Oulia	Ait Bel M'dine	Ait Bel M'd	529,981	101,116
A-077	Ferkla Oulia	Minighane	Minighane	528,499	98,663
A-078	Ferkla Oulia	Assaka	Assaka	525,268	93,584
A-079	Ferkla Oulia	Set	Barra N'set	531,305	99,605
A-080	Ferkla Oulia	Tafadouzte	Tafadouzte	531,001	99,881
A-081	Ferkla Oulia	Ait Assem	Ait Assem	532,054	101,406
A-082	Ferkla Oulia	Toujdite N'ihouda	Toujdite N'	536,607	92,705
A-083	Ferkla Oulia	Ait M'hamed	Aadouche	537,823	98,124
A-084	Ferkla Oulia	Ihandar	Tine Oughan	535,481	93,027
A-085	Ferkla Oulia	Ihandar	Takdimte	536,297	93,101
A-086	Ferkla Oulia	Akdim	Akdim	534,625	93,113
A-087	Ferkla Oulia	Amatous	Amatous	539,211	84,875
A-088	Ferkla Oulia	Imdouane	Imdouane	535,476	98,005
A-089	Ferkla Oulia	Derouich	Derouich	536,887	98,416
A-090	Ferkla Oulia	Tighdouine	Tighdouine	533,506	102,184
A-091	Ferkla Oulia	Gardmit	Gardmit	534,816	102,539
A-092	Ferkla Oulia		Ait Labzou	530,903	102,400
A-093	Ferkla Oulia	ferkla Oulia	Ali Oul Mek	542,190	113,057
A-094	Ferkla Oulia	Tangarfa	Tangarfa	530,912	102,280

No.	Commune	Ksar	Khettara	Cordination	(X, Y)
G-1	G-2	N4	G-3	G-4-1	G-1
A-095	Ferkla Oulia	Ait Hammou-Tayarza	Ait Hammou-	532,019	102,527
A-096	Ferkla Oulia	Laksiba	M'hamdia	535,226	107,383
A-097	Ferkla Oulia	Laksiba	Abdel Kadri	535,376	120,988
A-098	Assoul	Assoul	Kdima Assou	515,631	146,900
A-099	Assoul	Assoul	Jdida Assou	517,180	146,933
A-100	Ait Hani	Tamtatouchte	Drain Tamta		
A-101	Ait Hani	Tamtatouchte	Tamajjal No	487,149	122,750
A-102	Ait Hani	Tamtatouchte	Aoulzi Tama	486,751	120,287
A-103	Ait Hani	Tamtatouchte	Tamda	489,545	122,039
A-104	Amellago	Imider	Drain Imide		
A-105	Amellago	Idmouma	Idmouma	551,735	160,097
A-106	Amellago	Agoudime	Agoudime	550,532	171,556
A-107	Amellago	Oje	Oje	547,517	162,727
A-108	Amellago	Tasskountite	Tasskountit	551,453	163,960
A-109	Amellago	Outalamine	Outalamine	556,264	161,831
A-110	Ait Hani	Oukhalek	Oukhalk	554,900	160,465
A-111	Ait Hani	Moukhoune	Ait Mkhoun	546,874	163,897
A-112	Tadighouste	Idelssine	Idelssene	556,518	153,671
A-113	Tadighouste	Taltafrout	Taltafroute	533,912	130,703
A-114	Gheriss Soufla	Laaouina	Laaouina	560,238	116,525
A-115	Gheriss Soufla	Bouhadachia	Bouhadachia	559,366	116,593
A-116	Gheriss Soufla	Tilouine	El Magkzen	559,124	116,801
A-117	Gheriss Soufla	El Boutahiri	El Boutahir	536,692	108,377
A-118	Gheriss Soufla	Chrif	Chrif	555,108	115,965
A-119	Gheriss Soufla	Lhaj Tahami	Lhaj Thami	554,644	116,052
A-120	Gheriss Soufla	El Arb	El Arb	554,505	115,370
A-121	Gheriss Soufla	Tiliouine	El Hassania	555,406	115,899
A-122	Gheriss Soufla	Boukharia	Boukharia	555,776	116,268
A-123	Gheriss Soufla	Rjal	Rjal	557,089	116,555
A-124	Gheriss Soufla	Khlil	Khlil	548,966	117,112
A-125	Gheriss Soufla	My Hachem	My Hachem	548,889	115,979
A-126	Aghbalou N'kerdous	Oultamayoust	Oultamayous	506,282	116,852
A-127	Aghbalou N'kerdous	Tourtite	Tourtite	498,082	116,989
A-128	Aghbalou N'kerdous	Taldounte	Taldounte	506,834	110,698
A-129	Aghbalou N'kerdous	Imider	Imider	501,511	111,780
A-130	Aghbalou N'kerdous	Iguerguit	Iguerguit	505,382	119,984
A-131	Aghbalou N'kerdous	Taourirte	Taourirte	501,795	116,360
A-132	Aghbalou N'kerdous	Ait Taghi	Ihouna	501,346	123,592
A-133	Ferkla Oulia	Tinejdad	El Ghaba	538,111	101,415
A-134	Aghbalou N'kerdous	Imider	Imider	501,653	111,525
A-135	Aghbalou N'kerdous	Oul N'Tmayouste	Oul N'tnayo	506,242	116,744
A-136	Aghbalou N'kerdous	Tadaout Nougourame	Lagar	510,826	129,847
A-137	Tinjdad		El Maghzane	534,018	101,237
B-001	Beni-Tadjit	Ait wazag	Agoummad	667,133	196,308
B-002	Beni-Tadjit	Ait wazag	Tamazouarou	667,424	196,295
B-003	Beni-Tadjit	Ait sbaa	Ait Sbaa La kdima	668,467	205,867
B-004	Beni-Tadjit	Almou chorfa	El Ain Almo chorf	676,419	193,194
B-005	Beni-Tadjit	Almou chorfa	Boussefsaf	676,435	193,031

No.	Commune	Ksar	Khettara	Cordination	(X, Y)
G-1	G-2	N4	G-3	G-4-1	G-1
B-006	Beni-Tadjit	Almou chorfa	El Majeu	676,542	193,181
B-007	Beni-Tadjit	Almou Vhorfa	El Fougania	676,057	192,537
B-008	Beni-Tadjit	Ait Yaakoub	Ait Yakoub	685,742	202,415
B-009	Beni-Tadjit	Ait Fdouli	Ait Fdouli	685,789	187,853
B-010	Beni-Tadjit	Sbaik	Roda	688,401	186,520
B-011	Beni-Tadjit	Ait Daoud Youb	Ait Daoud Y	694,012	187,870
B-012	Beni-Tadjit	Sbaik	Sbaik	689,404	187,168
B-013	Beni-Tadjit	Almou chorfa	Ait My Hach	676,515	192,484
B-014	Bouanane	Zaouit El Hajoui	Jdida	728,349	158,423
B-015	Bouanane	Zaouit El Hajoui	El Hajoui	729,949	158,380
B-016	Chouater	Tafejaret	Tafejjaret	729,949	158,380
B-017	Chouater	Chouater	Chouater	730,672	139,914
B-018	Chouater	Chouater	Douimniaa	731,995	139,797
B-019	Chouater	Chouater	El Hajoui	731,436	140,517
B-020	Talsint	Afia	Afia Ifatsan	687,521	215,261
B-021	Talsint	Talsint	Ikardass	682,694	217,985
B-022	Talsint	Talsint	Ait Boubker	686,936	213,507
B-023	Talsint	Talsint	Talhamsoust	639,195	229,393
B-024	Boumaryem	Asdad	Almou Asdad	636,455	230,447
C-001	Ouad Naam	Beni Ouziem	Beni ouziem	677,373	152,791
C-002	Ouad Naam	Oulad Ali	Ouled Ali	676,198	152,289
C-003	Ouad Naam	Taouz	Taouz	676,955	152,688
C-004	Ouad Naam	Boudnib	Lakbira	670,849	151,015
C-005	Ouad Naam	Boudnib	Lakdima		
C-006	Ouad Naam	Boudnib	Jdida	669,832	150,733
C-007	Ouad Naam	Boudnib	Torba	666,447	151,590
C-008	Ouad Naam	Boudnib	Lahcen	668,541	151,570
D-001	Fezna	Oulad Jallal	Alouiya	589,277	104,340
D-002	Fezna	Oulad Jallal	Jarbouiya	589,351	106,143
D-003	Fezna	Oulad Jallal	Jdida	589,121	106,153
D-004	Fezna	Ksiba	Zamitia	589,271	104,168
D-005	Fezna	Ksiba	El Asria	589,256	104,091
D-006	Fezna	Glifat	Charkia	589,079	103,778
D-007	Fezna	Glifat	Bahamouya	589,757	102,657
D-008	Fezna	Glifat	Yahyaouiya	588,790	103,979
D-009	Fezna	Glifat	Sadguia	588,726	99,262
D-010	Fezna	Glifat	El Maatlaou	589,285	103,774
D-011	Fezna	Laachouria	El Omaria	592,504	102,377
D-012	Fezna	Laachouria	Zarguia	592,846	102,192
D-013	Fezna	Laachouria	Lagdima	592,846	102,192
D-014	Fezna	Laachouria	Jdida	592,347	102,258
D-015	Fezna	Laachouria	El Mahdia	592,464	103,254
D-016	Fezna	Ksar Glifat	Hamria	588,141	104,487
D-017	Fezna	Ouelad Jlala	Suiguia	590,497	105,137
D-018	Fezna	Glifate	Ghannamia	588,711	102,804
D-019	Fezna	Glifate	Diabia	591,058	102,397
D-020	Fezna	Ouelad Jalal	Lbida	588,663	104,313
D-021	Fezna	Glifate	Jdida	588,160	102,393

No.	Commune	Ksar	Khettara	Cordination	(X, Y)
G-1	G-2	N4	G-3	G-4-1	G-1
D-022	Jorf	Lhayen	Baghdadia	592,318	101,426
D-023	Jorf	Lhayen	Boushabia	593,788	101,945
D-024	Jorf	Oulad Brika	Brikia	593,990	100,715
D-025	Jorf	Oulad Brika	Zarguia	593,320	100,928
D-026	Jorf	Taraa	Smailia	592,994	101,932
D-027	Jorf	Taraa	Idrissia	592,272	101,217
D-028	Jorf	Taraa	Mkadmia	594,120	101,693
D-029	Jorf	Taraa	Bhihia	594,112	101,696
D-030	Jorf	Taraa	Louaria	594,124	101,884
D-031	Jorf	Taraa	Lakbira	594,129	101,366
D-032	Jorf	Taraa	Zanouhia	594,675	100,817
D-033	Jorf	Taraa	Souihla	595,149	100,369
D-034	Jorf	Oulad Ghanem	Souihla	594,712	100,272
D-035	Jorf	Oulad Ghanem	Aissaouia	594,655	100,186
D-036	Jorf	Oulad Ghanem	Saidia	594,544	100,194
D-037	Jorf	Oulad Ghanem	Kdima	594,137	100,236
D-038	Jorf	Oulad Ghanem	Jdida	594,439	99,577
D-039	Jorf	Oulad Ghanem	Sadguia	594,131	100,251
D-040	Jorf	Oulad Ghanem	Karmia	593,682	99,459
D-041	Jorf	Oulad Aissa	El Aissaoui	594,347	100,337
D-042	Jorf	Mounkara	Lambarkia	594,843	98,672
D-043	Jorf	Oueld Ghanem	Djajia	594,198	100,197
D-044	Jorf	Oled Mbark	Lambarkia	594,959	100,346
D-045	Jorf	Oulad Ghanem	El ghanmia	592,771	100,661
D-046	Jorf	Mounkara	Rozia	595,309	98,873
D-047	Jorf	Mounkara	Lahloua	594,927	98,725
D-048	Jorf	Oulad Ghanem	Lazizia	593,353	99,086
D-049	Jorf	Mounkara	Namoussia	594,939	98,605
D-050	Jorf	Jorf	Matmouria	592,967	101,389
D-051	Jorf	Jorf	Souihla	602,842	91,109
D-052	A.S.Gheris	El Bouya	Melha	598,505	96,545
D-053	A.S.Gheris	El Bouya	Kdima Bouya	599,243	114,048
D-054	A.S.Gheris	El Bouya	Jdida Bouya	599,370	95,660
D-055	A.S.Gheris	Krair	Kdima Krair	601,898	91,974
D-056	A.S.Gheris	Krair	Jdida Krair	600,727	94,627
D-057	A.S.Gheris	El Bouya/Krair	Bahmania	599,270	95,080
D-058	A.S.Gheris	Hannabou	Khtitira	601,327	93,281
D-059	A.S.Gheris	Hannabou	Sayed	601,631	93,003
D-060	A.S.Gheris	Hannabou	Fougania	601,208	93,024
D-061	A.S.Gheris	Hannabou	Oustania	601,430	92,560
D-062	A.S.Gheris	Krair	Kdima	601,765	92,262
D-063	A.S.Gheris	Krair	Lamdinia	600,964	92,849
D-064	A.S.Gheris	Hannabou	Lagrinia	601,758	91,908
D-065	A.S.Gheris	Hannabou	Laalouia	602,123	91,379
D-066	A.S.Gheris	Hannabou	Mostafia	602,678	89,595
D-067	A.S.Gheris	Hannabou	El Omaria	603,320	89,303
D-068	A.S.Gheris	Hannabou	Ben Abedell	602,281	90,922
D-069	A.S.Gheris		Kdima		

No.	Commune	Ksar	Khettara	Cordination	(X, Y)
G-1	G-2	N4	G-3	G-4-1	G-1
E-001	A.S. Ziz	Bahadi	El Ghanamia	603,293	87,922
E-002	Sifa	Ksour Sifa	El Bour	603,288	86,841
E-003	Sifa	Ksour Sifa	El Bouria	602,225	88,508
E-004	Sifa	Ksour Sifa	Laagaya	603,333	84,762
E-005	Sifa	Ksour Sifa	Jdida Bel H	602,610	85,171
E-006	Sifa	Ksour Sifa	Laagilia La	603,441	83,331
E-007	Sifa	Ksour Sifa	Ramlia	603,226	84,127
E-008	Sifa	Ksour Sifa	Lakdima Dou	602,048	84,290
E-009	Sifa	Ksour Sifa	Lihoudia	601,845	84,978
E-010	Sifa	Ksour Sifa	Laglaglia	600,509	84,539
E-011	Sifa	Ksour Sifa	Laksibia	602,238	84,862
E-012	Sifa	Ksour Sifa	Jdida Lhaj	602,725	82,467
E-013	Sifa	Ksour Sifa	Laaguilia K	603,441	83,331
E-014	Sifa	Ksour Sifa	Haj Allal	601,463	84,888
E-015	Sifa	Ksour Sifa	Ighzer	602,545	82,034
E-016	Sifa	Ksour Sifa	Charchmia	601,273	84,837
E-017	Sifa	Ksour Sifa	Labbiria	602,356	86,973
E-018	Sifa	Ksour Sifa	Zaoiua Boub	602,411	81,118
E-019	Sifa	Ksour Sifa	Chrichmia	601,140	85,193
E-020	Sifa	Ksour Sifa	El Handouria	600,928	84,728
E-021	Sifa	Ksour Sifa	El Kidaria	600,065	84,027
E-022	Sifa	Ksour Sifa	Loulija	603,508	87,500
E-023	Sifa	Ksour Sifa	Dhiminia	600,934	84,155
E-024	Sifa	Ksour Sifa	El Bakhbakh	603,226	87,226
E-025	Sifa	Ksour Sifa	M'Harzia	600,784	84,822
F-001	Beni Mhamed Sijilmassa	Loujarcha	Loujarchia	602,410	80,434
F-002	Beni Mhamed Sijilmassa	Oulad Saidane	Saaidania	601,589	78,734
F-003	Beni Mhamed Sijilmassa	Oulad Youssef	Rchidia	610,112	77,818
F-004	Beni Mhamed Sijilmassa	Oulad Youssef	Jdida	610,220	79,100
F-005	Beni Mhamed Sijilmassa	Oulad Youssef	Lakdima	610,289	68,843
F-006	Beni Mhamed Sijilmassa	Oulad Youssef	El Hassouni	609,460	80,109
F-007	Beni Mhamed Sijilmassa	Oulad Youssef	Belghitia	609,339	79,547
F-008	Beni Mhamed Sijilmassa	Oulad Youssef	Lakbibia	609,212	81,508
F-009	Beni Mhamed Sijilmassa	Oulad Youssef	Jablia (Gha	609,277	81,326
F-010	Beni Mhamed Sijilmassa	Dar Beida	Bidaouia	611,795	78,326
F-011	Beni Mhamed Sijilmassa	Dar Beida	M'barkia	611,823	79,131
F-012	Beni Mhamed Sijilmassa	Chekarna	EL Harjia (	610,074	81,018
F-013	Beni Mhamed Sijilmassa	Chekarna	Chakronia	607,983	81,168
F-014	Beni Mhamed Sijilmassa	Dar Beido	Rchidia Dar	612,000	79,154
F-015	Beni Mhamed Sijilmassa	Sidi El ghazi	El Ghazia	606,944	84,850
F-016	Beni Mhamed Sijilmassa		Benzirgma	607,176	77,250
F-017	Beni Mhamed Sijilmassa	Mansouriya	El Kassria	607,305	80,985
F-018	Beni Mhamed Sijilmassa	Dar Beido	Mjinina	611,813	79,235
F-019	Beni Mhamed Sijilmassa	Oulad Abd El Halim	Rchidia Oue	610,214	76,072
F-020	Sfalat	Oulad Youssef	Malhia	602,928	77,423
F-021	Sfalat	Oulad Jmiaa	Jmiaa	601,232	73,524
F-022	Sfalat	Oulad Jmiaa	Gaouzia	602,517	66,452
F-023	Rissani	Magtaa Sfa	Maktaa Sfa	599,790	66,381

No.	Commune	Ksar	Khettara	Cordination	(X, Y)
G-1	G-2	N4	G-3	G-4-1	G-1
F-024	Rissani	Haroun	Harounia	616,508	79,958
F-025	Rissani	Tagahoumte	Ibourine	586,000	71,671
F-026	Rissani	Tagahoumte	Tagaroumte	585,536	71,485
F-027	Rissani	Tagahoumte	Agouarroum	585,690	71,182
F-028	Rissani	Ouattara	Ouattara	594,981	61,263
F-029	Rissani	Mazguidia	Aassagourte	608,896	84,052
F-030	Rissani	Haroun	Tassagourte	623,790	84,907
F-031	Rissani	Harounn	N'AIT bork	623,042	84,827
F-032	Taouz	Merzouga	Talaabast	632,494	57,862
F-033	Taouz	Merzouga	Tamaright	632,873	56,866
F-034	Taouz	Merzouga	Tamazant	632,486	57,033
F-035	Taouz	Khamliya	Taboumiat	632,122	52,093
F-036	Taouz	Hasi El Biad	Hassi Labie	631,301	62,033
F-037	Taouz	Hasi El Biad	Jdida Hassi	631,453	61,758
F-038	Taouz	El Begaa	ElBagaa	644,149	40,190
F-039	Taouz	Hassi El Biad	Mhamed Ou A	631,594	61,116
F-040	M'Cissi	Lahfira	Tamaright	554,523	26,610
F-041	Sidi Ali	Ramlia	Ramlia Alt	593,430	11,411
F-042	Sidi Ali	Ramlia	Ramlia Alt	594,096	10,850
F-043	Sidi Ali	Tamasinte	Tamassinte	546,829	-2,672
F-044	Sidi Ali		Tint Rajdal	548,108	8,767
G-001	M'Cissi	M'Cissi	M'Cissi	554,010	69,727
G-002	M'Cissi	Lalla Mimouna	Lalla Mimou	554,567	72,943
G-003	M'Cissi	Bouadil	Bouadil	554,485	81,568
G-004	M'Cissi	Azag	Azag	552,260	71,643
G-005	M'Cissi	Tazoulaite	Tazoulaite	552,646	77,372
G-006	M'Cissi	Boudib	Boudib Kdim	549,859	52,580
G-007	M'Cissi	Boudib	Boudib Jdid	548,965	51,747
G-008	M'Cissi	Fezzou	AitOumwacef	547,754	39,827
G-009	M'Cissi	Fezzou	Aitlchou	547,583	41,053
G-010	M'Cissi	Tamarna	Tamarna	583,889	72,762
G-011	M'Cissi	Lahfira	Lahfira	554,523	26,613
G-012	Alnif	Tazoulaite	Kdima	551,071	56,351
G-013	Alnif	Taghroute	Taghroute	549,673	70,900
G-014	Alnif	Taghroute	Agoumad	549,512	70,723
G-015	Alnif	Alnif	Alnif	521,311	59,203
G-016	Alnif	Alnif	lmzilene	521,447	57,537
G-017	Alnif	Ait Lahbib	Ait Lahbib	519,889	59,937
G-018	Alnif	Tizi	Tizi Lakdim	518,354	61,625
G-019	Alnif	Tizi	Tizi Lajiar	518,214	62,811
G-020	Alnif	Ammar	Kdima Ammar	516,930	65,467
G-021	Alnif	Ammar	Jdida Ammar	516,930	65,467
G-022	Alnif	Azrag	Azrag	521,631	70,525
G-023	Alnif	Achbarou	Achbarou	545,338	58,279
G-024	Alnif	Achbarou	Lahri	530,023	58,434
G-025	Alnif	Achbarou	Ighil	529,854	61,684
G-026	Alnif	Achbarou	Simmou	529,854	61,684
G-027	Alnif	Achbarou	Tifarouin	527,285	60,327

No.	Commune	Ksar	Khettara	Cordination	(X, Y)
G-1	G-2	N4	G-3	G-4-1	G-1
G-028	Alnif	Achbarou	Jatoulte	527,500	61,125
G-029	Alnif	Toughza	Tanout	530,913	56,696
G-030	Alnif	Toughza	Assif	530,898	61,499
G-031	Alnif	Toughza	Bouichichao	532,120	49,195
G-032	Alnif	Tabouregt	Ahadjmi	533,836	54,749
G-033	Alnif	Tabouregt	Lakdima	534,323	56,427
G-034	Alnif	Taallalte	Taallalte	536,014	55,777
G-035	Alnif	Ait Zegane	Outadghate	539,403	57,786
G-036	Alnif	Tajouhrate	Jdida	551,071	56,351
G-037	Alnif	Ait Ben Said	Ait Ben Sai	537,561	61,115
G-038	Alnif	Mimarighene	Mimasighene	542,128	56,420
G-039	Alnif	Amgane	Amagane	546,450	57,450
G-040	Alnif	Amgane	Oufesfoul	546,862	57,827
G-041	Alnif	Ait Hammou	Ait Hammou	533,423	57,043
G-042	Alnif	Taghouchte	Taghouchte	532,178	66,321
G-043	Alnif	Azakour	Sghira	533,523	59,369
G-044	Alnif	Azakour	Lakbira	531,359	60,795
G-045	Alnif	Azakour	Taourirte	522,291	58,420
G-046	Alnif	Tanout	Tanout Noum	516,187	56,741
G-047	Alnif	Taguelgout	Taguelgoult	519,603	58,799
G-048	Alnif	Jorf	Jorf	518,606	63,267
G-049	Alnif	Ait Serroud	Lakdima	534,091	58,546
G-050	Alnif	Ait Serroud	Hada Ouyidi	536,245	57,962
G-051	Alnif	Maghnia	Maghnia	541,540	58,266
G-052	Alnif	lminouzrou	lminouzrou	509,609	55,088
G-053	Alnif	Tigarna	Tiguirna	512,892	50,199
G-054	Alnif	Tajouhrate	Taichoute	511,709	45,345
G-055	Alnif	Tinififte	Tinififte	524,296	72,182
G-056	Alnif	Afrou-AdLghazi	Afrou	531,593	68,725
G-057	Alnif	Talghazite	Talghazite	529,213	69,750
G-058	Alnif	Talghazite	Tihammate	529,978	69,810
G-059	Alnif	Taoumart	Lakbira	532,144	67,809
G-060	Alnif	Taoumart	Jdida Taoumart	532,403	68,250
G-061	Alnif	Taoumart	Afrou	532,029	68,317
G-062	Alnif	Toufassamame	Tassamamte	541,753	77,545
G-063	Alnif	Toufassamame	Toufassamam	542,271	75,764
G-064	Alnif	Timarzit	Timarzite	541,209	67,158
G-065	Alnif	Tajouhrate	Tajouhart	542,331	67,887
G-066	Alnif	Wouihlane	Ouihlane	543,674	64,837
G-067	Alnif	Wouihlane	Ait Mouhou	543,674	64,837
G-068	Alnif	Tamarghoute	Tamarghoute	536,779	64,704
G-069	Alnif	Tachoufite	Tachoufite	543,391	58,554
G-070	Alnif	Azag	Takacha	500,872	32,966
G-071	Hsia	Ait Iaazza	Tighourdine	500,872	32,966
G-072	Hsia	Ait Iaazza	Tizi	502,182	33,450
G-073	Hsia	Ait Iaazza	Bouamene	502,125	35,920
G-074	Hsia	Ait Iaazza	Boulamdoud	504,097	34,217
G-075	Hsia	Ait Iaazza	Agoumad	503,693	33,891

No.	Commune	Ksar	Khettara	Cordination	(X, Y)
G-1	G-2	N4	G-3	G-4-1	G-1
G-076	Hsia	Ait Iaazza	Talilit	503,130	34,081
G-077	Hsia	Ait Iaazza	Izougaghine	502,569	36,235
G-078	Hsia	Ait Iaazza	Tamlalt	502,808	35,227
G-079	Hsia	Ait Iaazza	Mimarighene	502,702	34,026
G-080	Hsia	Tissamoumine	Tissamoumin	522,825	814
G-081	Hsia	Amejrane	Daou Mejran	531,272	6,318
G-082	Hsia	Amejrane	Adane	521,318	6,218
G-083	Hsia	Takacha	Takacha	520,418	7,122
G-084	Hsia	El Facht	El Facht	525,047	16,245
G-085	Hsia	Khing	Khing	508,786	25,766
G-086	Hsia	Afrou	Afrou	513,526	20,937
G-087	Hsia	Aachich	Aachich	510,150	33,676
G-088	Hsia	Aachich	Tabernoucht	507,543	39,147
G-089	Hsia	Aachich	Fouk Talita	510,867	32,023
G-090	Hsia	El Hazbane	El Hazbane	514,734	26,574
G-091	Hsia	Tazegzoute	Tazagzaout	513,437	30,026
G-092	Hsia	Agoudim	Agoudim	512,789	29,449
G-093	Hsia	Ait Saadane	Ait Saadane	509,352	28,629
G-094	Hsia	Battou	Battou	509,346	40,833
G-095	Hsia	Battou	Khtart Batt	510,171	38,973
G-096	Hsia	Tarichte	Tarichte	515,787	21,479
G-097	Hsia	Tifaghsite	Tifakhsite	523,365	6,032
G-098	Hsia	Hsia	Ait Said Ou	516,310	28,114
G-099	Hsia	Hsia	Tizi Niziar	523,398	34,891
G-100	Hsia	Ouabrinouch	Ouabrinouch	507,566	39,133
G-101	Hsia	Anoun Ou Sardoune	Anoun Ou Sa	523,398	34,891
G-102	Hsia	Tiouardine	Tiouardine	524,362	32,943
G-103	Hsia	Izagarne	Izagarne	502,301	36,239

1. Khettara Number A-001 MP (G-1)	2. Name of commune Mellaab (G-2)			
(8-1)				
3. Name of khettara Taoutoutout (G-3)	4. Location of khettara $X = 550626.75$ (G-4-1) Y = 99699.79 (G-4-2)			
5. Number of families who 15 (G-5-2) familie have khettara water right	9. Histry of discharge			
6. Number of beneficialies 15 (G-6-2) familie	of khettara			
7. Cycle of kehttara water right 9 (G-7-1) days				
8.Discharge of khettara (latest) 1 (G-8) lit/sec	(I-10)			
10. History of khettara water flow 6 (I-9)	-			
(2)No water in the last two-decade(6)The khe(3)No water in the last decadeyear in(4)No water in the past five years(7)The disc	er in the dry season in the past five years ttara has water flow, but the discharge of khettara is reduced each the recent five years. charge of the khettara is constant charge of the khettara is increased			
11. Total area of farmland [14] ha (IA-1)	12. Irrigated area by the khettara Oha (IA-3)			
13. The condition of roads 2 appropriate (1) (G-15) not appropriate (2)	14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)			
15.Sanitary service 2 appropriate (1) (G-17) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)			
17. Existence of Association 1 Yes (1 (G-21) No (2)				
18. Situation of khettara Length (m)	Section of khettara (average) hight(m) width (m)			
Gallery of khettara (Gallery in catchment area and conduit140 (E-1-1 370 (E-1-1				
Khettara as open channel 190 (E-2-1				
Principal and secondary600 (E-4-2irrigation canal0 (E-4-2				
19. Rehabilitation Rehabilitation length of 510 (M-7)	(m) Rehabilitation length of principal 190 (m) irrigation canal (M-8)			
20. Influence of desertification				
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification (3)Negligible damage by desertification	uit <u>3</u> (I-2) Irrigation canals (I-7)			
21.Demandes of habitants (water resources)	Yes (1), No (2)			
Rehabilitation of khettara1(G-19-1)Protection dike against flood2(G-19-4)Installing pump2(G-19-2)Construction of public wells for domestic water2(G-19-5)Rehabilitation of irrigation canal1(G-19-3)Others2(G-19-6)				
22.Demandes of habitants (Aglicultual and social supp				
	School         2         (G-20-4)           product , etc.)         2         (G-20-1)         Sanitary system         2         (G-20-5)           ation of roads         1         (G-20-2)         Hospital         1         (G-20-6)           lectric supply         1         (G-20-3)         Others         2         (G-20-7)			
23. Importance of khettara 4 (G-23) (1) Unique source for both of potable water and irrigation (2) Unique source for irrigation (3) Main source for irrigation (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected				
24. Possibility of extension of khettara 2 Yes (1), No (2) If no, the reason 3 (G-24) (G-25)	<ul><li>(1)Constrains in landscape</li><li>(2)Prohibited by law</li><li>(3)Existence of other khettaras</li><li>(4)Others</li></ul>			

1. Khettara Number A-002 M (G-1)	Ρ	2. Name of commune Mellaab (G-2)
3. Name of khettara		4. Location of khettara $X = 563358.73$ (G-4-1) Y = 94570.42 (G-4-2)
5. Number of families who 15 (G-5-)	2) families	9. Histry of discharge
6. Number of beneficialies 20 (G-6-	2) families	of khettara
7. Cycle of kehttara water right 6 (G-7-	,	
8.Discharge of khettara (latest) 0 (G-8)	lit/sec	(I-10)
10. History of khettara water flow 5	(I-9)	
(2)No water in the last two-decade ( (3)No water in the last decade (4)No water in the past five years (	6)The khettar year in the 7)The discha	n the dry season in the past five years ra has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased
11. Total area of farmland [10] h (IA-1)	a	12. Irrigated area by the khettara Oha (IA-3)
13. The condition of roads 2 appropria (G-15) not appro-	ate (1) opriate (2)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 appropria (G-17) not appro	ate (1) opriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association 2 (G-21	Yes (1), ) No (2)	If yes, Name of G-22
18. Situation of khettara Le	ngth (m)	Section of khettara (average) hight(m) width (m)
	0 (E-1-1-1)	
	0 (E-1-1-2) 0 (E-2-1)	······································
		0.7 (E-2-2) 0.7 (E-2-3) ) 0.4 (E-4-3-1) 0.5 (E-4-1-1)
	0 (E-4-2-1 0 (E-4-2-2	
19. Rehabilitation Rehabilitation length of khettara	700 ( (M-7)	m) Rehabilitation length of principal 0 (m) irrigation canal (M-8)
20. Influence of desertification		
(1)Significant damage by desertification (2)Partial damage by desertification (2)Negligible damage by desertification	in catchme of conduit nannel khe	3 (I-2) Irrigation canals 3 (I-7)
21.Demandes of habitants (water resources)		Yes (1), No (2)
Installing pump 1 (G-	19-1) 19-2) Cor 19-3)	Protection dike against flood 1 (G-19-4) nstruction of public wells for domestic water (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual and soc	ial support	
Agriculture (storage,production, transpor	ttion of proc Rehabilitation	School 1 (G-20-4)
<ul><li>(1) Unique source for both of potable wate</li><li>(2) Unique source for irrigiton</li><li>(3) Main source for irrigation</li></ul>	6-23)	
		(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others

1. Khettara Number A-003 MP	2. Name of commune Mellaab (G-2)
(G-1)	
3. Name of khettara Ait Oulhou (G-3)	4. Location of khettara $X = 556178.73$ (G-4-1) Y = 95349.6 (G-4-2)
5. Number of families who [12] (G-5-2) famil have khettara water right	9. Histry of discharge
6. Number of beneficialies 15 (G-6-2) famil	of khettara
7. Cycle of kehttara water right 5 (G-7-1) day	S
8.Discharge of khettara (latest) 0 (G-8) lit/se	ec (I-10)
10. History of khettara water flow 6 (I-9)	)
(2)No water in the last two-decade(6)The kh(3)No water in the last decadeyear ir(4)No water in the past five years(7)The dis	ater in the dry season in the past five years nettara has water flow, but the discharge of khettara is reduced each in the recent five years. scharge of the khettara is constant scharge of the khettara is increased
11. Total area of farmland 4 ha (IA-1)	12. Irrigated area by the khettara Oha (IA-3)
13. The condition of roads 2 appropriate (1) (G-15) not appropriate (2)	2) 14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 appropriate (1) (G-17) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association (G-21) No (2	
18. Situation of khettara Length (m	n) Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit150 (E-1- 300 (E-1-	1-1) <u>4.5</u> (E-1-4-1) <u>0.8</u> (E-1-5-1)
Khettara as open channel 300 (E-2-	
Principal and secondary400 (E-4-irrigation canal0 (E-4-	
19. Rehabilitation Rehabilitation length of [75] khettara (M-7)	00 (m) Rehabilitation length of principal 0 (m) irrigation canal (M-8)
20. Influence of desertification	
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification Open channel	duit <u>3</u> (I-2) Irrigation canals <u>3</u> (I-7)
21.Demandes of habitants (water resources )	Yes (1), No (2)
Rehabilitation of khettara 1 (G-19-1) Installing pump 1 (G-19-2) Rehabilitation of irrigation canal 1 (G-19-3)	Protection dike against flood 2 (G-19-4) Construction of public wells for domestic water (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual and social sup	
	School         1         (G-20-4)           product , etc.)         2         (G-20-1)         Sanitary system         2         (G-20-5)           tation of roads         1         (G-20-2)         Hospital         1         (G-20-6)           Electric supply         1         (G-20-3)         Others         2         (G-20-7)
23. Importance of khettara 3 (G-23) (1) Unique source for both of potable water and irr (2) Unique source for irrigition (3) Main source for irrigation	
24. Possibility of extension of khettara 1 Yes (1), No (2) If no, the reason (G-24) (G-25)	(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others

1. Khettara Number A-004 (G-1)	MP	2. Name of commune Mellaab (G-2)
(0-1)		
3. Name of khettara Toufagi (G-3)	nanta	4. Location of khettara $X = 556552.16$ (G-4-1) Y = 93306.42 (G-4-2)
5. Number of families who 1 have khettara water right	1 (G-5-2) families	9. Histry of discharge
6. Number of beneficialies 1	1 (G-6-2) families	of khettara
7. Cycle of kehttara water right 7.	5 (G-7-1) days	
8.Discharge of khettara (latest)	0 (G-8) lit/sec	(I-10)
10. History of khettara water flow 5	(I-9)	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The dischar	n the dry season in the past five years a has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased
11. Total area of farmland [](IA	5 ha -1)	12. Irrigated area by the khettara Oha (IA-3)
13. The condition of roads 2 (G-15)	appropriate (1) not appropriate (2)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 (G-17)	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association	1 Yes (1), (G-21) No (2)	If yes, Name of ABRID Association (G-22)
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit	100 (E-1-1-1) 0 (E-1-1-2)	
Khettara as open channel	250 (E-2-1)	1.5 (E-2-2) 0.8 (E-2-3)
Principal and secondary irrigation canal	500 (E-4-2-1) 0 (E-4-2-2)	
19. Rehabilitation Rehabilitation leng khettara	th of <u>350</u> ( (M-7)	m) Rehabilitation length of principal 0 (m) irrigation canal (M-8)
20. Influence of desertification		
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	2 (I-2) Irrigation canals 3 (I-7)
21.Demandes of habitants (water reso	urces)	Yes (1), No (2)
Rehabilitation of khettara 1 Installing pump 1 Rehabilitation of irrigation canal 2	(G-19-1) (G-19-2) Cor (G-19-3)	Protection dike against flood 1 (G-19-4) nstruction of public wells for domestic water 0 (G-19-5) Others 1 (G-19-6)
22.Demandes of habitants (Aglicultual	and social support	
Agriculture (storage,production,	Rehabilitation	
23. Importance of khettara 3 (1) Unique source for both of pot (2) Unique source for irrigition (3) Main source for irrigation		on (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettara 1 Yes (1), No (2) If no, the (G-24)	reason	(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others

1. Khettara Number A-005 MP (G-1)	2. Name of commune Mellaab (G-2)
3. Name of khettara Akkerouz (G-3)	4. Location of khettara $X = 549332.78$ (G-4-1) Y = 98220.93 (G-4-2)
5. Number of families who 19 (G-5-2) families have khettara water right	9. Histry of discharge 1997: 13litter/sec
6. Number of beneficialies 19 (G-6-2) families	of khettara
7. Cycle of kehttara water right 7 (G-7-1) days	1
8.Discharge of khettara (latest) 1.5 (G-8) lit/sec	(I-10)
10. History of khettara water flow 6 (I-9)	
(2)No water in the last two-decade(6)The khetta(3)No water in the last decadeyear in the(4)No water in the past five years(7)The disch	in the dry season in the past five years ara has water flow, but the discharge of khettara is reduced each e recent five years. arge of the khettara is constant arge of the khettara is increased
11. Total area of farmland 10 ha (IA-1)	12. Irrigated area by the khettara [1]ha (IA-3)
13. The condition of roads 2 appropriate (1) (G-15) not appropriate (2)	14. The condition of schools     1     appropriate (1)       (G-16)     not appropriate (2)
15.Sanitary service 2 appropriate (1) (G-17) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association 1 Yes (1), (G-21) No (2)	If yes, Name of AFROU Association (G-22)
18. Situation of khettara Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in 120 (E-1-1-	
catchment area and conduit 260 (E-1-1-2	
Khettara as open channel 250 (E-2-1)	0.2 (E-2-2) 0.4 (E-2-3)
Principal and secondary 1100 (E-4-2-	
irrigation canal (E-4-2-2	
19. Rehabilitation Rehabilitation length of 630 khettara (M-7)	
20. Influence of desertification	
(1)Significant damage by desertification Gallery in catchm	ent area 3 (I-1) Regulation pond 3 (I-5)
(1) Significant damage by desertification (2) Partial damage by desertification (3) Negligible damage by desertification Open channel kh	
21.Demandes of habitants (water resources )	Yes (1), No (2)
Rehabilitation of khettara 1 (G-19-1)	Protection dike against flood 1 (G-19-4)
Installing pump 2 (G-19-2) Co Rehabilitation of irrigation canal 2 (G-19-3)	onstruction of public wells for domestic water 1 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual and social support	
	on of roads 1 (G-20-2) Hospital 1 (G-20-6)
	ctric supply 2 (G-20-3) Others 2 (G-20-7)
<ul> <li>23. Importance of khettara</li> <li>(1) Unique source for both of potable water and irrigation</li> <li>(2) Unique source for irrigation</li> <li>(3) Main source for irrigation</li> </ul>	tion (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettara	
1 Yes (1), No (2) If no, the reason (G-25)	<ul><li>(1)Constrains in landscape</li><li>(2)Prohibited by law</li><li>(3)Existence of other khettaras</li><li>(4)Others</li></ul>

1. Khettara Number A-006 MP (G-1)	2	. Name of commune	Mellaab (G-2)
		. Location of khettara	
3. Name of khettara (G-3)	4	Location of knettara	X = <u>561274.45</u> (G-4-1) Y = <u>91661.85</u> (G-4-2)
5. Number of families who 65 (G-5-2) fa		. Histry of discharge	0
6. Number of beneficialies 80 (G-6-2) fa	amilies O	f khettara	
7. Cycle of kehttara water right [[] 8 (G-7-1)	days		
8.Discharge of khettara (latest) 0 (G-8) lit	/sec	(I-10)	
10. History of khettara water flow	I-9)		
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> <li>(5) No water in the dry season in the past five years</li> <li>(6)The khettara has water flow, but the discharge of khettara is reduced each year in the recent five years.</li> <li>(7)The discharge of the khettara is constant</li> <li>(8)The discharge of the khettara is increased</li> </ul>			
11. Total area of farmland [26] ha (IA-1)	1:	2. Irrigated area by the	khettara 0 <sub>ha</sub> (IA-3)
13. The condition of roads (G-15) (G-15) (G-15)		14.The condition of sch	
15.Sanitary service 2 appropriate (1) (G-17) not appropriate		16.Facility of electricity telecomunication	and 2 appropriate (1) (G-18) not appropriate (2)
		If yes, Name of Association	(G-22)
18. Situation of khettara Length	ı (m)	Sectio hight(m)	n of khettara (average) width (m)
Gallery of khettara (Gallery in 250 (E catchment area and conduit 300 (E	,	0 (E-1-4	, , , , , , , , , , , , , , , , , , , ,
catchment area and conduit     300 (E       Khettara as open channel     350 (E		0 (E-1-4 0 (E-2-2	
Principal and secondary [1000] (E	-4-2-1)		
	-4-2-2)	0 (E-4-3	
19. Rehabilitation Rehabilitation length of khettara (M-	(m)	n) Rehabilitation le irrigation canal	ength of principal (m) (M-8)
20. Influence of desertification			
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification Open chann	onduit	(I-2) In	egulation pond (I-5) rigation canals (I-7)
21.Demandes of habitants (water resources)		Yes (1), No (2)	
Rehabilitation of khettara (G-19-1)			ke against flood(G-19-4)
Installing pump (G-19-2) Rehabilitation of irrigation canal (G-19-3)		struction of public wells for	domestic water (G-19-5) Others (G-19-6)
22.Demandes of habitants (Aglicultual and social s	upport)	Yes (1), No (2)	
Agriculture (storage,production, transporttion Rehal	bilitation of	of roads (G-20-2)	School (G-20-4) Sanitary system (G-20-5) Hospital (G-20-6)
	Electric	c supply (G-20-3)	Others (G-20-7)
23. Importance of khettara (G-23) (1) Unique source for both of potable water and (2) Unique source for irrigition (3) Main source for irrigation	,	n (4) Partial source for (5) Supplementary so (6) Neglected	
24. Possibility of extension of khettara Yes (1), No (2) If no, the reason	(1)	)Constrains in landscape	(3)Existence of other khettaras
(G-24) (G-25)		)Prohibited by law	(4)Others

1. Khettara Number A-007 (G-1)	MP	2. Name of commune Mellaab (G-2)
· · · · · · · · · · · · · · · · · · ·		
3. Name of khettara Tighrar (G-3)	nt	4. Location of khettara $X = 556830.83$ (G-4-1) Y = 96302.03 (G-4-2)
5. Number of families who 2 have khettara water right	0 (G-5-2) families	9. Histry of discharge
6. Number of beneficialies 2	0 (G-6-2) families	of khettara
7. Cycle of kehttara water right	6 (G-7-1) days	
8.Discharge of khettara (latest)	0 (G-8) lit/sec	(I-10)
10. History of khettara water flow 5	(I-9)	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The dischar	n the dry season in the past five years ra has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased
11. Total area of farmland [] (IA	17.5 ha -1)	12. Irrigated area by the khettara [12.5]ha (IA-3)
13. The condition of roads [2 (G-15)	appropriate (1) not appropriate (2)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 (G-17)	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association	1 Yes (1), (G-21) No (2)	If yes, Name of ABRID Association (G-22)
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit	400 (E-1-1-1) 400 (E-1-1-2)	) <u>1</u> (E-1-4-1) <u>0.6</u> (E-1-5-1)
Khettara as open channel	0 (E-2-1)	0 (E-2-2) 0 (E-2-3)
Principal and secondary irrigation canal	1000 (E-4-2-1) 0 (E-4-2-2)	
19. Rehabilitation Rehabilitation leng	gth of (M-7)	m) Rehabilitation length of principal (m) irrigation canal (M-8)
20. Influence of desertification		
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	(I-2) Irrigation canals <u>3</u> (I-7)
21.Demandes of habitants (water reso	urces)	Yes (1), No (2)
Rehabilitation of khettara 1 Installing pump 2 Rehabilitation of irrigation canal 1	(G-19-1) (G-19-2) Cor (G-19-3)	Protection dike against flood 1 (G-19-4) nstruction of public wells for domestic water (G-19-5) Others (G-19-6)
22.Demandes of habitants (Aglicultual	and social support	) Yes (1), No (2)
Agriculture (storage,production,	transporttion of proc Rehabilitation	School         1         (G-20-4)           duct , etc.)         (G-20-1)         Sanitary system         1         (G-20-5)           n of roads         1         (G-20-2)         Hospital         1         (G-20-6)
23. Importance of khettara 3	(G-23)	tric supply 1 (G-20-3) Others (G-20-7)
(1) Unique source for both of po (2) Unique source for irrigtion (3) Main source for irrigation	table water and irrigation	on (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettara 1 Yes (1), No (2) If no, the (G-24)	reason	(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others

1. Khettara Number A-008 MP (G-1)	2. Name of commune Mellaab (G-2)
3. Name of khettara Ighrane (G-3)	4. Location of khettara $X = 559539.51$ (G-4-1) Y = 104298.74 (G-4-2)
5. Number of families who 183 (G-5-2) families have khettara water right	9. Histry of discharge
6. Number of beneficialies 213 (G-6-2) families	of khettara
7. Cycle of kehttara water right 12 (G-7-1) days	
8.Discharge of khettara (latest) 6.42 (G-8) lit/sec	(I-10)
10. History of khettara water flow6-7(I-9)	
(2)No water in the last two-decade(6)The khetta(3)No water in the last decadeyear in the(4)No water in the past five years(7)The disch	in the dry season in the past five years ara has water flow, but the discharge of khettara is reduced each e recent five years. arge of the khettara is constant arge of the khettara is increased
11. Total area of farmland 200 ha (IA-1)	12. Irrigated area by the khettara [20]ha (IA-3)
13. The condition of roads 2 appropriate (1) (G-15) not appropriate (2)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 appropriate (1) (G-17) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association 2 Yes (1), (G-21) No (2)	If yes, Name of Association (G-22)
18. Situation of khettara Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in 500 (E-1-1-	1) <u>1.3</u> (E-1-4-1) <u>0.5</u> (E-1-5-1)
catchment area and conduit 120 (E-1-1-2	2) <u>1</u> (E-1-4-2) <u>0.5</u> (E-1-5-2)
Khettara as open channel 500 (E-2-1)	0.8 (E-2-2) 0.4 (E-2-3)
Principal and secondary 2055.5 (E-4-2-	1) 0.5 (E-4-3-1) 0.6 (E-4-1-1)
irrigation canal (E-4-2-2	2) (E-4-3-2) (E-4-1-2)
19. Rehabilitation Rehabilitation length of khettara (M-7)	(m) Rehabilitation length of principal (m) irrigation canal (M-8)
20. Influence of desertification	(in c)
Gallery in catchm	ent area 3 (I-1) Regulation pond 1 (I-5)
(2)Partial damage by desertification Gallery of conduit	
(3)Negligible damage by desertification Open channel kh	ettara 1 (I-3)
21.Demandes of habitants (water resources )	Yes (1), No (2)
Rehabilitation of khettara (G-19-1)	Protection dike against flood (G-19-4)
Installing pump (G-19-2) Co Rehabilitation of irrigation canal (G-19-3)	onstruction of public wells for domestic water (G-19-5) Others (G-19-6)
22.Demandes of habitants (Aglicultual and social support	
Agriculture (storage,production, transporttion of pro	School 1 (G-20-4) oduct , etc.) 1 (G-20-1) Sanitary system 1 (G-20-5)
Rehabilitati	on of roads         1         (G-20-2)         Hospital         1         (G-20-6)           ctric supply         1         (G-20-3)         Others         1         (G-20-7)
23. Importance of khettara 1 (G-23)	
<ul> <li>(1) Unique source for both of potable water and irrigation</li> <li>(2) Unique source for irrigation</li> <li>(3) Main source for irrigation</li> </ul>	tion (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettara	
1 Yes (1), No (2) If no, the reason	(1)Constrains in landscape (3)Existence of other khettaras
(G-24) (G-25)	(2)Prohibited by law (4)Others

1. Khettara Number A-009 MP (G-1)	2. Name of commune Mellaab (G-2)
(0-1)	· · · · · · · · · · · · · · · · · · ·
3. Name of khettara [kachrane (G-3)	4. Location of khettara $X = 559412.95$ (G-4-1) Y = 98559.57 (G-4-2)
5. Number of families who [G-5-2] families have khettara water right	9. Histry of discharge
6. Number of beneficialies 9 (G-6-2) families	of khettara
7. Cycle of kehttara water right 8 (G-7-1) days	_
8.Discharge of khettara (latest) 0 (G-8) lit/sec	(I-10)
10. History of khettara water flow6(I-9)	
(2)No water in the last two-decade(6)The khet(3)No water in the last decadeyear in the(4)No water in the past five years(7)The discl	r in the dry season in the past five years tara has water flow, but the discharge of khettara is reduced each ne recent five years. narge of the khettara is constant narge of the khettara is increased
11. Total area of farmland [6] ha (IA-1)	12. Irrigated area by the khettara (IA-3)
13. The condition of roads 2 appropriate (1) (G-15) not appropriate (2)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 appropriate (1) (G-17) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association 2 Yes (1) (G-21) No (2)	If yes, Name of G-22
18. Situation of khettara Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in 80 (E-1-1-	
catchment area and conduit (E-1-1-	
Khettara as open channel [140] (E-2-1)	
Principal and secondary100 (E-4-2-irrigation canal600 (E-4-2-	
· · · · · · · · · · · · · · · · · · ·	
19. Rehabilitation Rehabilitation length of khettara (M-7)	(m) Rehabilitation length of principal (m) irrigation canal (M-8)
20. Influence of desertification	
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification Open channel kt	it (I-2) Irrigation canals <u>3</u> (I-7)
21.Demandes of habitants (water resources )	Yes (1), No (2)
Rehabilitation of khettara 1 (G-19-1)	Protection dike against flood 1 (G-19-4)
	Construction of public wells for domestic water (G-19-5) Others (G-19-6)
22.Demandes of habitants (Aglicultual and social suppo	ort) Yes (1), No (2)
Agriculture (storage,production, transporttion of pr	School 1 (G-20-4) oduct , etc.) (G-20-1) Sanitary system 1 (G-20-5)
Rehabilitat	oduct , etc.)         (G-20-1)         Sanitary system         1         (G-20-5)           ion of roads         1         (G-20-2)         Hospital         1         (G-20-6)           ectric supply         1         (G-20-3)         Others         (G-20-7)
23. Importance of khettara 2 (G-23)	
<ul> <li>(1) Unique source for both of potable water and irriga</li> <li>(2) Unique source for irrigation</li> <li>(3) Main source for irrigation</li> </ul>	ation (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettara	
1 Yes (1), No (2) If no, the reason (G-24) (G-25)	<ul><li>(1)Constrains in landscape</li><li>(2)Prohibited by law</li><li>(3)Existence of other khettaras</li><li>(4)Others</li></ul>

1. Khettara Number A-010 (G-1)	MP	2. Name of commune Mellaab (G-2)
. ,		
3. Name of khettara Ouine (G-3)	Oufro	4. Location of khettara $X = 552599.15$ (G-4-1) Y = 96595.95 (G-4-2)
5. Number of families who 1 have khettara water right	0 (G-5-2) families	9. Histry of discharge <sup>0</sup>
6. Number of beneficialies	4 (G-6-2) families	of khettara
7. Cycle of kehttara water right	8 (G-7-1) days	
8.Discharge of khettara (latest) 1.5	68 (G-8) lit/sec	(I-10)
10. History of khettara water flow 6	+7 (I-9)	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The discha	n the dry season in the past five years a has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased
11. Total area of farmland	8 ha \-1)	12. Irrigated area by the khettara [1]ha (IA-3)
13. The condition of roads (G-15)	appropriate (1)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 (G-17	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association	2 Yes (1), (G-21) No (2)	If yes, Name of G-22
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in	0 (E-1-1-1)	······································
catchment area and conduit	32 (E-1-1-2)	
Khettara as open channel	(E-2-1)	0 (E-2-2) 0 (E-2-3)
Principal and secondary	500 (E-4-2-1	) 0.4 (E-4-3-1) 0.5 (E-4-1-1)
irrigation canal	0 (E-4-2-2	) 0 (E-4-3-2) 0 (E-4-1-2)
19. Rehabilitation Rehabilitation len khettara	gth of 400 ( (M-7)	m) Rehabilitation length of principal 0 (m) irrigation canal (M-8)
20. Influence of desertification		
(1)Significant damage by desertification	Gallery in catchme	nt area 3 (I-1) Regulation pond 3 (I-5)
<ul><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery of conduit Open channel khe	3(I-2)Irrigation canals3(I-7)ttara3(I-3)
21.Demandes of habitants (water reso		Yes (1), No (2)
Rehabilitation of khettara 1	(G-19-1)	Protection dike against flood 1 (G-19-4)
Installing pump 2 Rehabilitation of irrigation canal 2	(G-19-2) Cor (G-19-3)	nstruction of public wells for domestic water 1 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual	and social support	
Agriculture (storage,production	transporttion of proc Rehabilitatio	
		n of roads 1 (G-20-2) Hospital 1 (G-20-6) tric supply 1 (G-20-3) Others 2 (G-20-7)
23. Importance of khettara 1	(G-23)	
<ul><li>(1) Unique source for both of po</li><li>(2) Unique source for irrigition</li><li>(3) Main source for irrigation</li></ul>	table water and irrigation	on (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettara		(4) Constrains in landages (0) Evistance of the sheet
1 Yes (1), No (2) If no, the (G-24)		(1)Constrains in landscape(3)Existence of other khettaras(2)Prohibited by law(4)Others

1. Khettara Number A-011 (G-1)	MP	2. Name of commune Mellaab (G-2)
,		
3. Name of khettara Ouinigui (G-3)		4. Location of khettara X = <u>572091.57</u> (G-4-1) Y = <u>86710.47</u> (G-4-2)
5. Number of families who 30 (	G-5-2) <sup>families</sup>	9. Histry of discharge 0
6. Number of beneficialies 26 (	G-6-2) families	of khettara
7. Cycle of kehttara water right 7 (	G-7-1) days	
8.Discharge of khettara (latest) 3.21 (	G-8) lit/sec	(I-10)
10. History of khettara water flow 6	(I-9)	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The discha	n the dry season in the past five years ra has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased
11. Total area of farmland [IA-1]	30 ha	12. Irrigated area by the khettara [6]ha (IA-3)
	propriate (1) appropriate (2)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)
	propriate (1) appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association	2 Yes (1), G-21) No (2)	If yes, Name of G-22)
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in	80 (E-1-1-1) 224 (E-1-1-2)	) <u>1</u> (E-1-4-1) <u>0.5</u> (E-1-5-1)
Khettara as open channel	450 (E-2-1)	1 (E-2-2) 0.5 (E-2-3)
Principal and secondary	<u>316.7</u> (E-4-2-1 0 (E-4-2-2	
19. Rehabilitation Rehabilitation length khettara	of <u>754</u> ( (M-7)	m) Rehabilitation length of principal 600 (m) irrigation canal (M-8)
20. Influence of desertification		
(2)Partial damage by desertification Ga	llery in catchme llery of conduit en channel khe	(I-2) Irrigation canals <u>3</u> (I-7)
21.Demandes of habitants (water resource	es)	Yes (1), No (2)
Rehabilitation of khettara 1 Installing pump 1 Rehabilitation of irrigation canal 1	(G-19-1) (G-19-2) Cor (G-19-3)	Protection dike against flood 1 (G-19-4) nstruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual and	d social support	
Agriculture (storage,production, trar	Rehabilitatio	
23. Importance of khettara (1) Unique source for both of potable (2) Unique source for irrigition (3) Main source for irrigation	(G-23) water and irrigation	
24. Possibility of extension of khettara 1 (G-24) Yes (1), No (2) If no, the rea		(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others

1. Khettara Number A-012 MP (G-1)	2. Name of commune Mellaab (G-2)
	4. Location of khettara X = <u>571611.66</u> (G-4-1)
3. Name of khettara (G-3)	$Y = \frac{97534.34}{(G-4-2)}$
5. Number of families who 45 (G-5-2) families	9. Histry of discharge
6. Number of beneficialies 55 (G-6-2) families	of khettara
7. Cycle of kehttara water right 9 (G-7-1) days	
8.Discharge of khettara (latest) 8.87 (G-8) lit/sec	(I-10)
10. History of khettara water flow 6+8 (I-9)	
(2)No water in the last two-decade(6)The khetta(3)No water in the last decadeyear in th(4)No water in the past five years(7)The disch	in the dry season in the past five years ara has water flow, but the discharge of khettara is reduced each e recent five years. arge of the khettara is constant arge of the khettara is increased
11. Total area of farmland 360 ha (IA-1)	12. Irrigated area by the khettara [10]ha (IA-3)
13. The condition of roads 2 appropriate (1) (G-15) not appropriate (2)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 appropriate (1) (G-17) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association 1 Yes (1), (G-21) No (2)	If yes, Name of ELKHIR Association (G-22)
18. Situation of khettara Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in 340 (E-1-1-	1) 1.4 (E-1-4-1) 0.8 (E-1-5-1)
catchment area and conduit [1300 (E-1-1-2	2) <u>1.4</u> (E-1-4-2) <u>0.8</u> (E-1-5-2)
Khettara as open channel [16] (E-2-1)	0.85 (E-2-2) 0.6 (E-2-3)
Principal and secondary 6431 (E-4-2-	1) 0.2 (E-4-3-1) 0.4 (E-4-1-1)
irrigation canal (E-4-2-	2) (E-4-3-2) (E-4-1-2)
19. Rehabilitation Rehabilitation length of 1656 khettara (M-7)	(m) Rehabilitation length of principal 2924 (m) irrigation canal (M-8)
20. Influence of desertification	
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification	t <u>3</u> (I-2) Irrigation canals <u>3</u> (I-7)
21.Demandes of habitants (water resources )	ettara <u>3</u> (I-3) Yes (1), No (2)
Rehabilitation of khettara 1 (G-19-1)	Protection dike against flood 1 (G-19-4)
Installing pump 1 (G-19-2) Co Rehabilitation of irrigation canal 1 (G-19-3)	onstruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual and social support	rt) Yes (1), No (2)
	on of roads 1 (G-20-2) Hospital 1 (G-20-6)
	ctric supply 1 (G-20-3) Others 2 (G-20-7)
23. Importance of khettara (G-23) (1) Unique source for both of potable water and irriga (2) Unique source for irrigtion (3) Main source for irrigation	tion (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettara	
1 Yes (1), No (2) If no, the reason (G-25)	(1)Constrains in landscape(3)Existence of other khettaras(2)Prohibited by law(4)Others

1. Khettara Number A-013 MP (G-1)	2. Name of commune Mellaab (G-2)
	. ,
3. Name of khettara Ami Ali (G-3)	4. Location of khettara $X = 547900.09$ (G-4-1) Y = 114966.7 (G-4-2)
5. Number of families who 20 (G-5-2) families	9. Histry of discharge 1997: 3 litter/sec
6. Number of beneficialies 20 (G-6-2) families	of khettara
7. Cycle of kehttara water right 7 (G-7-1) days	1
8.Discharge of khettara (latest) 0.9 (G-8) lit/sec	(I-10)
10. History of khettara water flow 6 (I-9)	
(2)No water in the last two-decade(6)The khetta(3)No water in the last decadeyear in the(4)No water in the past five years(7)The discha	in the dry season in the past five years ara has water flow, but the discharge of khettara is reduced each a recent five years. arge of the khettara is constant arge of the khettara is increased
11. Total area of farmland [40] ha (IA-1)	12. Irrigated area by the khettara [5]ha (IA-3)
13. The condition of roads 2 appropriate (1) (G-15) not appropriate (2)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 appropriate (1) (G-17) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association 2 Yes (1), (G-21) No (2)	If yes, Name of G-22)
18. Situation of khettara Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in980 (E-1-1-1	
catchment area and conduit (E-1-1-2	
Khettara as open channel 370 (E-2-1)	0.6 (E-2-2) 1.2 (E-2-3)
Principal and secondary 450 (E-4-2-	
irrigation canal 344 (E-4-2-2	
19. Rehabilitation Rehabilitation length of 1350	· · · · · · · · · · · · · · · · · · ·
khettara (M-7)	irrigation canal (M-8)
20. Influence of desertification	
(1)Significant damage by desertification (2)Partial damage by desertification (2)Nartial damage by desertification (2)Nartial damage by desertification	
(3)Negligible damage by desertification Open channel khe	
21.Demandes of habitants (water resources )	Yes (1), No (2)
Rehabilitation of khettara 1 (G-19-1) Installing pump 1 (G-19-2) Co	Protection dike against flood 2 (G-19-4) onstruction of public wells for domestic water 2 (G-19-5)
Installing pump 1 (G-19-2) Co Rehabilitation of irrigation canal 1 (G-19-3)	$\frac{2}{(G-19-5)}$
22.Demandes of habitants (Aglicultual and social suppor	
Agriculture (storage, production, transporttion of pro	School         2         (G-20-4)           duct , etc.)         2         (G-20-1)         Sanitary system         2         (G-20-5)
Rehabilitatio	Construction         Construction<
23. Importance of khettara 3 (G-23)	
(1) Unique source for both of potable water and irrigat	ion (4) Partial source for irrigation
<ul><li>(2) Unique source for irrigition</li><li>(3) Main source for irrigation</li></ul>	<ul><li>(5) Supplementary source for irrigation</li><li>(6) Neglected</li></ul>
24. Possibility of extension of khettara 2 Yes (1), No (2) If no, the reason 3	(1)Constrains in landscape (3)Existence of other khettaras
(G-24) (G-25)	(2)Prohibited by law (4)Others

1. Khettara Number A-014 MP (G-1)	2. Name of commune Mellaab (G-2)
3. Name of khettara (G-3)	4. Location of khettara $X = 546075.52$ (G-4-1) Y = 113436.5 (G-4-2)
5. Number of families who 34 (G-5-2) families	9. Histry of discharge 1997 6 litter/sec
6. Number of beneficialies 34 (G-6-2) families	of khettara
7. Cycle of kehttara water right 9 (G-7-1) days	]
8.Discharge of khettara (latest) 2.73 (G-8) lit/sec	(I-10)
10. History of khettara water flow 6 (I-9)	
(2)No water in the last two-decade(6)The khetta(3)No water in the last decadeyear in the(4)No water in the past five years(7)The disch	in the dry season in the past five years ara has water flow, but the discharge of khettara is reduced each e recent five years. arge of the khettara is constant arge of the khettara is increased
11. Total area of farmland 30 ha (IA-1)	12. Irrigated area by the khettara 2ha (IA-3)
13. The condition of roads 2 appropriate (1) (G-15) not appropriate (2)	14.The condition of schools     2     appropriate (1)       (G-16)     not appropriate (2)
15.Sanitary service 2 appropriate (1) (G-17) not appropriate (2)	16.Facility of electricity and telecomunication1 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association 2 Yes (1), (G-21) No (2)	If yes, Name of G-22)
18. Situation of khettara Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in 400 (E-1-1-	
catchment area and conduit 520 (E-1-1-2	
Khettara as open channel 470 (E-2-1)	0.6 (E-2-2) 0.4 (E-2-3)
Principal and secondary 1678.3 (E-4-2-	
irrigation canal (E-4-2-2	
19. Rehabilitation Rehabilitation length of 1390	
khettara (M-7)	irrigation canal (M-8)
20. Influence of desertification	
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification	[2] (I-2) Irrigation canals [3] (I-7)
21.Demandes of habitants (water resources )	ettara [2] (I-3) Yes (1), No (2)
Rehabilitation of khettara 1 (G-19-1)	Protection dike against flood 2 (G-19-4)
	onstruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual and social suppor	
Agriculture (storage,production, transporttion of pro	School 2 (G-20-4)
Rehabilitati	oduct         etc.)         2         (G-20-1)         Sanitary system         2         (G-20-5)           on of roads         1         (G-20-2)         Hospital         1         (G-20-6)           ctric supply         1         (G-20-3)         Others         2         (G-20-7)
23. Importance of khettara 2 (G-23)	
<ul> <li>(1) Unique source for both of potable water and irrigation</li> <li>(2) Unique source for irrigation</li> <li>(3) Main source for irrigation</li> </ul>	tion (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettara	
1 Yes (1), No (2) If no, the reason (G-25)	<ul><li>(1)Constrains in landscape</li><li>(2)Prohibited by law</li><li>(3)Existence of other khettaras</li><li>(4)Others</li></ul>

1. Khettara Number A-015 MP (G-1)	2. Name of commune Mellaab (G-2)
3. Name of khettara (G-3)	4. Location of khettara $X = 546072.95$ (G-4-1) Y = 113987.82 (G-4-2)
5. Number of families who [70] (G-5-2) families have khettara water right	9. Histry of discharge 1997: 12 litter/sec
6. Number of beneficialies 70 (G-6-2) families	of khettara
7. Cycle of kehttara water right 10 (G-7-1) days	]
8.Discharge of khettara (latest) 9.35 (G-8) lit/sec	(I-10)
10. History of khettara water flow 6 (I-9)	
(2)No water in the last two-decade(6)The khett(3)No water in the last decadeyear in the(4)No water in the past five years(7)The disch	r in the dry season in the past five years ara has water flow, but the discharge of khettara is reduced each ne recent five years. aarge of the khettara is constant aarge of the khettara is increased
11. Total area of farmland 35 ha (IA-1)	12. Irrigated area by the khettara [12]ha (IA-3)
13. The condition of roads 2 appropriate (1) (G-15) not appropriate (2)	14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 appropriate (1) (G-17) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association 2 Yes (1), (G-21) No (2)	If yes, Name of G-22
18. Situation of khettara Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in 1600 (E-1-1-	· · · · · · · · · · · · · · · · · · ·
catchment area and conduit [1500] (E-1-1-	
Khettara as open channel [87] (E-2-1)	
Principal and secondary 300 (E-4-2-	
irrigation canal (E-4-2-	
19. Rehabilitation Rehabilitation length of 3187 khettara (M-7)	
20. Influence of desertification	
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification Open channel kh	t [2] (I-2) Irrigation canals [2] (I-7)
21.Demandes of habitants (water resources )	Yes (1), No (2)
Rehabilitation of khettara 1 (G-19-1)	Protection dike against flood 1 (G-19-4)
Installing pump 2 (G-19-2) C Rehabilitation of irrigation canal 2 (G-19-3)	onstruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual and social suppo	
	School         2         (G-20-4)           oduct , etc.)         2         (G-20-1)         Sanitary system         2         (G-20-5)           ion of roads         1         (G-20-2)         Hospital         1         (G-20-6)           actric supply         1         (G-20-3)         Others         2         (G-20-7)
23. Importance of khettara 2 (G-23)	
23. Importance of khettara 2 (G-23) (1) Unique source for both of potable water and irriga (2) Unique source for irrigation (3) Main source for irrigation	tion (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettara	
1 Yes (1), No (2) If no, the reason (G-24) (G-25)	<ul><li>(1)Constrains in landscape</li><li>(2)Prohibited by law</li><li>(3)Existence of other khettaras</li><li>(4)Others</li></ul>

1. Khettara Number       A-016		
3. Name of khettara       Mellab       4. Location of khettara       X = V = 1059912 (G-4-1) V = 1059912 (G-4-2)         5. Number of families who heneficialies       450 (G-5-2) families of khettara water right       9. Histry of discharge of khettara       0         7. Cycle of kehttara water right       12 (G-7-1) days B.Discharge of khettara water right       12 (G-7-1) days (I-10)       9. Histry of discharge of khettara       0         10. History of khettara water flow       (I-9)       (I-10)       (I-10)       (I-10)         11. Notaer from 1950s or 1970s. (20) water in the past flwe years       (I) the water in the day sceason in the past flwe years       (I) the khettara is reduced each (7) The discharge of the khettara is constant (B) the water in the past flwe years       (I) the khettara is nonceased         11. Total area of farmland       120 ha (IA-1)       12. Irrigated area by the khettara is nonceased       (IA-3)         13. The condition of noads       1 appropriate (1) (G-16) not appropriate (2)       16. Facility of electricity and (IA-3)       1 appropriate (1) (G-16) not appropriate (2)         14. Excende of Association       Y es (1), II yes, Name of (G-21) No (2)       Section of thettara (average) hight(m)       width (m)         3. Stuation of khettara       Length (m)       Section of thettara (average) hight(m)       width (m)       (Ic-1-1)         3. Stuation of khettara       Gallery in cachment area and conduit       (IC-1)		
S. Number of lamilies who       (G-3)       y = 105991.2 (G-4-2)         S. Number of lamilies who       410 (G-5-2) families of khettara water right       9         Histry of discharge of khettara water right       12 (G-7-1) days       6         Number of beneficialies       450 (G-6-2) families of khettara       0         10. History of khettara water flow       0 (G-8)       (I-10)         (10. History of khettara water flow       0 (G-9)       (I-10)         (10. History of khettara water flow       0 (G-8)       (I-10)         (20) water in the last water flow       (G) No water in the last water flow the discharge of the khettara is constant         (30) water in the last water flow       (G) The discharge of the khettara is constant         (31) Total area of familiand       120 ha         (11. Total area of familiand       120 ha         (12. Infraded area by the khettara       (G-16) not appropriate (1)         (G-17) not appropriate (1)       (G-16) not appropriate (2)         (15. Sanitary service       1 appropriate (1)       (G-16) not appropriate (2)         (16. E-15.1)       1.5 (G-14-2.1)       1.6 (G-15)         (17. Existence of Association       (G-21) No (2)       Association       (G-22)         (17. Existence of Association       (G-17) not appropriate (2)       (G-14-1.1)       1.6 (		$4 \downarrow \text{ constion of khottors}$ $Y = 552145.72 (C.4.1)$
have khettara water right	(G-3)	
C. Victified for befleticitatives     Construction     Construction	have khettara water right	of thousand ge
8.Discharge of khettara (tatest)       0       (G-8)       iif/sec       (I-10)         10. History of khettara water flow       (I-9)       (I)No water from 1950s or 1970s.       (S) No water in the dry season in the past five years         2No water in the last two decade (No water in the past five years       (G-16) methettara is constant       (I) The discharge of the khettara is constant         11. Total area of farmland       120 ha       12. Irrigated area by the khettara is constant         (A) No water in the past five years       (I) appropriate (1)       16. Facility of electricity and telecomunication       appropriate (1)         13. The condition of roads       appropriate (1)       16. Facility of electricity and telecomunication       appropriate (1)         15. Sanitary service       1       appropriate (1)       16. Facility of electricity and telecomunication       appropriate (2)         17. Existence of Association       Ves (1), If yes, Name of (G-11) not appropriate (2)       (G-12)       (G-12)       (G-12)         18. Situation of khettara catchment area and conduit       appropriate (1)       16. (E-1-1-1)       15. (E-1-4-1)       (G)       (E-1-5-2)         Rhetabilitation length of whettara       (G-12)       (G-12)       (G-12)       (G-12-4-1)       (G)       (E-1-2-2)         19. Rehabilitation Rehabilitation length of whettara       (M-7)       (M-8)	6. Number of beneficialies 450 (G-6-2) families	OF KHELLARA
10. History of khettara water flow       (I-9)         10. History of khettara water flow       (I-9)         (1No water in the last two-decade (3No water in the last two-decade (3No water in the past five years       (i) No water in the dry season in the past five years         (1No water in the last two-decade (3No water in the past five years       (i) No water in the dry season in the past five years         (1) No water in the past five years       (i) No water in the dry season in the past five years         (1) No water in the past five years       (i) The discharge of the khettara is constant (i) The discharge of the khettara is increased         11. Total area of farmland       120 ha (IA-1)       11. Fire discharge of the khettara is increased         13. The condition of roads       1       appropriate (1) (G-17) not appropriate (2)       16. Facility of electricity and (G-21) No (2)       appropriate (2)         14. Situation of khettara       Length (m)       16. Facility of electricity and (G-21) No (2)       appropriate (2)         18. Situation of khettara       Length (m)       Neg(E-14-41)       1.6] (E-15-2)         19. Rehabilitation length of (G-21)       00 (E-4-2-1)       0.5 (E-4-3-1)       0.7 (E-4-1-2)         19. Rehabilitation Rehabilitation length of (NH etar)       Gallery in catchment area (1-1)       (I-1)       Republication pond (I-5)         20. Influence of desertification (1)Significant dange by desertification (2) Unigne by d	7. Cycle of kehttara water right [12] (G-7-1) days	
(1)No water from 1965 or 1970s.       (5) To water in the dy season in the past five years         (2)No water in the list two-decade       (5) The discharge of the hout the discharge of khettara is constant         (4)No water in the past five years       (5) The discharge of the khettara is constant         (4)No water in the past five years       (1) The discharge of the khettara is increased         11. Total area of farmland       120 ha       12. Irrigated area by the khettara is constant         (1)No water in the past five years       (1) appropriate (2)       (1) for appropriate (2)         13. The condition of roads       1       appropriate (2)       (1) for appropriate (2)         15. Sanitary service       1       appropriate (2)       (1) for appropriate (2)         16. The discharge of the khettara is constant       (1) mot appropriate (2)       (2) for appropriate (2)         17. Existence of Association       Yes (1), If yes, Name of (G-22)       (G-18) not appropriate (2)         18. Situation of khettara       Length (m)       Section of khettara (average) high (m)         (3) Ro water as a open channel       27000 (E-2-1)       1.2 (E-1-5-1)         (2) Achtetara (Gallery in catchment area       (-1-1.2)       1.6 (E-1-4-2)       (E-4-1-2)         18. Situation of khettara       Gallery in catchment area       (-1)       Rehabilitation Rehabilitation length of (M-7)       (	8.Discharge of khettara (latest) 0 (G-8) lit/sec	(I-10)
(2)No water in the last two-decade (4)No water in the past five years       (B) The khettara is water flow, but the discharge of khettara is reduced each year in the past five years         (4)No water in the past five years       (B) The kinettara is water flow, but the discharge of the khettara is increased         11. Total area of farmland       120 ha (IA-1)       12. Irrigated area by the khettara is increased         13. The condition of roads       1 appropriate (1) (G-15) not appropriate (2)       14. The condition of schools       1 appropriate (1) (G-16) not appropriate (2)         15. Sanitary service       1 appropriate (1) (G-17) not appropriate (2)       16. Facility of electricity and (G-21) No (2)       1 appropriate (2)         17. Existence of Association       Yes (1), If	10. History of khettara water flow (I-9)	
(IA-1)       (IA-3)         13. The condition of roads       1 appropriate (1) (G-15) not appropriate (2) (G-15) not appropriate (2)       14. The condition of schools       1 appropriate (1) (G-16) not appropriate (2)         15. Sanitary service       1 appropriate (1) (G-17) not appropriate (2)       16. Facility of electricity and telecomunication       appropriate (2)         17. Existence of Association       Yes (1), N(2)       If yes, Name of Association       (G-27)       No (2)         18. Situation of khettara       Length (m)       Section of Khettara (average) hight(m)       width (m)         Gallery of khettara (Gallery in catchment area and conduit       1800 (E-1-1-2)       1.6 (E-1-4-2)       1 (E-1-5-2)         Khettara as open channel       2700 (E-2-1)       1.2 (E-2-2)       0 (E-4-1-1)       (I-1)         Irrigation canal       0 (E-4-2-1)       0.5 (E-4-3-1)       0.7 (E-4-1-1)         19. Rehabilitation Rehabilitation length of (M-7)       (m)       Rehabilitation length of principal (m)       (m/4-8)         (1) Significant damage by desertification       (M-7)       (M-7)       rigation canals       (I-7)         (1)Significant damage by desertification       Gallery in catchment area       (I-1)       Regulation pond       (I-5)         (1)Significant damage by desertification       Gallery of conduit       (I-2)       Irrigation canals </td <td>(2)No water in the last two-decade(6)The khetta(3)No water in the last decadeyear in the(4)No water in the past five years(7)The discha</td> <td>ra has water flow, but the discharge of khettara is reduced each recent five years. Irge of the khettara is constant</td>	(2)No water in the last two-decade(6)The khetta(3)No water in the last decadeyear in the(4)No water in the past five years(7)The discha	ra has water flow, but the discharge of khettara is reduced each recent five years. Irge of the khettara is constant
Instantion of the propriate (2)       Instantion of appropriate (2)         15. Sanitary service       1       appropriate (1) (G-17)       16. Facility of electricity and (G-18)       1       appropriate (1) (G-18)       1       appropriate (2)         17. Existence of Association       Image of the propriate (2)       16. Facility of electricity and (G-18)       1       appropriate (2)         18. Situation of khettara       Length (m)       Section of khettara (average) hight(m)       width (m)         Gallery of khettara (Gallery in catchment area and conduit       0       (E-1-1-1)       1.5       (E-1-4-1)       1.6       (E-1-5-1)         10. (G-13)       1000       (E-1-1-2)       1.6       (E-1-4-2)       1       (E-1-5-2)         Khettara as open channel       2700       (E-2-1)       1.2       (E-2-3)       0       (E-4-2-2)         19. Rehabilitation Rehabilitation length of (1)Significant damage by desertification (1)Significant damage by desertification (2)Partial damage by desertification (3)Neelgible desertification (3)Neelgible desertification (2)Partial damage by desertification (3)Neelgible desertification (3)Neelgible desertification of khettara       (G-19-1)       Protection dike against flood (2-19-5)       (G-19-4)         21.Demandes of habitants (water resources)       Yes (1), No (2)       School (2-19-5)       School (2-19-5)       (G-19-6)       (G-19-5) <t< td=""><td></td><td></td></t<>		
10:Solution       iot appropriate (2)       telecomunication       (G-15)       not appropriate (2)         17. Existence of Association       Yes (1), If yes, Name of Association       (G-22)       (G-22)       (G-22)         18. Situation of khettara       Length (m)       Section of khettara (average) hight(m)       width (m)         18. Situation of khettara       (G-21)       (G-22)       (G-22)       (G-22)         18. Situation of khettara       (G-11-1)       1.5       (G-14-1)       (G-22)         19. Rehabilitation canal       27000 (E-2-1)       (G-22)       (G-23)       (G-4-1-2)         19. Rehabilitation Rehabilitation length of khettara       (M-7)       (G-4-3-2)       (G-4-1-2)       (G-4-1-2)         19. Rehabilitation Rehabilitation length of khettara       Gallery of conduit       (G-12)       (I-1)       (I-5)         (2)Partial damage by descrification       Gallery of conduit       (I-2)       Irrigation canals       (I-7)         21. Demandes of habitants (water resources )       Yes (1), No (2)       Protection dike against flood       (G-19-4)         22. Demandes of habitants (Aglicultual and social support)       Yes (1), No (2)       School (G-20-6)       (G-20-6)         Rehabilitation of intrigation canal       (G-19-3)       Construction of public wells for domestic water       (G		
Instruction of Nocodition       Image: Construction of Construction (Construction (Constructin (Construction (Construction (Constructin (C	10.0alitaly service (0)	
Callery of khettara (Gallery in catchment area and conduit       0 (E-1-1-1)       1.5 (E-1-4-1)       1.6 (E-1-5-1)         Catchment area and conduit       1800 (E-1-1-2)       1.6 (E-1-4-2)       1 (E-1-5-2)         Khettara as open channel       2700 (E-2-1)       1.2 (E-2-2)       1 (E-2-3)         Principal and secondary       900 (E-4-2-1)       0.5 (E-4-3-1)       0.7 (E-4-1-1)         irrigation canal       0 (E-4-2-2)       0 (E-4-3-2)       0 (E-4-1-2)         19. Rehabilitation Rehabilitation length of khettara       (M-7)       Rehabilitation length of principal (M-8)       (M-8)         20. Influence of desertification       Gallery in catchment area (I-1) Regulation pond (H-8)       (I-5)       (I-7)         (2)Partial damage by desertification       Gallery of conduit (I-2) Irrigation canals (I-7)       (I-7)         (3)Negligible damage by desertification       Gallery (G-19-2) Construction of public wells for domestic water (G-19-4)       (G-19-3)         21.Demandes of habitants (water resources )       Yes (1), No (2)       School (2 (G-20-4))       (G-19-5)         22.Demandes of habitants (Aglicultual and social support)       Yes (1), No (2)       School (2 (G-20-4))       (G-19-5)         23.Importance of khettara       (G-23)       (4) Partial source for irrigation (5) Supplementary source for irrigation (2) Unique source for both of potable water and irrigation (2) Supplementary sour		
catchment area and conduit       1800 (E-1-1-2)       1.6 (E-1-4-2)       (E-1-5-2)         Khettara as open channel       2700 (E-2-1)       1.2 (E-2-2)       1 (E-2-3)         Principal and secondary       900 (E-4-2-1)       0.5 (E-4-3-1)       0.7 (E-4-1-1)         irrigation canal       0 (E-4-2-2)       0 (E-4-3-2)       0 (E-4-1-2)         19. Rehabilitation       Rehabilitation length of khettara       (M-7)       Rehabilitation length of principal (M-8)       (m)         (1) Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification       Gallery in catchment area (1-1)       (I-2)       Irrigation canals       (I-7)         21. Demandes of habitants (water resources )       Yes (1), No (2)       Protection dike against flood (2-19-4)       (G-19-4)         22.Demandes of habitants (Aglicultual and social support)       Yes (1), No (2)       School (2-0-4)       (G-19-5)         22.Demandes of habitants (Aglicultual and social support)       Yes (1), No (2)       School (2-0-6)       (G-20-6)         23.Importance of khettara       (G-23)       (G-20-3)       School (2-0-6)       (G-20-7)         23.Importance of khettara       (G-23)       (4) Partial source for irrigation (5) Supplementary source for irrigation (5) Supplementary source for irrigation (6) Neglected       24. Posssibility of extension of khettara       (1)Constrains in	18. Situation of khettara Length (m)	
Khettara as open channel       2700       (E-1+22)       (E-1-22)       (E-1-22)         Principal and secondary       900       (E-4-2-1)       0.5       (E-4-3-1)       0.7       (E-4-1-1)         irrigation canal       0       (E-4-2-2)       0       (E-4-3-2)       0       (E-4-1-2)         19. Rehabilitation Rehabilitation length of khettara       (M-7)       (m)       Rehabilitation length of principal (M-8)       (m)         20. Influence of desertification       Gallery in catchment area       (I-1)       Regulation pond (I-5)       (E-1-2-2)         (2)Partial damage by desertification       Gallery of conduit       (I-2)       Irrigation canals       (I-7)         (2)Partial damage by desertification       Gallery of conduit       (I-2)       Irrigation canals       (I-7)         (2)Partial damage by desertification       Gallery of conduit       (I-3)       (I-7)       (G-19-4)         21.Demandes of habitants (water resources )       Yes (1), No (2)       School       2       (G-19-4)         22.Demandes of habitants (Aglicultual and social support)       Yes (1), No (2)       School       2       (G-20-4)         32.Demandes of habitants (Aglicultual and social support)       Yes (1), No (2)       School       2       (G-20-4)         42.Decorece or irrigation <td>Gallery of khettara (Gallery in 0 (E-1-1-1</td> <td>) <u>1.5</u> (E-1-4-1) <u>1.6</u> (E-1-5-1)</td>	Gallery of khettara (Gallery in 0 (E-1-1-1	) <u>1.5</u> (E-1-4-1) <u>1.6</u> (E-1-5-1)
Khettara as open channel       Z700       (E-2-1)       1.2       (E-2-2)       1       (E-2-3)         Principal and secondary irrigation canal       900       (E-4-2-1)       0.5       (E-4-3-1)       0.7       (E-4-1-1)         19. Rehabilitation Rehabilitation length of khettara       (M-7)       Rehabilitation length of principal       (m)       (m-4-1-2)         20. Influence of desertification (1)Significant damage by desertification (3)Negligible damage by desertification       Gallery in catchment area Gallery of conduit       (I-1)       Regulation pond       (I-5)         21.Demandes of habitants (water resources )       Yes (1), No (2)       Yes (1), No (2)       Yes (1), No (2)         Rehabilitation of irrigation canal       (G-19-1)       Protection dike against flood       2       (G-19-4)         22.Demandes of habitants (Aglicultual and social support)       Yes (1), No (2)       School       2       (G-19-5)         23.Demandes of habitants (Aglicultual and social support)       Yes (1), No (2)       School       2       (G-20-4)         4griculture (storage, production, transportion of product , etc.)       2       (G-20-1)       Sanitary system       2       (G-20-7)         23. Importance of khettara       (G-23)       (G-20-3)       (4) Partial source for irrigation       (5) Supplementary source for irrigation       (6) Neglected<		
Principal and secondary irrigation canal       900 (E-4-2-1)       0.5 (E-4-3-1)       0.7 (E-4-1-1)         19. Rehabilitation       Rehabilitation length of khettara       (m)       Rehabilitation length of principal       (m)         20. Influence of desertification       Gallery in catchment area       (I-1)       Regulation pond       (I-5)         (2)Partial damage by desertification       Gallery of conduit       (I-2)       Irrigation canals       (I-7)         21.Demandes of habitants (water resources )       Yes (1), No (2)       Protection dike against flood       2       (G-19-4)         22.Demandes of habitants (kater resources )       Yes (1), No (2)       Protection dike against flood       2       (G-19-6)         22.Demandes of habitants (Aglicultual and social support)       Yes (1), No (2)       School       2       (G-20-4)         Agriculture (storage,production, transportion of product , etc.)       2       (G-20-1)       Sanitary system       2       (G-20-6)         23. Importance of khettara       (G-23)       (A) Partial source for irrigation       (B) Partial source for irrigation         24. Possibility of extension of khettara       (D) No (2)       (B) Partial source for irrigation       (B) Partial source for irrigation       (B) Pa	Khettara as open channel 2700 (E-2-1)	
irrigation canal       0 (E-4-2-2)       0 (E-4-3-2)       0 (E-4-1-2)         19. Rehabilitation       Rehabilitation length of khettara       (M-7)       Rehabilitation length of principal (M-8)       (m)         20. Influence of desertification       Gallery in catchment area Gallery of conduit (1-2)       (I-1)       Regulation pond (I-5)       (I-7)         (2)Partial damage by desertification       Gallery of conduit Open channel khettara       (I-2)       Irrigation canals       (I-7)         21.Demandes of habitants (water resources )       Yes (1), No (2)       Protection dike against flood 2       (G-19-4)       (G-19-2)       Construction of public wells for domestic water 2       (G-19-5)         22.Demandes of habitants (Aglicultual and social support)       Yes (1), No (2)       School 2       (G-20-4)       (G-20-5)         Rehabilitation of irrigation canal       (G-23)       (G-20-3)       School 2       (G-20-6)         (1) Unique source for irrigation       (G-23)       (4) Partial source for irrigation       (G-20-7)         23. Importance of khettara       (G-23)       (4) Partial source for irrigation       (5) Supplementary source for irrigation         (3) Main source for irrigation       (1) Constrains in landscape       (3) Existence of other khettaras	Principal and secondary 900 (E-4-2-1	
khettara       (M-7)       intrigation canal       (M-8)         20. Influence of desertification       (M-7)       irrigation canal       (M-8)         (1)Significant damage by desertification       Gallery in catchment area       (I-1)       Regulation pond       (I-5)         (2)Partial damage by desertification       Gallery of conduit       (I-2)       Irrigation canals       (I-7)         (3)Negligible damage by desertification       Gallery of conduit       (I-2)       Irrigation canals       (I-7)         (3)Negligible damage by desertification       Gallery of conduit       (I-3)       (I-7)       (G-19-4)         21.Demandes of habitants (water resources )       Yes (1), No (2)       Protection dike against flood       2       (G-19-4)         1       Installing pump       (G-19-2)       Construction of public wells for domestic water       2       (G-19-5)         2.Demandes of habitants (Aglicultual and social support)       Yes (1), No (2)       Sanitary system       2       (G-20-4)         3       Agriculture (storage, production, transportion of product, etc.)       (G-20-2)       Gallery (G-20-6)       Sanitary system       2       (G-20-6)         2       Input age source for both of potable water and irrigation       (4) Partial source for irrigation       (5) Supplementary source for irrigation       (6) Negl		
khettara       (M-7)       Intrigation canal       (M-8)         20. Influence of desertification (1)Significant damage by desertification (3)Negligible damage by desertification (3) Main source for irrigation (2) Unique source for both of potable water and irrigation (2) Unique source for irrigation (2) Unique source for irrigation (2) Unique source for irrigation (3) Main source for irrigation (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected       (M-8) (I) Unique source for irrigation (1) Unique source for irrigation (2) Unique source for irrigation (3) Main source for irrigation (3) Main source for irrigation (3) Main source for irrigation       (I) Constrains in landscape (3) Existence of other khettara	10 Rehabilitation Rehabilitation length of	
(1)Significant damage by desertification       Gallery in catchment area       (I-1)       Regulation pond       (I-5)         (3)Negligible damage by desertification       Gallery of conduit       (I-2)       Irrigation canals       (I-7)         21.Demandes of habitants (water resources)       Yes (1), No (2)         Rehabilitation of khettara       (G-19-1)       Protection dike against flood       (G-19-4)         Installing pump       (G-19-2)       Construction of public wells for domestic water       (G-19-6)         22.Demandes of habitants (Aglicultual and social support)       Yes (1), No (2)       School       (G-20-4)         Agriculture (storage,production, transportion of product , etc.)       (G-20-1)       Sanitary system       (G-20-6)         (1) Unique source for both of potable water and irrigation       (G-20-3)       (G-20-7)       (G-20-7)         23. Importance of khettara       (G-23)       (4) Partial source for irrigation       (5) Supplementary source for irrigation         (3) Main source for irrigation       (5) Supplementary source for irrigation       (6) Neglected       (1)Constrains in landscape       (3)Existence of other khettaras		
(1)Significant damage by desertification       Gallery of conduit       (1-2)       Irrigation canals       (1-7)         (3)Negligible damage by desertification       Gallery of conduit       (1-2)       Irrigation canals       (1-7)         (3)Negligible damage by desertification       Gallery of conduit       (1-2)       Irrigation canals       (1-7)         (3)Negligible damage by desertification       Gallery of conduit       (1-3)       (1-3)       (1-7)         21.Demandes of habitants (water resources )       Yes (1), No (2)       Protection dike against flood       2       (G-19-4)         Rehabilitation of knettara       (G-19-2)       Construction of public wells for domestic water       2       (G-19-5)         22.Demandes of habitants (Aglicultual and social support)       Yes (1), No (2)       School       2       (G-20-4)         Agriculture (storage,production, transporttion of product , etc.)       2       (G-20-3)       Sanitary system       2       (G-20-6)         23. Importance of khettara       (G-23)       (4) Partial source for irrigation       (5) Supplementary source for irrigation       (6) Neglected         24. Possibility of extension of khettara       (1)Constrains in landscape       (3) Existence of other khettaras		
(2) Partial damage by desertification       Gallery of conduit       (I-2)       Irrigation canals       (I-7)         (3) Negligible damage by desertification       Open channel khettara       (I-3)       (I-3)       (I-7)         21. Demandes of habitants (water resources)       Yes (1), No (2)       Protection dike against flood       2       (G-19-4)         Installing pump       (G-19-1)       Protection dike against flood       2       (G-19-4)         22. Demandes of habitants (Aglicultual and social support)       Yes (1), No (2)       School       2       (G-19-6)         22.Demandes of habitants (Aglicultual and social support)       Yes (1), No (2)       School       2       (G-20-4)         Agriculture (storage,production, transportion of product, etc.)       2       (G-20-1)       Sanitary system       2       (G-20-5)         23. Importance of khettara       (G-23)       (G-23)       (G-20-7)       Sanitary source for irrigation       (6) Neglected         24. Possibility of extension of khettara       (1) Unique source for irrigation       (6) Neglected       (1) Constrains in landscape       (3) Existence of other khettaras	(1)Significant damage by desertification	
21.Demandes of habitants (water resources )       Yes (1), No (2)         Rehabilitation of khettara       1       (G-19-1)       Protection dike against flood       2       (G-19-4)         Rehabilitation of irrigation canal       2       (G-19-2)       Construction of public wells for domestic water       2       (G-19-5)         Rehabilitation of irrigation canal       2       (G-19-3)       Construction of public wells for domestic water       2       (G-19-5)         22.Demandes of habitants (Aglicultual and social support)       Yes (1), No (2)       School       2       (G-20-4)         Agriculture (storage,production, transporttion of product , etc.)       2       (G-20-1)       Sanitary system       2       (G-20-5)         Rehabilitation of roads       2       (G-20-3)       G-20-3)       Others       2       (G-20-6)         23. Importance of khettara       (G-23)       (G-23)       (G-20-3)       Others       2       (G-20-7)         23. Importance for irrigation       (G-23)       (G-24)       (G-20-7)       (G-20-7)       (G-20-7)       (G-20-7)         24. Possibility of extension of khettara       (G-20)       (G)       (G)       (G)       (G)       (G)       (G)         24. Possibility of extension of khettara       (1)       (1)       (1) </td <td>(2) Negligible damage by description</td> <td></td>	(2) Negligible damage by description	
Installing pump       2       (G-19-2)       Construction of public wells for domestic water       2       (G-19-5)         Rehabilitation of irrigation canal       2       (G-19-3)       Others       2       (G-19-6)         22.Demandes of habitants (Aglicultual and social support)       Yes (1), No (2)       School       2       (G-20-4)         Agriculture (storage,production, transporttion of product, etc.)       2       (G-20-1)       Sanitary system       2       (G-20-5)         Rehabilitation of roads       2       (G-20-2)       Hospital       2       (G-20-6)         23. Importance of khettara       (G-23)       (G-23)       (G-20-7)       Others       2       (G-20-7)         23. Importance of khettara       (G-23)       (G-23)       (G-20-7)       Others       2       (G-20-7)         24. Possibility of extension of khettara       (G-23)       (A) Partial source for irrigation       (B) Neglected       (B) Neglected         24. Possibility of extension of khettara       (1)Constrains in landscape       (3) Existence of other khettaras		
Rehabilitation of irrigation canal       2       (G-19-3)       Others       2       (G-19-6)         22.Demandes of habitants (Aglicultual and social support)       Yes (1), No (2)       School       2       (G-20-4)         Agriculture (storage,production, transporttion of product , etc.)       2       (G-20-1)       Sanitary system       2       (G-20-5)         Rehabilitation of roads       2       (G-20-2)       Hospital       2       (G-20-6)         2       (G-20-3)       (G-20-3)       Others       2       (G-20-6)         2       (G-20-7)       Sanitary system       2       (G-20-6)       (G-20-6)         2       (G-20-3)       (G-20-3)       Others       2       (G-20-6)         2       (G-20-3)       (G-20-3)       Others       2       (G-20-7)         23. Importance of khettara       (G-23)       (4) Partial source for irrigation       (5) Supplementary source for irrigation       (5) Supplementary source for irrigation       (6) Neglected         24. Possibility of extension of khettara       (1)Constrains in landscape       (3)Existence of other khettaras	Rehabilitation of khettara 1 (G-19-1)	Protection dike against flood 2 (G-19-4)
Agriculture (storage,production, transportition of product , etc.)       2       (G-20-1)       School       2       (G-20-4)         Agriculture (storage,production, transportition of product , etc.)       2       (G-20-1)       Sanitary system       2       (G-20-5)         Rehabilitation of roads       2       (G-20-2)       (G-20-2)       Hospital       2       (G-20-6)         2       (G-20-3)       (G-20-3)       (G-20-7)       (G-20-7)       2       (G-20-7)         23. Importance of khettara       (G-23)       (G-23)       (G-20-7)       (G-20-7)       (G-20-7)         23. Importance of khettara       (G-23)       (G-23)       (G-20-7)       (G-20-7)         24. Possibility of extension of khettara       (1)Constrains in landscape       (3)Existence of other khettaras		
Agriculture (storage,production, transportition of product , etc.)       2       (G-20-1)       Sanitary system       2       (G-20-5)         Rehabilitation of roads       2       (G-20-2)       Hospital       2       (G-20-6)         Electric supply       2       (G-20-3)       Others       2       (G-20-7)         23. Importance of khettara       (G-23)       (G-23)       (G-20-7)       (G-20-7)         (1) Unique source for both of potable water and irrigation       (4) Partial source for irrigation       (5) Supplementary source for irrigation         (3) Main source for irrigation       (6) Neglected       (3) Existence of other khettaras	22.Demandes of habitants (Aglicultual and social suppor	
Rehabilitation of roads       2       (G-20-2)       Hospital       2       (G-20-6)         Electric supply       2       (G-20-3)       Others       2       (G-20-7)         23. Importance of khettara       (G-23)       (G-23)       (G-20-7)       (G-20-7)         23. Importance of khettara       (G-23)       (G-20-7)       (G-20-7)         (1) Unique source for both of potable water and irrigation       (4) Partial source for irrigation       (5) Supplementary source for irrigation         (3) Main source for irrigation       (6) Neglected       (6) Neglected         24. Possibility of extension of khettara       (1)Constrains in landscape       (3)Existence of other khettaras	Agriculture (storage.production, transporttion of pro	
(1) Unique source for both of potable water and irrigation       (4) Partial source for irrigation         (2) Unique source for irrigation       (5) Supplementary source for irrigation         (3) Main source for irrigation       (6) Neglected         24. Possibility of extension of khettara       (1)Constrains in landscape       (3)Existence of other khettaras	Rehabilitatio	n of roads 2 (G-20-2) Hospital 2 (G-20-6)
(1) Unique source for both of potable water and irrigation       (4) Partial source for irrigation         (2) Unique source for irrigation       (5) Supplementary source for irrigation         (3) Main source for irrigation       (6) Neglected         24. Possibility of extension of khettara       (1)Constrains in landscape       (3)Existence of other khettaras	23. Importance of khettara	
Yes (1), No (2) If no, the reason (1)Constrains in landscape (3)Existence of other khettaras	<ul> <li>(1) Unique source for both of potable water and irrigat</li> <li>(2) Unique source for irrigtion</li> </ul>	(5) Supplementary source for irrigation
Yes (1), No (2) If no, the reason (1)Constrains in landscape (3)Existence of other khettaras	24. Possibility of extension of khettara	
		<ul><li>(1)Constrains in landscape</li><li>(2)Prohibited by law</li><li>(3)Existence of other khettaras</li><li>(4)Others</li></ul>

1. Khettara Number A-017 - (G-1)	2. Name of commune Mellaab (G-2)
	、
3. Name of khettara Tighadouine (G-3)	4. Location of khettara $X = 552201.09$ (G-4-1) Y = 104996.61 (G-4-2)
5. Number of families who 300 (G-5-2) fameliar a water right	<sup>nilies</sup> 9. Histry of discharge <sup>0</sup>
6. Number of beneficialies 15 (G-6-2) fan	of khettara
7. Cycle of kehttara water right 12 (G-7-1) da	ays
8.Discharge of khettara (latest) 0 (G-8) lit/s	sec (I-10)
10. History of khettara water flow (I-	9)
(2)No water in the last two-decade(6)The l(3)No water in the last decadeyear(4)No water in the past five years(7)The d	vater in the dry season in the past five years chettara has water flow, but the discharge of khettara is reduced each in the recent five years. discharge of the khettara is constant discharge of the khettara is increased
11. Total area of farmland [70] ha (IA-1)	12. Irrigated area by the khettara Oha (IA-3)
13. The condition of roads (G-15) appropriate (1) not appropriate	(2) 14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 1 appropriate (1) (G-17) not appropriate	(2) 16.Facility of electricity and telecomunication (G-18) appropriate (1) not appropriate (2)
17. Existence of Association Yes (G-21) No	
18. Situation of khettara Length (	m) Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in20 (E-	
catchment area and conduit 2600 (E-	1-1-2) <u>4</u> (E-1-4-2) <u>0.8</u> (E-1-5-2)
Khettara as open channel 0 (E-2	2-1) 0 (E-2-2) 0 (E-2-3)
Principal and secondary 0 (E-4 irrigation canal 0 (E-4	
19. Rehabilitation Rehabilitation length of khettara (M-7	(m) Rehabilitation length of principal (m) irrigation canal (M-8)
20. Influence of desertification	
(1)Significant damage by desertification Gallery in cate	chment area 3 (I-1) Regulation pond (I-5)
(2)Partial damage by desertification (3)Negligible damage by desertification Open channe	
21.Demandes of habitants (water resources )	Yes (1), No (2)
Rehabilitation of khettara 1 (G-19-1)	Protection dike against flood 2 (G-19-4)
Installing pump 1 (G-19-2) Rehabilitation of irrigation canal 2 (G-19-3)	Construction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual and social su	
Agriculture (storage,production, transporttion or	School         2         (G-20-4)           f product , etc.)         2         (G-20-1)         Sanitary system         2         (G-20-5)
	Litation of roads         2         (G-20-2)         Hospital         2         (G-20-6)           Electric supply         2         (G-20-3)         Others         2         (G-20-7)
23. Importance of khettara (G-23) (1) Unique source for both of potable water and i (2) Unique source for irrigtion	(5) Supplementary source for irrigation
(3) Main source for irrigation	(6) Neglected
24. Possibility of extension of khettara	_
Yes (1), No (2) If no, the reason (G-25)	(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others

1. Khettara Number A-018 - (G-1)	2. Name of commune Mellaab (G-2)
(G-1)	
3. Name of khettara (G-3)	4. Location of khettara X = <u>547877.75</u> (G-4-1) Y = <u>107044.63</u> (G-4-2)
5. Number of families who 600 (G-5-2) families have khettara water right	9. Histry of discharge
6. Number of beneficialies 100 (G-6-2) families	of khettara
7. Cycle of kehttara water right 13 (G-7-1) days	
8.Discharge of khettara (latest) 0 (G-8) lit/sec	(I-10)
10. History of khettara water flow (I-9)	·
(2)No water in the last two-decade(6)The khett(3)No water in the last decadeyear in the(4)No water in the past five years(7)The disch	in the dry season in the past five years ara has water flow, but the discharge of khettara is reduced each e recent five years. arge of the khettara is constant arge of the khettara is increased
11. Total area of farmland [100] ha (IA-1)	12. Irrigated area by the khettara 2ha (IA-3)
13. The condition of roads (G-15) (G-15) (1) appropriate (1) not appropriate (2)	14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 1 appropriate (1) (G-17) not appropriate (2)	16.Facility of electricity and telecomunication1 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association Yes (1), (G-21) No (2)	If yes, Name of Association (G-22)
18. Situation of khettara Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit1300 (E-1-1- 900 (E-1-1-	
Khettara as open channel <u>600</u> (E-2-1)	
Principal and secondary 3200 (E-4-2- irrigation canal 6 (E-4-2-	
	2) 0 (E-4-3-2) 0 (E-4-1-2)
19. Rehabilitation Rehabilitation length of khettara (M-7)	(m) Rehabilitation length of principal (m) irrigation canal (M-8)
20. Influence of desertification	
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification Open channel kh	t <u>3</u> (I-2) Irrigation canals <u>1+2</u> (I-7)
21.Demandes of habitants (water resources )	Yes (1), No (2)
Rehabilitation of khettara 1 (G-19-1)	Protection dike against flood 1 (G-19-4)
	onstruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual and social suppo	
	on of roads 2 (G-20-2) Hospital 2 (G-20-6)
Ele	ctric supply 2 (G-20-3) Others 2 (G-20-7)
23. Importance of khettara (G-23) (1) Unique source for both of potable water and irriga (2) Unique source for irrigition (3) Main source for irrigation	tion (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettara	(1)Constrains in landscape (3)Existence of other khettaras
(G-24) (G-25)	(2)Prohibited by law (4)Others

1. Khettara Number A-019 - (G-1)	2. Name of commune Mellaab (G-2)
3. Name of khettara (G-3)	4. Location of khettara $X = 546974.72$ (G-4-1) Y = 107246.68 (G-4-2)
5. Number of families who have khettara water right 500 (G-5-2) families	9. Histry of discharge 1975: 40 litter/sec
6. Number of beneficialies 400 (G-6-2) families	of khettara
7. Cycle of kehttara water right 13 (G-7-1) days	]
8.Discharge of khettara (latest) 0 (G-8) lit/sec	(I-10)
10. History of khettara water flow (I-9)	
(2)No water in the last two-decade(6)The khetta(3)No water in the last decadeyear in the(4)No water in the past five years(7)The disch	in the dry season in the past five years ara has water flow, but the discharge of khettara is reduced each e recent five years. arge of the khettara is constant arge of the khettara is increased
11. Total area of farmland 30 ha (IA-1)	12. Irrigated area by the khettara 0ha (IA-3)
13. The condition of roads (G-15) appropriate (1) not appropriate (2)	14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 1 appropriate (1) (G-17) not appropriate (2)	16.Facility of electricity and telecomunication1 appropriate (1) (G-18)1 or appropriate (2)
17. Existence of Association Yes (1), (G-21) No (2)	If yes, Name of G-22)
18. Situation of khettara Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in 2400 (E-1-1-	· · · · · · · · · · · · · · · · · · ·
catchment area and conduit [700] (E-1-1-2	
Khettara as open channel 500 (E-2-1)	6 (E-2-2) 0.7 (E-2-3)
Principal and secondary 900 (E-4-2-	
irrigation canal 800 (E-4-2-2	
khettara (M-7)	(m) Rehabilitation length of principal (m) irrigation canal (M-8)
20. Influence of desertification	
(1)Significant damage by desertification Gallery in catchm	
(2)Partial damage by desertification (3)Negligible damage by desertification Open channel kho	
21.Demandes of habitants (water resources )	Yes (1), No (2)
Rehabilitation of khettara 1 (G-19-1)	Protection dike against flood 2 (G-19-4)
Installing pump 2 (G-19-2) Co Rehabilitation of irrigation canal 1 (G-19-3)	onstruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual and social suppor	
Agriculture (storage,production, transporttion of pro	
Rehabilitation	Construction         Construction<
23. Importance of khettara (G-23)	
(1) Unique source for both of potable water and irrigat	tion (4) Partial source for irrigation
<ul><li>(2) Unique source for irrigation</li><li>(3) Main source for irrigation</li></ul>	<ul><li>(5) Supplementary source for irrigation</li><li>(6) Neglected</li></ul>
24. Possibility of extension of khettara Yes (1), No (2) If no, the reason	(1)Constrains in landscape (3)Existence of other khettaras
(G-24) (G-25)	(2)Prohibited by law (4)Others

1. Khettara Number A-020 -	2. Name of commune Mellaab (G-2)		
(G-1)			
3. Name of khettara Tighazdiste (G-3)	4. Location of khettara $X = 547816.21$ (G-4-1) Y = 95185.64 (G-4-2)		
5. Number of families who [6-5-2] families have khettara water right	9. Histry of discharge 1998: tarie		
6. Number of beneficialies 8 (G-6-2) families	of khettara		
7. Cycle of kehttara water right [8] (G-7-1) days			
8.Discharge of khettara (latest) 0 (G-8) lit/sec	(I-10)		
10. History of khettara water flow (I-9)			
(2)No water in the last two-decade(6)The khetta(3)No water in the last decadeyear in the(4)No water in the past five years(7)The discha	in the dry season in the past five years ara has water flow, but the discharge of khettara is reduced each e recent five years. arge of the khettara is constant arge of the khettara is increased		
11. Total area of farmland [6] ha (IA-1)	12. Irrigated area by the khettara [1]ha (IA-3)		
13. The condition of roads 2 appropriate (1) (G-15) not appropriate (2)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)		
15.Sanitary service 2 appropriate (1) (G-17) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)		
17. Existence of Association Yes (1), (G-21) No (2)	If yes, Name of G-22		
18. Situation of khettara Length (m)	Section of khettara (average) hight(m) width (m)		
Gallery of khettara (Gallery in catchment area and conduit       0 (E-1-1-1)         0 (E-1-1-2)       0 (E-1-1-2)			
Khettara as open channel 500 (E-2-1)	0.3 (E-2-2) 0.5 (E-2-3)		
Principal and secondary1200 (E-4-2-1)irrigation canal0 (E-4-2-2)			
19. Rehabilitation       Rehabilitation length of khettara       (m)       Rehabilitation length of principal (m)       (m)         (M-7)       (M-7)       (m)       (m)       (m)			
20. Influence of desertification			
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification	(I-2) Irrigation canals (I-7)		
Rehabilitation of khettara1(G-19-1)Protection dike against flood2(G-19-4)Installing pump2(G-19-2)Construction of public wells for domestic water1(G-19-5)Rehabilitation of irrigation canal2(G-19-3)Others2			
22.Demandes of habitants (Aglicultual and social suppor			
Agriculture (storage,production, transporttion of product , etc.)ConstantSchool(G-20-4)Agriculture (storage,production, transporttion of product , etc.)(G-20-1)Sanitary system(G-20-5)Rehabilitation of roads(G-20-2)Hospital(G-20-6)Electric supply(G-20-3)Others(G-20-7)			
<ul> <li>23. Importance of khettara (G-23) <ul> <li>(1) Unique source for both of potable water and irrigation</li> <li>(2) Unique source for irrigation</li> <li>(3) Main source for irrigation</li> </ul> </li> <li>(4) Partial source for irrigation</li> <li>(5) Supplementary source for irrigation</li> <li>(6) Neglected</li> </ul>			
24. Possibility of extension of khettara Yes (1), No (2) If no, the reason (G-24) (G-24)	(1)Constrains in landscape(3)Existence of other khettaras(2)Prohibited by law(4)Others		

1. Khettara Number A-021 - (G-1)	2. Name of commune Mellaab (G-2)
(0-1)	· · ·
3. Name of khettara Talghachite (G-3)	4. Location of khettara $X = 549430.58$ (G-4-1) Y = 97666.98 (G-4-2)
5. Number of families who4 (G-5-2) fa	amilies 9. Histry of discharge 2003: tarie
6. Number of beneficialies (G-6-2) fa	amilies of khettara
7. Cycle of kehttara water right 0 (G-7-1)	days
8.Discharge of khettara (latest) 0 (G-8) lit/	i/sec (I-10)
10. History of khettara water flow (I-	I-9)
(2)No water in the last two-decade(6)The(3)No water in the last decadeyea(4)No water in the past five years(7)The	o water in the dry season in the past five years e khettara has water flow, but the discharge of khettara is reduced each ar in the recent five years. e discharge of the khettara is constant e discharge of the khettara is increased
11. Total area of farmland [IA-1]	12. Irrigated area by the khettara [1]ha (IA-3)
13. The condition of roads 2 appropriate (1) (G-15) not appropriate	
15.Sanitary service 2 appropriate (1) (G-17) not appropriate	
	es (1), If yes, Name of G-22)
18. Situation of khettara Length	n (m) Section of khettara (average) hight(m) width (m)
	-1-1-1) 0 (E-1-4-1) 0 (E-1-5-1)
catchment area and conduit 250 (E-	-1-1-2) 0 (E-1-4-2) 0 (E-1-5-2)
Khettara as open channel 200 (E-	
Principal and secondary 300 (E-	-4-2-1) 0.4 (E-4-3-1) 0.5 (E-4-1-1)
irrigation canal [10] (E-	-4-2-2) 0 (E-4-3-2) 0 (E-4-1-2)
19. Rehabilitation Rehabilitation length of [ khettara (M-7	(m) Rehabilitation length of principal (m) irrigation canal (M-8)
20. Influence of desertification	
21.Demandes of habitants (water resources)	Yes (1), No (2)
Rehabilitation of khettara 2 (G-19-1)	Protection dike against flood 2 (G-19-4)
Installing pump 2 (G-19-2) Rehabilitation of irrigation canal 2 (G-19-3)	) Construction of public wells for domestic water 2 (G-19-5)
22.Demandes of habitants (Aglicultual and social su	
Agriculture (storage,production, transporttion o	
	bilitation of roads         2         (G-20-2)         Hospital         2         (G-20-6)           Electric supply         2         (G-20-3)         Others         2         (G-20-7)
23. Importance of khettara (G-23) (1) Unique source for both of potable water and (2) Unique source for irrigition (3) Main source for irrigation	
24. Possibility of extension of khettara	
G-24) Yes (1), No (2) If no, the reason (G-25) (G-25)	(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others

1. Khettara Number A-022 - (G-1)		2. Name of commune	Mellaab (G-2)
3. Name of khettara Ignaoune (G-3)	'	4. Location of khettara	X = <u>545457.97</u> (G-4-1) Y = 113596.89 (G-4-2)
5. Number of families who [7] (G-5-2)		9. Histry of discharge of khettara	Y = 113596.89 (G-4-2)
	lamies		
7. Cycle of kehttara water right 0 (G-7-1)	days		
8.Discharge of khettara (latest) 0 (G-8) li	t/sec	(I-10)	)
10. History of khettara water flow	(I-9)		
(2)No water in the last two-decade(6)Th(3)No water in the last decadeye(4)No water in the past five years(7)Th	e khettara ar in the r e discharg	the dry season in the past five a has water flow, but the disch recent five years. ge of the khettara is constant ge of the khettara is increased	narge of khettara is reduced each
11. Total area of farmland [IA-1]		12. Irrigated area by the	e khettara 0ha (IA-3)
13. The condition of roads 2 appropriate (7 (G-15) not appropria		14.The condition of sch	nools 2 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 appropriate ( (G-17) not appropria		16.Facility of electricity telecomunication	and 1 appropriate (1) (G-18) not appropriate (2)
	es (1), o (2)	If yes, Name of Association	(G-22)
18. Situation of khettara Length	n (m)	Section hight(m	on of khettara (average) )
Gallery of khettara (Gallery in 1200 (E catchment area and conduit 0 (F	E-1-1-1) E-1-1-2)	0 (E-1-4	4-1) <u>0</u> (E-1-5-1)
Khettara as open channel 120 (E		0 (E-2-2	·····
	E-4-2-1) E-4-2-2)		
19. Rehabilitation Rehabilitation length of khettara (M	(n		length of principal (m) (M-8)
20. Influence of desertification			
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertificationGallery in ca Gallery of c Open change	onduit		Regulation pond (I-5) rrigation canals (I-7)
21.Demandes of habitants (water resources)		Yes (1), No (2)	
Rehabilitation of khettara 2 (G-19-1 Installing pump 2 (G-19-2 Rehabilitation of irrigation canal 2 (G-19-3	) Con	Protection d struction of public wells fo	ike against flood 2 (G-19-4) r domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual and social s	support)	Yes (1), No (2)	
Agriculture (storage,production, transporttion Reha	abilitation	uct , etc.) 2 (G-20-1) o of roads 2 (G-20-2) ric supply 2 (G-20-3)	School         2         (G-20-4)           Sanitary system         2         (G-20-5)           Hospital         2         (G-20-6)           Others         2         (G-20-7)
23. Importance of khettara (G-23 (1) Unique source for both of potable water and (2) Unique source for irrigition (3) Main source for irrigation	,	on (4) Partial source fo (5) Supplementary so (6) Neglected	r irrigation
24. Possibility of extension of khettara Yes (1), No (2) If no, the reason (G-24) (G-2		1)Constrains in landscape 2)Prohibited by law	(3)Existence of other khettaras (4)Others

1. Khettara Number A-023 (G-1)	MP	2. Name of commune Mellaab (G-2)
	hmed	4. Location of khettara X = 547157.96 (G-4-1)
(G-3)		Y = 114183.89 (G-4-2)
5. Number of families who have khettara water right	16 (G-5-2) families	9. Histry of discharge 1997: 3 litter/sec
6. Number of beneficialies	14 (G-6-2) families	of khettara
7. Cycle of kehttara water right	8 (G-7-1) days	
8.Discharge of khettara (latest)	0.4 (G-8) lit/sec	(I-10)
10. History of khettara water flow	6-7 (I-9)	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The discha	n the dry season in the past five years a has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased
11. Total area of farmland	8 ha A-1)	12. Irrigated area by the khettara [2]ha (IA-3)
13. The condition of roads (G-1)	appropriate (1) not appropriate (2)	14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 (G-1	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication1 appropriate (1) (G-18)appropriate (1) (1) not appropriate (2)
17. Existence of Association	2 Yes (1), (G-21) No (2)	If yes, Name of G-22
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit	930 (E-1-1-1) 9 (E-1-1-2)	
Khettara as open channel	<u>360</u> (E-2-1)	0.4 (E-2-2) 0.4 (E-2-3)
Principal and secondary irrigation canal	360 (E-4-2-1 0 (E-4-2-2	
19. Rehabilitation Rehabilitation le khettara	ngth of <u>1299</u> ( (M-7)	m) Rehabilitation length of principal <u>360</u> (m) irrigation canal (M-8)
20. Influence of desertification		
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	(I-2) Irrigation canals 2 (I-7)
21.Demandes of habitants (water res	ources)	Yes (1), No (2)
Rehabilitation of khettara 1 Installing pump 1 Rehabilitation of irrigation canal 2	(G-19-1) (G-19-2) Con (G-19-3)	Protection dike against flood 2 (G-19-4) nstruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultua	al and social support	
Agriculture (storage,productio	Rehabilitation	
23. Importance of khettara (1) Unique source for both of p (2) Unique source for irrigition (3) Main source for irrigation		on (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khetta 1 (G-24) Yes (1), No (2) If no, the 1 (G-24)	e reason	(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others

1. Khettara Number A-024 - (G-1)	2. Name of commune Mellaab (G-2)
(G-1)	
3. Name of khettara Tighraute (G-3)	4. Location of khettara $X = 556980.36$ (G-4-1) Y = 96013.34 (G-4-2)
5. Number of families who 20 (G-5-2) families	9. Histry of discharge
6. Number of beneficialies 20 (G-6-2) families	of khettara
7. Cycle of kehttara water right 6 (G-7-1) days	
8.Discharge of khettara (latest) 0 (G-8) lit/sec	(I-10)
10. History of khettara water flow (I-9)	
(2)No water in the last two-decade(6)The khetta(3)No water in the last decadeyear in the(4)No water in the past five years(7)The disch	in the dry season in the past five years ara has water flow, but the discharge of khettara is reduced each e recent five years. arge of the khettara is constant arge of the khettara is increased
11. Total area of farmland 12.5 ha (IA-1)	12. Irrigated area by the khettara 0.5ha (IA-3)
13. The condition of roads 2 appropriate (1) (G-15) not appropriate (2)	14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service appropriate (1) (G-17) not appropriate (2)	16.Facility of electricity and telecomunicationappropriate (1) not appropriate (2)
17. Existence of Association Yes (1), (G-21) No (2)	If yes, Name of G-22)
18. Situation of khettara Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in 400 (E-1-1-	
catchment area and conduit (E-1-1-2	
Khettara as open channel 0 (E-2-1)	0 (E-2-2) 0 (E-2-3)
Principal and secondary 1000 (E-4-2-	1) 0.5 (E-4-3-1) 0.6 (E-4-1-1)
irrigation canal (E-4-2-2	2) 0 (E-4-3-2) 0 (E-4-1-2)
19. Rehabilitation Rehabilitation length of khettara (M-7)	(m) Rehabilitation length of principal (m) irrigation canal (M-8)
20. Influence of desertification	
Gallery in catchm	ent area (I-1) Regulation pond 1 (I-5)
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification Open channel kh	(I-2) Irrigation canals 1 (I-7)
21.Demandes of habitants (water resources )	Yes (1), No (2)
Rehabilitation of khettara 1 (G-19-1)	Protection dike against flood 1 (G-19-4)
	onstruction of public wells for domestic water 1 (G-19-5) Others 1 (G-19-6)
22.Demandes of habitants (Aglicultual and social support	
Agriculture (storage,production, transporttion of pro	School <u>2</u> (G-20-4) oduct , etc.) <u>1</u> (G-20-1) Sanitary system <u>2</u> (G-20-5)
Rehabilitatio	Constraints         Constraints <thconstraints< th=""> <thconstraints< th=""></thconstraints<></thconstraints<>
23. Importance of khettara (G-23)	
(1) Unique source for both of potable water and irrigation	tion (4) Partial source for irrigation
(2) Unique source for irrigiton (3) Main source for irrigation	(5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettara	
Yes (1), No (2) If no, the reason	(1)Constrains in landscape (3)Existence of other khettaras
(G-24) (G-25)	(2)Prohibited by law (4)Others

1. Khettara Number A-025 (G-1)	MP	2. Name of commune Mellaab (G-2)
(G-3)	Dghou	4. Location of khettara $X = 559442.83$ (G-4-1) Y = 104581.53 (G-4-2)
5. Number of families who 18 have khettara water right	33 (G-5-2) families	9. Histry of discharge <sup>0</sup>
6. Number of beneficialies 2	13 (G-6-2) families	of khettara
7. Cycle of kehttara water right	12 (G-7-1) days	
8.Discharge of khettara (latest) 5.	99 (G-8) lit/sec	(I-10)
10. History of khettara water flow 6	-7 (I-9)	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The discha	n the dry season in the past five years a has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased
11. Total area of farmland	200 ha A-1)	12. Irrigated area by the khettara [40]ha (IA-3)
13. The condition of roads (G-15)	appropriate (1)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 (G-17	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association	2 Yes (1), (G-21) No (2)	If yes, Name of G-22
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in	500 (E-1-1-1)	) 1.3 (E-1-4-1) 0.5 (E-1-5-1)
catchment area and conduit	120 (E-1-1-2)	
Khettara as open channel	<u>500</u> (E-2-1)	0.8 (E-2-2) 0.4 (E-2-3)
Principal and secondary irrigation canal	2000 (E-4-2-1 4000 (E-4-2-2	
19. Rehabilitation Rehabilitation ler khettara	gth of 11.2 ( (M-7)	m) Rehabilitation length of principal 50 (m) irrigation canal (M-8)
20. Influence of desertification	. ,	
(1)Significant damage by desertification	Gallery in catchme	nt area <u>3</u> (I-1) Regulation pond <u>1</u> (I-5)
(2)Partial damage by desertification (3)Negligible damage by desertification	Gallery of conduit Open channel khe	3(I-2)Irrigation canals1(I-7)ttara1(I-3)
21.Demandes of habitants (water reso	•	Yes (1), No (2)
Rehabilitation of khettara 1	(G-19-1)	Protection dike against flood 1 (G-19-4)
Installing pump 1 Rehabilitation of irrigation canal 1		nstruction of public wells for domestic water 1 (G-19-5) Others 1 (G-19-6)
22.Demandes of habitants (Aglicultua	l and social support	) Yes (1), No (2)
School 1 (G-20-4) Agriculture (storage,production, transporttion of product, etc.) 1 (G-20-1) Sanitary system 2 (G-20-5)		
Agriculture (Storage, production	Rehabilitatio	
23. Importance of khettara	(G-23)	
<ul> <li>(1) Unique source for both of po (2) Unique source for irrigition (3) Main source for irrigation</li> </ul>	、 /	on (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettar	a	
1 Yes (1), No (2) If no, the (G-24)		(1)Constrains in landscape(3)Existence of other khettaras(2)Prohibited by law(4)Others

1. Khettara Number A-026 - (G-1)	2. Name of commune Mellaab (G-2)
3. Name of khettara [kchrene (G-3)	4. Location of khettara X = <u>559250.13</u> (G-4-1) Y = <u>98857.38</u> (G-4-2)
5. Number of families who [G-5-2] families have khettara water right	9. Histry of discharge
6. Number of beneficialies 9 (G-6-2) families	of khettara
7. Cycle of kehttara water right 8 (G-7-1) days	
8.Discharge of khettara (latest) 0 (G-8) lit/sec	(I-10)
10. History of khettara water flow (I-9)	
(2)No water in the last two-decade(6)The khet(3)No water in the last decadeyear in the(4)No water in the past five years(7)The discl	r in the dry season in the past five years tara has water flow, but the discharge of khettara is reduced each ne recent five years. harge of the khettara is constant harge of the khettara is increased
11. Total area of farmland [4] ha (IA-1)	12. Irrigated area by the khettara (IA-3)
13. The condition of roads 2 appropriate (1) (G-15) not appropriate (2)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service appropriate (1) (G-17) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association Yes (1) (G-21) No (2)	If yes, Name of G-22
18. Situation of khettara Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit       80 (E-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	
Khettara as open channel 140 (E-2-1)	
Principal and secondary100 (E-4-2)irrigation canal0 (E-4-2)	
khettara (M-7)	(m) Rehabilitation length of principal (m) irrigation canal (M-8)
20. Influence of desertification	
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification Open channel kł	it [I-2] Irrigation canals [1] (I-7)
21.Demandes of habitants (water resources)	Yes (1), No (2)
Rehabilitation of khettara 1 (G-19-1)	Protection dike against flood 1 (G-19-4)
Installing pump 1 (G-19-2) C Rehabilitation of irrigation canal 1 (G-19-3)	Construction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual and social suppo	ort) Yes (1), No (2)
Agriculture (storage,production, transporttion of pr Rehabilitat	School         1         (G-20-4)           roduct , etc.)         2         (G-20-1)         Sanitary system         2         (G-20-5)           ion of roads         1         (G-20-2)         Hospital         1         (G-20-6)
	ectric supply 1 (G-20-3) Others 2 (G-20-7)
23. Importance of khettara (G-23) (1) Unique source for both of potable water and irriga (2) Unique source for irrigation (3) Main source for irrigation	ation (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettara Yes (1), No (2) If no, the reason	(1)Constrains in landscape (3)Existence of other khettaras
(G-24) (G-25)	(2)Prohibited by law (4)Others

1. Khettara Number A-027 - (G-1)	コ  :	2. Name of commune	Mellaab (G-2)	
3. Name of khettara Touflguir (G-3)	'	4. Location of khettara	X = <u>557747.21</u> (G-4-1) Y = <u>97188.27</u> (G-4-2)	
5. Number of families who [6-5-2]		9. Histry of discharge	1975: tarie	
6. Number of beneficialies 14 (G-6-2)	families	of khettara		
7. Cycle of kehttara water right 11 (G-7-1)	days			
8.Discharge of khettara (latest) 0 (G-8)	it/sec	(I-10	)	
10. History of khettara water flow	(I-9)			
(2)No water in the last two-decade(6)Th(3)No water in the last decadeye(4)No water in the past five years(7)Th	he khettara ear in the r he discharg	the dry season in the past five a has water flow, but the disc recent five years. ge of the khettara is constant ge of the khettara is increase	harge of khettara is reduced each	
11. Total area of farmland [10] ha (IA-1)	,	12. Irrigated area by the	e khettara [] <sub>ha</sub> (IA-3)	
13. The condition of roads 2 appropriate ( (G-15) not appropriate		14.The condition of scl	hools 1 appropriate (1) (G-16) <sup>not</sup> appropriate (2)	
15.Sanitary service 2 appropriate ( (G-17) not appropria		16.Facility of electricity telecomunication	v and 2 appropriate (1) (G-18) not appropriate (2)	
	′es (1), lo (2)	If yes, Name of Association	(G-22)	
18. Situation of khettara Lengt	h (m)	Section hight(m	on of khettara (average) n) : width (m)	
	E-1-1-1) E-1-1-2)			
• • • • • • • • • • • • • • • • • • •	E-2-1)	(E-2-		
	E-4-2-1) E-4-2-2)		· · · ·	
19. Rehabilitation Rehabilitation length of		``		
	(n I-7)	n) Rehabilitation irrigation cana	length of principal (m) I (M-8)	
20. Influence of desertification				
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertificationGallery in c Gallery of c Open chan	conduit		Regulation pond (I-5) rrigation canals 1 (I-7)	
21.Demandes of habitants (water resources)		Yes (1), No (2)		
Rehabilitation of khettara 1 (G-19-1	1)	Protection of	like against flood 1 (G-19-4)	
Installing pump 1 (G-19-2 Rehabilitation of irrigation canal 1 (G-19-3		struction of public wells fo	or domestic water 1 (G-19-5) Others 2 (G-19-6)	
22.Demandes of habitants (Aglicultual and social	support)	Yes (1), No (2)		
Agriculture (storage,production, transporttion Reha	abilitation	n of roads 1 (G-20-2)	School         2         (G-20-4)           Sanitary system         1         (G-20-5)           Hospital         1         (G-20-6)	
	Electr	ric supply 1 (G-20-3)	Others 2 (G-20-7)	
23. Importance of khettara (G-23 (1) Unique source for both of potable water an (2) Unique source for irrigition (3) Main source for irrigation	,	on (4) Partial source fo (5) Supplementary s (6) Neglected		
24. Possibility of extension of khettara		1)Constrains in landages	(2) Eviptones of other libertores	
Yes (1), No (2) If no, the reason (G-24)		<ol> <li>Constrains in landscape</li> <li>Prohibited by law</li> </ol>	<ul> <li>(3)Existence of other khettaras</li> <li>(4)Others</li> </ul>	
1. Khettara Number A-028 - (G-1)		2. Name of commun	e Mellaa (G-2)	b
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3. Name of khettara [gr N'outta (G-3)		4. Location of khetta	ra X = Y =	559980.03 (G-4-1) 101261.25 (G-4-2)
5. Number of families who 20 (G-5-2)		9. Histry of discharge of khettara	-	
6. Number of beneficialies 50 (G-6-2)	families	or knettara		
7. Cycle of kehttara water right (G-7-1)	days			
8.Discharge of khettara (latest) 0 (G-8)	lit/sec	(I-	10)	
10. History of khettara water flow	(I-9)			
(1)No water from 1950s or 1970s.(5) No water in the dry season in the past five years(2)No water in the last two-decade(6)The khettara has water flow, but the discharge of khettara is reduced each(3)No water in the last decadeyear in the recent five years.(4)No water in the past five years(7)The discharge of the khettara is constant(8)The discharge of the khettara is increased				ettara is reduced each
11. Total area of farmland 5.2 ha (IA-1)		12. Irrigated area by	the khettara	a <u>4.2</u> ha (IA-3)
13. The condition of roads 2 appropriate (G-15) not appropriate		14.The condition of		appropriate (1) G-16) not appropriate (2)
15.Sanitary service 2 appropriate (G-17) not appropri	· ·	16.Facility of electric telecomunication	- 4	2 appropriate (1) G-18) <sup>not</sup> appropriate (2)
	Yes (1), No (2)	If yes, Name of Association	(G-22)	
18 Situation of khettara	th (m)	Se hight		ttara (average) width (m)
	(E-1-1-1)	) <u> </u>	·1-4-1)	<u>1.5</u> (E-1-5-1)
	(E-1-1-2)	·····	-1-4-2)	0 (E-1-5-2)
	(E-2-1)	0.4 (E·		0.4 (E-2-3)
	(E-4-2-1) (E-4-2-2)		-4-3-1) -4-3-2)	0.5 (E-4-1-1) 0 (E-4-1-2)
19. Rehabilitation Rehabilitation length of khettara	л-7) (I	m) Rehabilitation irrigation ca	-	principal (m) (M-8)
20. Influence of desertification				
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertificationGallery in Gallery of Open chai	conduit	<u>2</u> (I-2)	Regulation	
21.Demandes of habitants (water resources)		Yes (1), No (2)		
Rehabilitation of khettara 1 (G-19- Installing pump 1 (G-19-	2) Cor	Protectic nstruction of public wells		c water 1 (G-19-5)
Rehabilitation of irrigation canal 1 (G-19-	,			Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual and social	support	) Yes (1), No (2)		School 1 (G-20-4)
Agriculture (storage,production, transporttio Ref	nabilitation	luct , etc.) <u>1</u> (G-20- n of roads <u>1</u> (G-20- ric supply <u>1</u> (G-20-	-2)	y system 2 (G-20-5) Hospital 1 (G-20-6) Others 2 (G-20-7)
23. Importance of khettara (G-2 (1) Unique source for both of potable water a (2) Unique source for irrigition (3) Main source for irrigation	3)		e for irrigation	
24. Possibility of extension of khettara Yes (1), No (2) If no, the reason (G-24)		(1)Constrains in landsca (2)Prohibited by law	ape (3)Exist (4)Othe	tence of other khettaras ers

1. Khettara Number A-029 - (G-1)	2.		ellaab G-2)
	-+	, ,	,
3. Name of khettara (G-3)	4.		$\begin{array}{l} X = & \underline{556237.46} & (G-4-1) \\ Y = & \underline{94305.72} & (G-4-2) \end{array}$
5. Number of families who [10] (G-5-2) families have khettara water right		. Histry of discharge	
6. Number of beneficialies 25 (G-6-2) fa	amilies 01	f khettara	
7. Cycle of kehttara water right 6 (G-7-1)	days		
8.Discharge of khettara (latest) 0 (G-8) lit	/sec	(I-10)	
10. History of khettara water flow (I	I-9)		
(2)No water in the last two-decade(6)The(3)No water in the last decadeyea(4)No water in the past five years(7)The	e khettara l ar in the re discharge	he dry season in the past five yea has water flow, but the discharge cent five years. e of the khettara is constant e of the khettara is increased	ars e of khettara is reduced each
11. Total area of farmland 2 ha (IA-1)	1:	2. Irrigated area by the khe	ettara <u>2</u> ha (IA-3)
13. The condition of roads 2 appropriate (1) (G-15) not appropriate		14.The condition of schools	S 2 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 appropriate (1) (G-17) not appropriate		16.Facility of electricity and elecomunication	2 appropriate (1) (G-18) not appropriate (2)
		If yes, Name of G	-22)
18. Situation of khettara Length	(m)	Section of hight(m)	khettara (average) width (m)
Gallery of khettara (Gallery in catchment area and conduit       200 (E-catchment area and conduit	-1-1-1) -1-1-2)	1 (E-1-4-1) 0 (E-1-4-2)	0.5 (E-1-5-1) 0 (E-1-5-2)
Khettara as open channel 300 (E-		<u> </u>	0.5 (E-2-3)
Principal and secondary 300 (E- irrigation canal 0) (E-	-4-2-1) -4-2-2)	0.5 (E-4-3-1) 0 (E-4-3-2)	0.5 (E-4-1-1) 0 (E-4-1-2)
19. Rehabilitation Rehabilitation length of	,		
khettara (M-7	(m) 7)	) Rehabilitation leng irrigation canal	th of principal (m) (M-8)
20. Influence of desertification			
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification Open chann	onduit	<u>3</u> (I-2) Irriga	Ilation pond <u>1</u> (I-5) tion canals <u>1</u> (I-7)
21.Demandes of habitants (water resources)		Yes (1), No (2)	
Rehabilitation of khettara 1 (G-19-1)		Protection dike a	against flood 1 (G-19-4)
Installing pump 1 (G-19-2) Rehabilitation of irrigation canal 1 (G-19-3)		truction of public wells for dor	mestic water         1         (G-19-5)           Others         1         (G-19-6)
22.Demandes of habitants (Aglicultual and social su	upport)	Yes (1), No (2)	
Agriculture (storage,production, transporttion or Rehab	bilitation of	of roads 1 (G-20-2)	School         1         (G-20-4)           anitary system         2         (G-20-5)           Hospital         1         (G-20-6)
		c supply 1 (G-20-3)	Others 2 (G-20-7)
23. Importance of khettara (G-23) (1) Unique source for both of potable water and (2) Unique source for irrigtion (3) Main source for irrigation		<ul><li>(4) Partial source for irrig</li><li>(5) Supplementary source</li><li>(6) Neglected</li></ul>	
24. Possibility of extension of khettara			
G-24) Yes (1), No (2) If no, the reason (G-25) (G-25)			)Existence of other khettaras )Others

1. Khettara Number A-030 -	2. Name of commune Mellaab		
	2. Name of commune Mellaab (G-2)		
(G-1)			
3. Name of khettara Talghoumte (G-3)	4. Location of khettara $X = 562805.85$ (G-4-1) Y = 93880 (G-4-2)		
5. Number of families who Anter the Anter Science (G-5-2) families (G-5-2) families	9. Histry of discharge 1998: tarie		
6. Number of beneficialies 25 (G-6-2) families	of khettara		
7. Cycle of kehttara water right 7 (G-7-1) days			
8.Discharge of khettara (latest) 0 (G-8) lit/sec	(I-10)		
10. History of khettara water flow (I-9)			
(2)No water in the last two-decade(6)The khetta(3)No water in the last decadeyear in the(4)No water in the past five years(7)The discha	in the dry season in the past five years ara has water flow, but the discharge of khettara is reduced each e recent five years. arge of the khettara is constant arge of the khettara is increased		
11. Total area of farmland [IA-1] ha	12. Irrigated area by the khettara Oha (IA-3)		
13. The condition of roads 2 appropriate (1) (G-15) not appropriate (2)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)		
15.Sanitary service 2 appropriate (1) (G-17) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)		
17. Existence of Association Yes (1), (G-21) No (2)	If yes, Name of G-22		
18. Situation of khettara Length (m)	Section of khettara (average) hight(m) width (m)		
Gallery of khettara (Gallery in catchment area and conduit       500 (E-1-1-1)         0 (E-1-1-2)			
Khettara as open channel 800 (E-2-1)	1.2 (E-2-2) 0.6 (E-2-3)		
Principal and secondary1500 (E-4-2-1)irrigation canal120 (E-4-2-2)			
19. Rehabilitation Rehabilitation length of (M-7)	(m) Rehabilitation length of principal (m) irrigation canal (M-8)		
20. Influence of desertification			
(1)Significant damage by desertification (2)Partial damage by desertification Gallery of conduit			
(3)Negligible damage by desertification Open channel khe			
21.Demandes of habitants (water resources ) Yes (1), No (2)			
Rehabilitation of khettara1(G-19-1)Protection dike against flood1(G-19-4)Installing pump1(G-19-2)Construction of public wells for domestic water1(G-19-5)Rehabilitation of irrigation canal1(G-19-3)Others2(G-19-6)			
22.Demandes of habitants (Aglicultual and social support) Yes (1), No (2)			
Agriculture (storage,production, transporttion of product , etc.) 1 (G-20-1) Sanitary system 2 (G-20-4) Rehabilitation of roads 1 (G-20-2) Hospital 1 (G-20-6) Electric supply 1 (G-20-3) Others 2 (G-20-7)			
<ul> <li>23. Importance of khettara (G-23) <ul> <li>(1) Unique source for both of potable water and irrigation</li> <li>(2) Unique source for irrigation</li> <li>(3) Main source for irrigation</li> </ul> </li> <li>(4) Partial source for irrigation <ul> <li>(5) Supplementary source for irrigation</li> <li>(6) Neglected</li> </ul> </li> </ul>			
24. Possibility of extension of khettara Yes (1), No (2) If no, the reason (G-24) (G-24)	(1)Constrains in landscape(3)Existence of other khettaras(2)Prohibited by law(4)Others		

1. Khettara Number A-031 (G-1)	MP	2. Name of commune Mellaab (G-2)	
(0-1)			
3. Name of khettara Bou ou (G-3)	Iguiss	4. Location of khettara $X = 554553.15$ (G-4-1) Y = 92740.78 (G-4-2)	
5. Number of families who have khettara water right	2 (G-5-2) families	9. Histry of discharge <sup>0</sup>	
6. Number of beneficialies	I2 (G-6-2) families	of khettara	
7. Cycle of kehttara water right	10 (G-7-1) days		
8.Discharge of khettara (latest)	.4 (G-8) lit/sec	(I-10)	
10. History of khettara water flow 6	(I-9)		
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The discha	n the dry season in the past five years a has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased	
11. Total area of farmland	8 ha A-1)	12. Irrigated area by the khettara [4]ha (IA-3)	
13. The condition of roads (G-15	appropriate (1) not appropriate (2)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)	
15.Sanitary service 2 (G-17	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)	
17. Existence of Association	2 Yes (1), (G-21) No (2)	If yes, Name of G-22	
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)	
Gallery of khettara (Gallery in catchment area and conduit	40 (E-1-1-1) 20 (E-1-1-2)	) <u>0.3</u> (E-1-4-1) <u>0.5</u> (E-1-5-1)	
Khettara as open channel	<u>0</u> (E-2-1)	0 (E-2-2) 0 (E-2-3)	
Principal and secondary irrigation canal	500 (E-4-2-1 500 (E-4-2-2		
19. Rehabilitation Rehabilitation len khettara	gth of 60 ( (M-7)	m) Rehabilitation length of principal 0 (m) irrigation canal (M-8)	
20. Influence of desertification			
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	(I-2) Irrigation canals 1 (I-7)	
21.Demandes of habitants (water reso	ources)	Yes (1), No (2)	
Rehabilitation of khettara 1 Installing pump 2 Rehabilitation of irrigation canal 2	(G-19-1) (G-19-2) Cor (G-19-3)	Protection dike against flood 2 (G-19-4) nstruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)	
22.Demandes of habitants (Aglicultua	and social support		
Agriculture (storage,production	Rehabilitation		
23. Importance of khettara       3       (G-23)         (1) Unique source for both of potable water and irrigation       (4) Partial source for irrigation         (2) Unique source for irrigation       (5) Supplementary source for irrigation         (3) Main source for irrigation       (6) Neglected			
24. Possibility of extension of khettara 1 Yes (1), No (2) If no, the (G-24)	e reason	(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others	

1. Khettara Number A-032 - (G-1)	2. Name of commune Mellaab (G-2)
3. Name of khettara Tilila Ait (G-3)	4. Location of khettara X = <u>556847</u> (G-4-1) Y = <u>91635.51</u> (G-4-2)
5. Number of families who14 (G-5-2) families have khettara water right	9. Histry of discharge
6. Number of beneficialies 14 (G-6-2) families	of khettara
7. Cycle of kehttara water right 10 (G-7-1) days	
8.Discharge of khettara (latest) 0 (G-8) lit/sec	(I-10)
10. History of khettara water flow (I-9)	
(2)No water in the last two-decade(6)The khett(3)No water in the last decadeyear in the(4)No water in the past five years(7)The disch	r in the dry season in the past five years ara has water flow, but the discharge of khettara is reduced each re recent five years. harge of the khettara is constant harge of the khettara is increased
11. Total area of farmland 1.5 ha (IA-1)	12. Irrigated area by the khettara 0.5 ha (IA-3)
13. The condition of roads 2 appropriate (1) (G-15) not appropriate (2)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 appropriate (1) (G-17) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association Yes (1), (G-21) No (2)	If yes, Name of G-22
18. Situation of khettara Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit30 (E-1-1- 130 (E-1-1-	
Khettara as open channel [160 (E-2-1)	
Principal and secondary300 (E-4-2-irrigation canal0 (E-4-2-	1) 0.2 (E-4-3-1) 0.4 (E-4-1-1)
19. Rehabilitation Rehabilitation length of	
khettara (M-7)	(m) Rehabilitation length of principal (m) irrigation canal (M-8)
20. Influence of desertification	
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification Open channel kh	t (I-2) Irrigation canals 1 (I-7)
21.Demandes of habitants (water resources )	Yes (1), No (2)
Rehabilitation of khettara 1 (G-19-1)	Protection dike against flood 1 (G-19-4)
Installing pump 2 (G-19-2) C Rehabilitation of irrigation canal 2 (G-19-3)	onstruction of public wells for domestic water 1 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual and social suppo	
Agriculture (storage,production, transporttion of pr	
	ion of roads         1         (G-20-2)         Hospital         1         (G-20-6)           octric supply         1         (G-20-3)         Others         2         (G-20-7)
23. Importance of khettara (G-23) (1) Unique source for both of potable water and irriga (2) Unique source for irrigition (3) Main source for irrigation	tion (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettara Yes (1), No (2) If no, the reason	(1)Constrains in landscape (3)Existence of other khettaras
(G-24) (G-25)	(2)Prohibited by law (4)Others

1. Khettara Number A-033		2. Name of commune Mellaab (G-2)	
(G-1)			
3. Name of khettara N'touna (G-3)		4. Location of khettara $X = 562004.04$ (G-4-1) Y = 92011.38 (G-4-2)	
5. Number of families who 68 Address Addre	· · · ·	9. Histry of discharge 1987: tarie	
6. Number of beneficialies 8	0 (G-6-2) families	of khettara	
7. Cycle of kehttara water right	8 (G-7-1) days		
8.Discharge of khettara (latest)	0 (G-8) lit/sec	(I-10)	
10. History of khettara water flow	(I-9)		
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The dischar	n the dry season in the past five years a has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased	
11. Total area of farmland [](IA	6 ha -1)	12. Irrigated area by the khettara [ha (IA-3)	
13. The condition of roads 2 (G-15)	appropriate (1) not appropriate (2)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)	
15.Sanitary service 2 (G-17)	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)	
17. Existence of Association	(G-21) Yes (1), (2)	If yes, Name of G-22	
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)	
Gallery of khettara (Gallery in catchment area and conduit	500 (E-1-1-1) 0 (E-1-1-2)		
Khettara as open channel	500 (E-2-1)	1 (E-2-2) 0.4 (E-2-3)	
Principal and secondary irrigation canal	300 (E-4-2-1) 0 (E-4-2-2)		
19. Rehabilitation Rehabilitation leng khettara	ith of (M-7)	m) Rehabilitation length of principal (m) irrigation canal (M-8)	
20. Influence of desertification	· · · · ·		
(1)Significant damage by desertification (2)Partial damage by desertification	Gallery in catchme Gallery of conduit Open channel khe	(I-2) Irrigation canals 1 (I-7)	
21.Demandes of habitants (water reso	urces)	Yes (1), No (2)	
Rehabilitation of khettara 1 Installing pump 2 Rehabilitation of irrigation canal 2	(G-19-1) (G-19-2) Cor (G-19-3)	Protection dike against flood 1 (G-19-4) nstruction of public wells for domestic water (G-19-5) Others 2 (G-19-6)	
22.Demandes of habitants (Aglicultual	and social support	) Yes (1), No (2)	
School 1 (G-20-4)			
, ground o (otorago, production,	Rehabilitation		
23. Importance of khettara (1) Unique source for both of pot (2) Unique source for irrigition (3) Main source for irrigation	(G-23) able water and irrigation	on (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected	
24. Possibility of extension of khettara Yes (1), No (2) If no, the (G-24)		(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others	

1. Khettara Number A-034 - (G-1)		2. Name of commune Mellaab (G-2)	
(G-1)			
3. Name of khettara Noumgan (G-3)		4. Location of khettara X = <u>561706.73</u> (G-4-1) Y = <u>91393.465</u> (G-4-2)	
5. Number of families who 65 (G-5-2)		9. Histry of discharge 1987: tarie	
6. Number of beneficialies 80 (G-6-2)	families	of khettara	
7. Cycle of kehttara water right (G-7-1)	days		
8.Discharge of khettara (latest) 0 (G-8)	lit/sec	(I-10)	
10. History of khettara water flow	(I-9)		
(2)No water in the last two-decade(6)(3)No water in the last decade(4)No water in the past five years(7)	The khettar year in the The dischar	n the dry season in the past five years ra has water flow, but the discharge of khettara is reduced each recent five years. arge of the khettara is constant arge of the khettara is increased	
11. Total area of farmland [26] ha (IA-1)		12. Irrigated area by the khettara Oha (IA-3)	
13. The condition of roads 2 appropriate (G-15) not appropriate		14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)	
15.Sanitary service 2 appropriate (G-17) not appropri		16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)	
	Yes (1), No (2)	If yes, Name of Association (G-22)	ן
18. Situation of khettara Leng	th (m)	Section of khettara (average) hight(m) width (m)	
	(E-1-1-1)		
<u>;                                     </u>	(E-1-1-2) (E-2-1)	2) <u>1.4</u> (E-1-4-2) <u>0.6</u> (E-1-5-2) 1 (E-2-2) <u>0.6</u> (E-2-3)	
Principal and secondary 1000	(E-4-2-1)	······································	
	(E-4-2-2)		
19. Rehabilitation Rehabilitation length of khettara	(I M-7)	(m) Rehabilitation length of principal (m irrigation canal (M-8)	ı)
20. Influence of desertification			
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification Open cha	conduit	(I-2) Irrigation canals 1 (I-7)	
21.Demandes of habitants (water resources)		Yes (1), No (2)	
Rehabilitation of khettara 1 (G-19	-1)	Protection dike against flood 1 (G-19-4	4)
Installing pump 1 (G-19 Rehabilitation of irrigation canal 1 (G-19		nstruction of public wells for domestic water 1 (G-19-4 Others 1 (G-19-4	
22.Demandes of habitants (Aglicultual and social	support	t) Yes (1), No (2)	
Agriculture (storage,production, transporttic Rel	habilitatior	on of roads 1 (G-20-2) Hospital 1 (G-20	)-5)
	Elect	tric supply 1 (G-20-3) Others 2 (G-20	
23. Importance of khettara (G-2 (1) Unique source for both of potable water a (2) Unique source for irrigition (3) Main source for irrigation	,	ion (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected	
24. Possibility of extension of khettara Yes (1), No (2) If no, the reason	(	(1)Constrains in landscape (3)Existence of other khettaras	5
		(2)Prohibited by law (4)Others	

1. Khettara Number A-035 -	2. Name of commune Mellaab (G-2)		
(G-1)			
3. Name of khettara Bouyzemrane (G-3)	4. Location of khettara $X = 555388.62$ (G-4-1) Y = 89763.67 (G-4-2)		
5. Number of families who3 (G-5-2) families have khettara water right	9. Histry of discharge 1973: tarie		
6. Number of beneficialies 3 (G-6-2) families	of khettara		
7. Cycle of kehttara water right 9 (G-7-1) days	]		
8.Discharge of khettara (latest) 0 (G-8) lit/sec	(I-10)		
10. History of khettara water flow (I-9)			
(2)No water in the last two-decade(6)The khetta(3)No water in the last decadeyear in the(4)No water in the past five years(7)The discharge	in the dry season in the past five years ara has water flow, but the discharge of khettara is reduced each e recent five years. arge of the khettara is constant arge of the khettara is increased		
11. Total area of farmland 6 ha (IA-1)	12. Irrigated area by the khettara [1]ha (IA-3)		
13. The condition of roads 2 appropriate (1) (G-15) not appropriate (2)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)		
15.Sanitary service 2 appropriate (1) (G-17) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)		
17. Existence of Association Yes (1), (G-21) No (2)	If yes, Name of G-22)		
18. Situation of khettara Length (m)	Section of khettara (average) hight(m) width (m)		
Gallery of khettara (Gallery in catchment area and conduit       30 (E-1-1-2)         0 (E-1-1-2)			
Khettara as open channel [170] (E-2-1)	6 (E-2-2) 1 (E-2-3)		
Principal and secondary300 (E-4-2-7)irrigation canal0 (E-4-2-2)	1) <u>0.6</u> (E-4-3-1) <u>0.5</u> (E-4-1-1)		
19. Rehabilitation Rehabilitation length of khettara (M-7)	(m) Rehabilitation length of principal (m) irrigation canal (M-8)		
20. Influence of desertification			
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification	(I-2) Irrigation canals 1 (I-7)		
Open channel khettara     1     (I-3)       21.Demandes of habitants (water resources )     Yes (1), No (2)			
Rehabilitation of khettara       1       (G-19-1)       Protection dike against flood       2       (G-19-4)         Installing pump       1       (G-19-2)       Construction of public wells for domestic water       1       (G-19-5)         Rehabilitation of irrigation canal       1       (G-19-3)       Others       2       (G-19-6)			
22.Demandes of habitants (Aglicultual and social support) Yes (1), No (2)			
Agriculture (storage,production, transporttion of product , etc.)Content (G-20-1)School(G-20-4)Rehabilitation of roads(G-20-2)(G-20-2)Hospital(G-20-5)Electric supply(G-20-3)Others(G-20-7)			
<ul> <li>23. Importance of khettara (G-23)</li> <li>(1) Unique source for both of potable water and irrigation</li> <li>(2) Unique source for irrigation</li> <li>(3) Main source for irrigation</li> <li>(4) Partial source for irrigation</li> <li>(5) Supplementary source for irrigation</li> <li>(6) Neglected</li> </ul>			
24. Possibility of extension of khettara Yes (1), No (2) If no, the reason (G-25) (G-24)	(1)Constrains in landscape(3)Existence of other khettaras(2)Prohibited by law(4)Others		

1. Khettara Number A-036	-	2. Name of commune Mellaab (G-2)
(G-1)		
3. Name of khettara Tigratine (G-3)		4. Location of khettara $X = 561501.18$ (G-4-1) Y = 91737.18 (G-4-2)
5. Number of families who 65 (G	-5-2) families	9. Histry of discharge 1986: tarie
6. Number of beneficialies 80 (G	-6-2) families	of khettara
7. Cycle of kehttara water right 8 (G	-7-1) days	
8.Discharge of khettara (latest) 0 (G	-8) lit/sec	(I-10)
10. History of khettara water flow	(I-9)	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The dischar	n the dry season in the past five years ra has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased
11. Total area of farmland [IA-1]	ha	12. Irrigated area by the khettara []ha (IA-3)
	opriate (1) ppropriate (2)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)
	opriate (1) ppropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association G	Yes (1), -21) No (2)	If yes, Name of G-22
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in	120 (E-1-1-1)	
catchment area and conduit	100 (E-1-1-2) 200 (E-2-1)	
		1 (E-2-2) 0.6 (E-2-3)
Principal and secondary irrigation canal	<u>600</u> (E-4-2-1) 0 (E-4-2-2)	
19. Rehabilitation Rehabilitation length of khettara	(M-7)	m) Rehabilitation length of principal (m) irrigation canal (M-8)
20. Influence of desertification		
(2)Partial damage by desertification Galle	ery in catchme ery of conduit n channel khe	(I-2) Irrigation canals 1 (I-7)
21.Demandes of habitants (water resources	5)	Yes (1), No (2)
Rehabilitation of khettara 1	(G-19-1)	Protection dike against flood 1 (G-19-4)
	(G-19-2) Cor (G-19-3)	nstruction of public wells for domestic water 1 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual and	social support	
Agriculture (storage,production, trans	Rehabilitation	n of roads 1 (G-20-2) Hospital (G-20-6)
	Elect	tric supply 1 (G-20-3) Others 2 (G-20-7)
23. Importance of khettara (1) Unique source for both of potable v (2) Unique source for irrigition (3) Main source for irrigation	(G-23) vater and irrigation	on (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettara		
Yes (1), No (2) If no, the reaso (G-24)		(1)Constrains in landscape(3)Existence of other khettaras(2)Prohibited by law(4)Others

1. Khettara Number A-037 (G-1)	] -	2. Name of commune Mellaab (G-2)
3. Name of khettara Touroug (G-3)	gue	4. Location of khettara $X = 565289.15$ (G-4-1) Y = 107421.27 (G-4-2)
5. Number of families who 400 400	,	9. Histry of discharge
6. Number of beneficialies 850	0 (G-6-2) families	of khettara
7. Cycle of kehttara water right	0 (G-7-1) days	
8.Discharge of khettara (latest)	0 (G-8) lit/sec	(I-10)
10. History of khettara water flow	(I-9)	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The dischar	n the dry season in the past five years a has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased
11. Total area of farmland [IA	200 ha -1)	12. Irrigated area by the khettara [0]ha (IA-3)
13. The condition of roads (G-15)	appropriate (1) not appropriate (2)	14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 (G-17)	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication1 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association	(G-21) Yes (1), (2)	If yes, Name of G-22
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit	1500 (E-1-1-1) 1000 (E-1-1-2)	
Khettara as open channel	300 (E-2-1)	1 (E-2-2) [1] (E-2-3)
Principal and secondary	4000 (E-4-2-1)	
irrigation canal	0 (E-4-2-2)	) 0 (E-4-3-2) 0 (E-4-1-2)
19. Rehabilitation Rehabilitation leng khettara	th of (M-7)	m) Rehabilitation length of principal (m) irrigation canal (M-8)
20. Influence of desertification		
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification	Gallery in catchme Gallery of conduit Open channel khe	(I-2) Irrigation canals 2 (I-7)
21.Demandes of habitants (water resou	urces)	Yes (1), No (2)
Rehabilitation of khettara	(G-19-1)	Protection dike against flood 1 (G-19-4)
Installing pump 2 Rehabilitation of irrigation canal 1	(G-19-2) Cor (G-19-3)	nstruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual	and social support	
Agriculture (storage,production,	Rehabilitation	n of roads 2 (G-20-2) Hospital 1 (G-20-6)
		tric supply 2 (G-20-3) Others 1 (G-20-7)
23. Importance of khettara (1) Unique source for both of pot (2) Unique source for irrigtion (3) Main source for irrigation	(G-23) able water and irrigation	on (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettara		
Yes (1), No (2) If no, the (G-24)		(1)Constrains in landscape(3)Existence of other khettaras(2)Prohibited by law(4)Others

1. Khettara Number A-038 - (G-1)		2. Name of commune Mellaab (G-2)	
3. Name of khettara Assallab (G-3)			65397.15 (G-4-1) 07043.12 (G-4-2)
5. Number of families who 400 (G-5-2) have khettara water right		9. Histry of discharge 1970: tarie	
6. Number of beneficialies 850 (G-6-2)	families	of khettara	
7. Cycle of kehttara water right 10 (G-7-1)	days		
8.Discharge of khettara (latest) 0 (G-8)	lit/sec	(I-10)	
10. History of khettara water flow	(I-9)		
(2)No water in the last two-decade(6)(3)No water in the last decade(4)No water in the past five years(7)	The khettar year in the The dischaı	n the dry season in the past five years a has water flow, but the discharge of khettal recent five years. rge of the khettara is constant rge of the khettara is increased	ra is reduced each
11. Total area of farmland [IA-1]		12. Irrigated area by the khettara	0ha (IA-3)
13. The condition of roads [1] appropriate (G-15) not appropriate		14.The condition of schools 1 (G-1)	appropriate (1) 6) not appropriate (2)
15.Sanitary service 2 appropriate (G-17) not appropriate		16.Facility of electricity and telecomunication	appropriate (1) 8) not appropriate (2)
	Yes (1), No (2)	If yes, Name of G-22	
18. Situation of khettara Leng	ıth (m)	Section of khettar hight(m)	a (average) width (m)
	(E-1-1-1) (E-1-1-2)	` /	0.5 (E-1-5-1) 0.5 (E-1-5-2)
•	(E-2-1)	0 (E-2-2)	0 (E-2-3)
	(E-4-2-1) (E-4-2-2)		0.5 (E-4-1-1) 0 (E-4-1-2)
19. Rehabilitation Rehabilitation length of khettara	(I M-7)	m) Rehabilitation length of prin	ncipal (m) (M-8)
20. Influence of desertification	/	5	
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertificationGallery in Gallery of Open cha	conduit	(I-2) Irrigation can	
21.Demandes of habitants (water resources)		Yes (1), No (2)	
Rehabilitation of khettara 1 (G-19 Installing pump 1 (G-19 Rehabilitation of irrigation canal 1 (G-19	-2) Cor	Protection dike against flon nstruction of public wells for domestic wat Oth	
22.Demandes of habitants (Aglicultual and socia	l support	) Yes (1), No (2)	
Agriculture (storage,production, transporttion	on of proc	Sanitary sy n of roads 2 (G-20-2) Ho	spital 1 (G-20-6)
23. Importance of khettara (G-2 (1) Unique source for both of potable water a (2) Unique source for irrigition (3) Main source for irrigation 24. Possibility of extension of khettara	23)		others 1 (G-20-7)
Yes (1), No (2) If no, the reason		(1)Constrains in landscape(3)Existend(2)Prohibited by law(4)Others	ce of other khettaras

1. Khettara Number A-039 - (G-1)		2. Name of commune Mellaab (G-2)	
3. Name of khettara Astif (G-3)		4. Location of khettara $X = 556005.5$ (G-4-1) Y = 103107.68 (G-4-2)	
5. Number of families who 44 (G-5-2	2) families	9. Histry of discharge	
6. Number of beneficialies 9 (G-6-2	2) families	of khettara	
7. Cycle of kehttara water right 6 (G-7-1	) days		
8.Discharge of khettara (latest) 0 (G-8)	lit/sec	(I-10)	
10. History of khettara water flow	(I-9)		
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> <li>(5) No water in the dry season in the past five years</li> <li>(6)The khettara has water flow, but the discharge of khettara is reduced each year in the recent five years.</li> <li>(7)The discharge of the khettara is constant</li> <li>(8)The discharge of the khettara is increased</li> </ul>			
11. Total area of farmland [13] ha	l	12. Irrigated area by the khettara [5]ha (IA-3)	
13. The condition of roads 2 appropria (G-15) not appropria		14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)	
15.Sanitary service 2 appropria (G-17) not appropria	( )	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)	
17. Existence of Association (G-21)	Yes (1), No (2)	If yes, Name of G-22	
18 Situation of khettara	ngth (m)	Section of khettara (average) hight(m) width (m)	
	) (E-1-1-1) ) (E-1-1-2)		
	) (E-2-1)	0.7 (E-2-2) 0.4 (E-2-3)	
	) (E-4-2-1 ) (E-4-2-2		
19. Rehabilitation Rehabilitation length of			
khettara	(M-7)	m) Rehabilitation length of principal (m) irrigation canal (M-8)	
20. Influence of desertification			
(1)Significant damage by desertification (2)Partial damage by desertification (2)Negligible damage by desertification	n catchme of conduit annel khe	(I-2) Irrigation canals 1 (I-7)	
21.Demandes of habitants (water resources)		Yes (1), No (2)	
Rehabilitation of khettara 1 (G-1	9-1)	Protection dike against flood 1 (G-19-4)	
Installing pump 1 (G-1 Rehabilitation of irrigation canal 1 (G-1	9-2) Cor	nstruction of public wells for domestic water 1 (G-19-5) Others 2 (G-19-6)	
22.Demandes of habitants (Aglicultual and soci	al support	i) Yes (1), No (2)	
Agriculture (storage,production, transport	tion of proc	School <u>1</u> (G-20-4) duct , etc.) <u>2</u> (G-20-1) Sanitary system <u>2</u> (G-20-5)	
	ehabilitatio	duct , etc.)         2         (G-20-1)         Sanitary system         2         (G-20-5)           n of roads         1         (G-20-2)         Hospital         1         (G-20-6)           tric supply         1         (G-20-3)         Others         2         (G-20-7)	
23. Importance of khettara (G (1) Unique source for both of potable water (2) Unique source for irrigtion (3) Main source for irrigation	-23) r and irrigation	on (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected	
24. Possibility of extension of khettara Yes (1), No (2) If no, the reason		(1)Constrains in landscape (3)Existence of other khettaras	
(G-24)	G-25)	(2)Prohibited by law (4)Others	

1. Khettara Number A-040 - (G-1)	2. Name of commune Mellaab (G-2)
3. Name of khettara Merroucha (G-3)	4. Location of khettara $X = 548614.22$ (G-4-1) Y = 106928.09 (G-4-2)
5. Number of families who [30] (G-5-2) fam have khettara water right	9. Histry of discharge
6. Number of beneficialies 120 (G-6-2) fam	ilies of khettara
7. Cycle of kehttara water right 13 (G-7-1) day	ys
8.Discharge of khettara (latest) 0 (G-8) lit/s	(I-10)
10. History of khettara water flow (I-S	3)
(2)No water in the last two-decade(6)The k(3)No water in the last decadeyear i(4)No water in the past five years(7)The d	rater in the dry season in the past five years hettara has water flow, but the discharge of khettara is reduced each in the recent five years. lischarge of the khettara is constant lischarge of the khettara is increased
11. Total area of farmland [IA-1] ha	12. Irrigated area by the khettara [4]ha (IA-3)
13. The condition of roads (G-15) appropriate (1) not appropriate (1)	2) 14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 appropriate (1) (G-17) not appropriate (	2)16.Facility of electricity and telecomunication1 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association Yes (G-21) No (	
18. Situation of khettara Length (r	m) Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit       500 (E-1         (E-1)       0 (E-1)	-1-1) <u>1.7</u> (E-1-4-1) <u>0.8</u> (E-1-5-1)
Khettara as open channel 1700 (E-2	
Principal and secondary1800 (E-4irrigation canal0 (E-4	
19. Rehabilitation Rehabilitation length of (M-7)	(m) Rehabilitation length of principal (m) irrigation canal (M-8)
20. Influence of desertification	
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification Open channel	duit <u>3</u> (I-2) Irrigation canals <u>1</u> (I-7)
21.Demandes of habitants (water resources)	Yes (1), No (2)
Rehabilitation of khettara 1 (G-19-1) Installing pump 1 (G-19-2) Rehabilitation of irrigation canal 1 (G-19-3)	Protection dike against flood 1 (G-19-4) Construction of public wells for domestic water (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual and social sup	
	School         2         (G-20-4)           product , etc.)         2         (G-20-1)         Sanitary system         1         (G-20-5)           itation of roads         2         (G-20-2)         Hospital         1         (G-20-6)           Electric supply         2         (G-20-3)         Others         2         (G-20-7)
23. Importance of khettara (G-23) (1) Unique source for both of potable water and ir (2) Unique source for irrigition (3) Main source for irrigation	
24. Possibility of extension of khettara Yes (1), No (2) If no, the reason (G-24) (G-24)	<ul> <li>(1)Constrains in landscape</li> <li>(3)Existence of other khettaras</li> <li>(2)Prohibited by law</li> <li>(4)Others</li> </ul>

1. Khettara Number A-041 (G-1)	MP	2. Name of commune	Ferkla Soufla (G-2)
3. Name of khettara Bakass (G-3)	sia	4. Location of khettara	X = 542760.1 (G-4-1) Y = 112078.73 (G-4-2)
5. Number of families who 20 have khettara water right	0 (G-5-2) families	9. Histry of discharge	Y = 112078.73 (G-4-2)
_	0 (G-6-2) families	of khettara	
7. Cycle of kehttara water right	9 (G-7-1) days		
8.Discharge of khettara (latest) 19	.6 (G-8) lit/sec	(I-10)	
10. History of khettara water flow 7	(1-9)		
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The discha	n the dry season in the past five a has water flow, but the discha recent five years. rge of the khettara is constant rge of the khettara is increased	e years arge of khettara is reduced each
11. Total area of farmland [] (IA	40 ha 1-1)	12. Irrigated area by the	khettara <u>20</u> ha (IA-3)
13. The condition of roads [2 (G-15)	appropriate (1) not appropriate (2)	14.The condition of sch	ools 2 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 (G-17)	appropriate (1) not appropriate (2)	16.Facility of electricity a telecomunication	and 1 appropriate (1) (G-18) not appropriate (2)
17. Existence of Association	1 Yes (1), (G-21) No (2)	If yes, Name of Association	(G-22)
18. Situation of khettara	Length (m)	Sectior hight(m)	n of khettara (average) width (m)
Gallery of khettara (Gallery in catchment area and conduit	120 (E-1-1-1) 2880 (E-1-1-2)	) <u>1.7</u> (E-1-4	-1) <u>0.6</u> (E-1-5-1)
Khettara as open channel	21 (E-2-1)	0.52 (E-2-2	) 0.5 (E-2-3)
Principal and secondary irrigation canal	300 (E-4-2-1 400 (E-4-2-2		,
19. Rehabilitation Rehabilitation leng	gth of 350 ( (M-7)	, `	ength of principal 1800 (m) (M-8)
20. Influence of desertification		-	
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	<u>3</u> (I-2) Irr	egulation pond <u>3</u> (I-5) igation canals <u>3</u> (I-7)
21.Demandes of habitants (water reso	urces)	Yes (1), No (2)	
Rehabilitation of khettara 1 Installing pump 2 Rehabilitation of irrigation canal 1	(G-19-1) (G-19-2) Cor (G-19-3)	Protection dil nstruction of public wells for	ke against flood 2 (G-19-4) domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual	and social support	) Yes (1), No (2)	
Agriculture (storage,production,	Rehabilitatio	duct , etc.) 2 (G-20-1) n of roads 1 (G-20-2) tric supply 2 (G-20-3)	School         1         (G-20-4)           Sanitary system         1         (G-20-5)           Hospital         1         (G-20-6)           Others         2         (G-20-7)
23. Importance of khettara 1 (1) Unique source for both of po (2) Unique source for irrigition (3) Main source for irrigation		on (4) Partial source for (5) Supplementary so (6) Neglected	
24. Possibility of extension of khettara 1 Yes (1), No (2) If no, the (G-24)	reason	(1)Constrains in landscape (2)Prohibited by law	(3)Existence of other khettaras (4)Others

1. Khettara Number A-042 (G-1)	MP	2. Name of commune	Ferkla Soufla (G-2)
3. Name of khettara Maamrya (G-3)		4. Location of khettara	X = 542942.8 (G-4-1) Y = 112504.57 (G-4-2)
5 Number of femilies who		9. Histry of discharge	0
6. Number of beneficialies 380 (G-	6-2) families	of khettara	
7. Cycle of kehttara water right 9 (G-	7-1) days		
8.Discharge of khettara (latest) 8.8 (G-	8) lit/sec	(I-10)	
10. History of khettara water flow 6	(I-9)		
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The dischar	a the dry season in the past five a has water flow, but the discha- recent five years. ge of the khettara is constant ge of the khettara is increased	arge of khettara is reduced each
11. Total area of farmland [120 (IA-1)	ha	12. Irrigated area by the	khettara <u>40</u> ha (IA-3)
	priate (1) propriate (2)	14.The condition of sch	ools 2 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 appro (G-17) not ap	priate (1) propriate (2)	16.Facility of electricity telecomunication	and 1 appropriate (1) (G-18) not appropriate (2)
17. Existence of Association 1	Yes (1), 21) No (2)	If yes, Name of Association	(G-22)
18 Situation of khettara	Length (m)	Section hight(m)	n of khettara (average) width (m)
	000 (E-1-1-1) 500 (E-1-1-2)	<u> </u>	-1) <u>0.7</u> (E-1-5-1)
Khettara as open channel	0 (E-2-1)	3 (E-2-2	
	000 (E-4-2-1) 900 (E-4-2-2)		
19. Rehabilitation Rehabilitation length of khettara	150 (I (M-7)	m) Rehabilitation le irrigation canal	ength of principal 1050 (m) (M-8)
20. Influence of desertification	. ,		
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification	ry in catchme ry of conduit channel khei	<u>2</u> (I-2) Irr	egulation pond <u>3</u> (I-5) rigation canals (I-7)
21.Demandes of habitants (water resources	)	Yes (1), No (2)	
Installing pump 2	G-19-1) G-19-2) Cor G-19-3)	Protection di nstruction of public wells for	ke against flood 1 (G-19-4) domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual and s	ocial support	) Yes (1), No (2)	
Agriculture (storage,production, transp	Rehabilitatior	luct , etc.) 1 (G-20-1) n of roads 1 (G-20-2) ric supply 2 (G-20-3)	School         1         (G-20-4)           Sanitary system         1         (G-20-5)           Hospital         1         (G-20-6)           Others         2         (G-20-7)
23. Importance of khettara 1 (1) Unique source for both of potable w (2) Unique source for irrigtion (3) Main source for irrigation	(G-23) ater and irrigatio	on (4) Partial source for (5) Supplementary so (6) Neglected	
24. Possibility of extension of khettara 1 Yes (1), No (2) If no, the reason (G-24)		1)Constrains in landscape 2)Prohibited by law	(3)Existence of other khettaras (4)Others

K	HETTARA	DATBASE	
1. Khettara Number A-043 (G-1)	MP	2. Name of commune	Ferkla Soufla (G-2)
3. Name of khettara Ami Hass (G-3)	an	4. Location of khettara	X = <u>543339.94</u> (G-4-1) Y = <u>112112.05</u> (G-4-2)
nave knettara water right         6. Number of beneficialies         7. Cycle of kehttara water right	(G-5-2)families(G-6-2)families(G-7-1)days(G-8)lit/sec	9. Histry of discharge of khettara (I-10)	1999: 2.4 litter/sec 2000: 2.4 litter/sec 2001: 2.4 litter/sec 2002: 2.4 litter/sec 2003: 2.4 litter/sec
10. History of khettara water flow6(1)No water from 1950s or 1970s.(2)No water in the last two-decade(3)No water in the last decade(4)No water in the past five years	(6)The khettar year in the (7)The discha	n the dry season in the past five	e years arge of khettara is reduced each
11. Total area of farmland (IA-1	40 ha )	12. Irrigated area by the	khettara <u>30</u> ha (IA-3)
	ppropriate (1) ot appropriate (2)	14.The condition of sch	(G-16) not appropriate (2)
	ppropriate (1) ot appropriate (2)	16.Facility of electricity telecomunication	and 1 appropriate (1) (G-18) not appropriate (2)
17. Existence of Association	1 Yes (1), (G-21) No (2)	If yes, Name of Association	(G-22)
18. Situation of khettara Gallery of khettara (Gallery in catchment area and conduit	Length (m) <u>3480</u> (E-1-1-1) 1230 (E-1-1-2)	hight(m) )8 (E-1-4	-1) <u>0.8</u> (E-1-5-1)
Khettara as open channel	600 (E-2-1) 50 (E-4-2-1 0 (E-4-2-2	2.5 (E-2-2 ) 0.4 (E-4-3	) 0.4 (E-2-3) 3-1) 0.3 (E-4-1-1)
19. Rehabilitation Rehabilitation length khettara			ength of principal 600 (m) (M-8)
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification O	allery in catchme allery of conduit pen channel khe	ent area 2 (I-1) R 2 (I-2) Irr ttara 3 (I-3)	egulation pond 2 (I-5) rigation canals 3 (I-7)
21.Demandes of habitants (water resour Rehabilitation of khettara 1 Installing pump 2 Rehabilitation of irrigation canal 1	(G-19-1)	Yes (1), No (2) Protection di nstruction of public wells for	ke against flood 2 (G-19-4) domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual ar Agriculture (storage,production, tra	ansporttion of proc Rehabilitatio Elec	duct , etc.)2(G-20-1)	School         2         (G-20-4           Sanitary system         2         (G-20-5           Hospital         1         (G-20-6           Others         2         (G-20-7
23. Importance of khettara [1 (1) Unique source for both of potab (2) Unique source for irrigition (3) Main source for irrigation	(G-23) le water and irrigation	on (4) Partial source for (5) Supplementary so (6) Neglected	irrigation ource for irrigation
24. Possibility of extension of khettara 1 Yes (1), No (2) If no, the re (G-24)		(1)Constrains in landscape (2)Prohibited by law	(3)Existence of other khettaras (4)Others

1. Khettara Number A-044 (G-1)	MP	2. Name of commune	Ferkla Soufla (G-2)
3. Name of khettara Lakbira	à	4. Location of khettara	X = 542230.92 (G-4-1)
(G-3)			Y = 112529.23 (G-4-2)
5. Number of families who 10 have khettara water right	00 (G-5-2) families	5. Thistry of disorial ge	0
6. Number of beneficialies 15	60 (G-6-2) families	of khettara	
7. Cycle of kehttara water right	7 (G-7-1) days		
8.Discharge of khettara (latest) 6	.8 (G-8) lit/sec	(I-10)	
10. History of khettara water flow 6	(I-9)	-	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The dischar	n the dry season in the past five y a has water flow, but the dischar recent five years. rge of the khettara is constant rge of the khettara is increased	
11. Total area of farmland	80 ha A-1)	12. Irrigated area by the k	khettara <u>26</u> ha (IA-3)
13. The condition of roads (G-15)	appropriate (1)	14.The condition of scho	
15.Sanitary service 2 (G-17	appropriate (1) not appropriate (2)	16.Facility of electricity a telecomunication	nd 1 appropriate (1) (G-18) not appropriate (2)
17. Existence of Association	1 Yes (1), (G-21) No (2)	If yes, Name of Association	(G-22)
18. Situation of khettara	Length (m)	Section hight(m)	of khettara (average) width (m)
Gallery of khettara (Gallery in catchment area and conduit	500 (E-1-1-1) 2000 (E-1-1-2)		
Khettara as open channel	20 (E-2-1)	<u>1.5</u> (E-2-2)	0.5 (E-2-3)
Principal and secondary irrigation canal	1500 (E-4-2-1) 3000 (E-4-2-2)	,	,
19. Rehabilitation Rehabilitation len khettara	gth of 200 ( (M-7)	m) Rehabilitation lei irrigation canal	ngth of principal (m) (M-8)
20. Influence of desertification		Ŭ	
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	<u>3</u> (I-2) Irrig	gulation pond <u>3</u> (I-5) gation canals <u>2</u> (I-7)
21.Demandes of habitants (water reso	ources)	Yes (1), No (2)	
Rehabilitation of khettara 1 Installing pump 2 Rehabilitation of irrigation canal 1	(G-19-1) (G-19-2) Cor (G-19-3)	Protection dike nstruction of public wells for c	e against flood 2 (G-19-4) domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultua	and social support	) Yes (1), No (2)	
Agriculture (storage,production	, transporttion of proc Rehabilitation	luct , etc.) 2 (G-20-1)	School         2         (G-20-4)           Sanitary system         1         (G-20-5)           Hospital         1         (G-20-6)           Others         2         (G-20-7)
23. Importance of khettara 1 (1) Unique source for both of po (2) Unique source for irrigition (3) Main source for irrigation	(G-23) table water and irrigation		rrigation
24. Possibility of extension of khettara 1 Yes (1), No (2) If no, the (G-24)	reason	(1)Constrains in landscape (2)Prohibited by law	(3)Existence of other khettaras (4)Others

1. Khettara Number A-045 (G-1)	MP	2. Name of commune Ferkla Soufla (G-2)
3. Name of khettara El Mehdia		4. Location of khettara X = <u>543180.5</u> (G-4-1)
(G-3)		Y = 112400.88 (G-4-2)
5. Number of families who 50 (	G-5-2) families	9. Histry of discharge 0
	G-6-2) families	of khettara
7. Cycle of kehttara water right 8 (	G-7-1) days	
8.Discharge of khettara (latest) 0 (	G-8) lit/sec	(I-10)
10. History of khettara water flow 4	(I-9)	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The dischar	n the dry season in the past five years ra has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased
11. Total area of farmland (IA-1)	15 ha	12. Irrigated area by the khettara Oha (IA-3)
13. The condition of roads 2 ap	propriate (1) appropriate (2)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)
	propriate (1) t appropriate (2)	16.Facility of electricity and telecomunication1 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association	Yes (1), G-21) No (2)	If yes, Name of G-22
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in	1500 (E-1-1-1) 1500 (E-1-1-2)	
Khettara as open channel	0 (E-2-1)	0 (E-2-2) 0 (E-2-3)
Principal and secondary	800 (E-4-2-1) 0 (E-4-2-2)	
19. Rehabilitation Rehabilitation length khettara	of 0 (M-7)	m) Rehabilitation length of principal 0 (m) irrigation canal (M-8)
20. Influence of desertification		
(2)Partial damage by desertification Ga	llery in catchme llery of conduit en channel khe	[1] (I-2) Irrigation canals [3] (I-7)
21.Demandes of habitants (water resource	es)	Yes (1), No (2)
Rehabilitation of khettara 1 Installing pump 1 Rehabilitation of irrigation canal 1	(G-19-1) (G-19-2) Cor (G-19-3)	Protection dike against flood 2 (G-19-4) nstruction of public wells for domestic water (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual and	d social support	
Agriculture (storage,production, tran	Rehabilitation	
23. Importance of khettara (1) Unique source for both of potable (2) Unique source for irrigition (3) Main source for irrigation	(G-23) water and irrigation	
24. Possibility of extension of khettara Yes (1), No (2) If no, the rea (G-24)		(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others

1. Khettara Number A-046 (G-1)	MP	2. Name of commune	Ferkla Soufla (G-2)
3. Name of khettara Atti kaida (G-3)		4. Location of khettara	X = 542389.54 (G-4-1) Y = 112425.18 (G-4-2)
5. Number of families who 95 (G	6-5-2) families	9. Histry of discharge of khettara	0
6. Number of beneficialies 200 (G	6-6-2) families	or kneuara	
7. Cycle of kehttara water right 7 (G	6-7-1) days		
8.Discharge of khettara (latest) 5.95 (G	6-8) lit/sec	(I-10)	
10. History of khettara water flow 6+7	(I-9)		
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The dischar	n the dry season in the past five ra has water flow, but the disch recent five years. rge of the khettara is constant rge of the khettara is increased	arge of khettara is reduced each
11. Total area of farmland [2] (IA-1)	0 ha	12. Irrigated area by the	e khettara <u>8</u> ha (IA-3)
	opriate (1) appropriate (2)	14.The condition of sch	iools 2 appropriate (1) (G-16) not appropriate (2)
	opriate (1) appropriate (2)	16.Facility of electricity telecomunication	and 2 appropriate (1) (G-18) not appropriate (2)
17. Existence of Association	Yes (1), 6-21) No (2)	If yes, Name of Association	(G-22)
18. Situation of khettara	Length (m)	Sectio hight(m)	n of khettara (average) )
	1000 (E-1-1-1) 2500 (E-1-1-2)	) <u>2</u> (E-1-4	I-1) <u>0.4</u> (E-1-5-1)
Khettara as open channel	0 (E-2-1)	) (E-2-2	2) 0 (E-2-3)
	4000 (E-4-2-1) 1000 (E-4-2-2)	· · · ·	/ I
19. Rehabilitation Rehabilitation length o khettara	f <u>100</u> ( (M-7)	m) Rehabilitation le irrigation canal	ength of principal 1100 (m) (M-8)
20. Influence of desertification			
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification	ery in catchme ery of conduit n channel khe	<u>2</u> (I-2) Iri	rigation pond <u>3</u> (I-5) rigation canals (I-7)
21.Demandes of habitants (water resource	s )	Yes (1), No (2)	
Rehabilitation of khettara 1 Installing pump 2 Rehabilitation of irrigation canal 1	(G-19-1) (G-19-2) Cor (G-19-3)	Protection di nstruction of public wells for	ike against flood 1 (G-19-4) r domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual and	social support	) Yes (1), No (2)	
Agriculture (storage,production, trans	Rehabilitation		School         1         (G-20-4)           Sanitary system         1         (G-20-5)           Hospital         1         (G-20-6)           Others         2         (G-20-7)
23. Importance of khettara (1) Unique source for both of potable (2) Unique source for irrigation (3) Main source for irrigation	] (G-23) water and irrigation	on (4) Partial source for (5) Supplementary so (6) Neglected	
24. Possibility of extension of khettara 1 Yes (1), No (2) If no, the rease (G-24)		(1)Constrains in landscape (2)Prohibited by law	(3)Existence of other khettaras (4)Others

1. Khettara Number A-047 (G-1)	MP	2. Name of commune	Ferkla Soufla (G-2)
3. Name of khettara Regaga		4. Location of khettara	X = 541387.18 (G-4-1)
G-3)			Y = 112568.78 (G-4-2)
have khettara water right	,	9. Histry of discharge of khettara	0
6. Number of beneficialies 100 (G-6	5-2) families		
7. Cycle of kehttara water right 7 (G-7	'-1) days		
8.Discharge of khettara (latest) 4 (G-8	3) lit/sec	(I-10)	
10. History of khettara water flow 6+7	(I-9)		
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The dischar	a the dry season in the past five a has water flow, but the discha recent five years. ge of the khettara is constant ge of the khettara is increased	arge of khettara is reduced each
11. Total area of farmland [20] (IA-1)	ha	12. Irrigated area by the	khettara <u>8</u> ha (IA-3)
	riate (1) propriate (2)	14.The condition of scho	ools 1 appropriate (1) (G-16) not appropriate (2)
	riate (1) propriate (2)	16.Facility of electricity a telecomunication	and 1 appropriate (1) (G-18) not appropriate (2)
17. Existence of Association 1 (G-2	Yes (1), 21) No (2)	If yes, Name of Association	Nahda El Mamounia (G-22)
18 Situation of khettara	ength (m)	Sectior hight(m)	n of khettara (average) width (m)
	00 (E-1-1-1) 00 (E-1-1-2)	12 (E-1-4	-1) <u>2</u> (E-1-5-1)
	00 (E-2-1)	1.5 (E-2-2)	
	<u>00</u> (E-4-2-1)	) <u>0.3</u> (E-4-3	·
irrigation canal	0 (E-4-2-2)	) <u> </u>	-2) 0 (E-4-1-2)
19. Rehabilitation Rehabilitation length of khettara	94 (I (M-7)	m) Rehabilitation le irrigation canal	ength of principal 1103 (m) (M-8)
20. Influence of desertification			
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification	y in catchme y of conduit channel khet	<u>1</u> (I-2) Irr	egulation pond <u>1</u> (I-5) rigation canals <u>1</u> (I-7)
21.Demandes of habitants (water resources )		Yes (1), No (2)	
	6-19-1)		ke against flood 2 (G-19-4)
	6-19-2) Cor 6-19-3)	nstruction of public wells for	domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual and so	cial support	) Yes (1), No (2)	
Agriculture (storage,production, transpo	Rehabilitation	luct , etc.) 2 (G-20-1) n of roads 1 (G-20-2) ric supply 2 (G-20-3)	School         2         (G-20-4)           Sanitary system         1         (G-20-5)           Hospital         1         (G-20-6)           Others         2         (G-20-7)
(1) Unique source for both of potable wa (2) Unique source for irrigtion (3) Main source for irrigation	(G-23) ter and irrigatio	on (4) Partial source for (5) Supplementary so (6) Neglected	
24. Possibility of extension of khettara 1 Yes (1), No (2) If no, the reason (G-24)		1)Constrains in landscape 2)Prohibited by law	(3)Existence of other khettaras (4)Others

1. Khettara Number A-048 MP (G-1)		2. Name of commune	Ferkla Soufla (G-2)	
3. Name of khettara Mouyjna	<u> </u>	4. Location of khettara	X = <u>541890.55</u>	` '
(G-3)			Y = 112601.7	(G-4-2)
5. Number of families who 54 (G-5-2)		9. Histry of discharge	0	
	families	of khettara		
7. Cycle of kehttara water right 6 (G-7-1)	days			
8.Discharge of khettara (latest) 7.2 (G-8)	it/sec	(I-10)		
10. History of khettara water flow 7	(I-9)			
(2)No water in the last two-decade(6)Th(3)No water in the last decadeye(4)No water in the past five years(7)Th	ne khettara ear in the r ne discharg	the dry season in the past fiv a has water flow, but the disch ecent five years. ge of the khettara is constant ge of the khettara is increased	harge of khettara is reduce	d each
11. Total area of farmland 20 ha (IA-1)		12. Irrigated area by the	e khettara (IA-3)	10ha
13. The condition of roads 2 appropriate ( (G-15) not appropriate		14.The condition of sch		ate (1) opriate (2)
15.Sanitary service 2 appropriate ( (G-17) not appropriate		16.Facility of electricity telecomunication		ate (1) opriate (2)
	es (1), lo (2)	If yes, Name of Association	MAMOUNIA (G-22)	
18. Situation of khettara Lengt	h (m)	Section hight(m	on of khettara (averag ) width	
	E-1-1-1) E-1-1-2)	<u>1.5</u> (E-1-4	4-1) <u>0.5</u> (E	-1-5-1)
Khettara as open channel 2000 (I		0.3 (E-2-2		
	E-4-2-1) E-4-2-2)			-4-1-1) -4-1-2)
19. Rehabilitation Rehabilitation length of	100 (n -7)		length of principal	150 (m) (M-8)
20. Influence of desertification	_/	-	-	
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification Open chan	conduit	(I-2) II	Regulation pond	(I-5) (I-7)
21.Demandes of habitants (water resources)		Yes (1), No (2)		
Rehabilitation of khettara 1 (G-19-1			ike against flood 2	(G-19-4)
Installing pump 2 (G-19-2 Rehabilitation of irrigation canal 1 (G-19-3		struction of public wells fo	Others 2	(G-19-5) (G-19-6)
22.Demandes of habitants (Aglicultual and social	support)	Yes (1), No (2)		
Agriculture (storage,production, transporttion Reha	abilitation	uct , etc.) 2 (G-20-1) o f roads 1 (G-20-2) ric supply 2 (G-20-3)	School 2 Sanitary system 1 Hospital 1 Others 2	(G-20-4) (G-20-5) (G-20-6) (G-20-7)
23. Importance of khettara 1 (G-23 (1) Unique source for both of potable water an (2) Unique source for irrigation (3) Main source for irrigation	,	n (4) Partial source fo (5) Supplementary so (6) Neglected		
24. Possibility of extension of khettara 1 Yes (1), No (2) If no, the reason (G-24) (G-24)		1)Constrains in landscape 2)Prohibited by law	(3)Existence of other (4)Others	khettaras

1. Khettara Number A-049 (G-1)	MP	2. Name of commune Ferkla Soufla (G-2)	
	Mamo		5 (G-4-1) 6 (G-4-2)
nave knettara water right	70 (G-5-2) families	9. Histry of discharge 0 of khettara	
	70 (G-6-2) families		
7. Cycle of kehttara water right	9 (G-7-1) days		
8.Discharge of khettara (latest)	I.6 (G-8) lit/sec	(I-10)	
10. History of khettara water flow	(I-9)		
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The discha	h the dry season in the past five years a has water flow, but the discharge of khettara is redu recent five years. rge of the khettara is constant rge of the khettara is increased	iced each
11. Total area of farmland [	70 ha A-1)	12. Irrigated area by the khettara (IA-3	7 <mark>ha</mark> 3)
13. The condition of roads 2 (G-15)	appropriate (1) not appropriate (2)		priate (1) ppropriate (2)
15.Sanitary service 2 (G-17	appropriate (1) not appropriate (2)		opriate (1) opropriate (2)
17. Existence of Association	1 Yes (1), (G-21) No (2)	If yes, Name of Association (G-22)	nia
18. Situation of khettara	Length (m)	Section of khettara (aver hight(m) wio	age) dth (m)
Gallery of khettara (Gallery in catchment area and conduit	<u>3000</u> (E-1-1-1 0 (E-1-1-2		(E-1-5-1) (E-1-5-2)
Khettara as open channel	0 (E-2-1)		(E-2-3)
Principal and secondary irrigation canal	800 (E-4-2-1 0 (E-4-2-2		(E-4-1-1) (E-4-1-2)
19. Rehabilitation Rehabilitation ler khettara	gth of 461 ( (M-7)	m) Rehabilitation length of principal irrigation canal	140 (m) (M-8)
20. Influence of desertification			
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	(I-2) Irrigation canals	1(I-5) 1(I-7)
21.Demandes of habitants (water reso	ources)	Yes (1), No (2)	
Rehabilitation of khettara 1 Installing pump 1 Rehabilitation of irrigation canal 1	(G-19-1) (G-19-2) Con (G-19-3)	Protection dike against flood 2 nstruction of public wells for domestic water 0 Others 1	(G-19-4) (G-19-5) (G-19-6)
22.Demandes of habitants (Aglicultua	I and social support		
Agriculture (storage,productior	Rehabilitatio		(G-20-4) (G-20-5) (G-20-6) (G-20-7)
23. Importance of khettara (1) (1) Unique source for both of por (2) Unique source for irrigtion (3) Main source for irrigation		on (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected	
24. Possibility of extension of khettar 1 (G-24) Yes (1), No (2) If no, the	e reason	(1)Constrains in landscape (3)Existence of oth (2)Prohibited by law (4)Others	er khettaras

1. Khettara Number A-050 (G-1)	MP	2. Name of commune	Ferkla Soufla (G-2)
3. Name of khettara Litama (G-3)		4. Location of khettara	X = 536244.2 (G-4-1) Y = 111088.68 (G-4-2)
5. Number of families who 65 (G-	,	9. Histry of discharge of khettara	0
6. Number of beneficialies 65 (G-	-6-2) families	UI KIIEIIAIA	
7. Cycle of kehttara water right 41 (G-	.7-1) days		
8.Discharge of khettara (latest) 7.5 (G-	-8) lit/sec	(I-10)	
10. History of khettara water flow 6+7	(I-9)		
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The dischar	n the dry season in the past five a has water flow, but the disch- recent five years. rge of the khettara is constant rge of the khettara is increased	arge of khettara is reduced each
11. Total area of farmland [75 (IA-1)	ha	12. Irrigated area by the	khettara <u>15</u> ha (IA-3)
	priate (1) ppropriate (2)	14.The condition of sch	iools 2 appropriate (1) (G-16) not appropriate (2)
	priate (1) ppropriate (2)	16.Facility of electricity telecomunication	and 2 appropriate (1) (G-18) not appropriate (2)
17. Existence of Association 1 (G-	Yes (1), -21) No (2)	If yes, Name of Association	Ennour Ksiba (G-22)
18 Situation of khettara	Length (m)	Section hight(m)	n of khettara (average) width (m)
	200 (E-1-1-1) 800 (E-1-1-2)	) <u>2</u> (E-1-4	l-1) <u>0.6</u> (E-1-5-1)
Khettara as open channel	0 (E-2-1)	1.4 (E-2-2	
Principal and secondary	500 (E-4-2-1) 0 (E-4-2-2)		,
19. Rehabilitation Rehabilitation length of khettara	(_ 100 (i (M-7)		ength of principal 920 (m) (M-8)
20. Influence of desertification		ingulori ballar	(1110)
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification	ry in catchme ry of conduit n channel khe	<u>2</u> (I-2) Iri	rigation pond 2 (I-5) rigation canals 2 (I-7)
21.Demandes of habitants (water resources	)	Yes (1), No (2)	
Installing pump 2	G-19-1) G-19-2) Cor G-19-3)	Protection di nstruction of public wells for	ike against flood 1 (G-19-4) · domestic water 2 (G-19-5) Others 1 (G-19-6)
22.Demandes of habitants (Aglicultual and s	ocial support	) Yes (1), No (2)	
Agriculture (storage,production, transp	Rehabilitation		School         1         (G-20-4)           Sanitary system         2         (G-20-5)           Hospital         1         (G-20-6)           Others         2         (G-20-7)
23. Importance of khettara 1 (1) Unique source for both of potable w (2) Unique source for irrigition (3) Main source for irrigation	(G-23) ater and irrigation	on (4) Partial source for (5) Supplementary so (6) Neglected	
24. Possibility of extension of khettara <u>1</u> Yes (1), No (2) If no, the reaso (G-24)		1)Constrains in landscape 2)Prohibited by law	(3)Existence of other khettaras (4)Others

1. Khettara Number A-051 MF (G-1)	2	2. Name of commune Ferkla Soufla (G-2)
	t	4. Location of khettara X = 533235.86 (G-4-1)
3. Name of khettara (G-3)		Y = 111102.77 (G-4-2)
5. Number of families who 39 (G-5-2	) families	9. Histry of discharge
6. Number of beneficialies 39 (G-6-2	) families	of khettara
7. Cycle of kehttara water right 7 (G-7-1	) days	
8.Discharge of khettara (latest) 10 (G-8)	lit/sec	(I-10)
10. History of khettara water flow 7	(I-9)	
(2)No water in the last two-decade(6)(3)No water in the last decade(4)No water in the past five years(7)	)The khettar year in the )The dischar	n the dry season in the past five years a has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased
11. Total area of farmland [100 ha (IA-1)		12. Irrigated area by the khettara [20]ha (IA-3)
13. The condition of roads 2 appropriat (G-15) not appropriat		14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 appropriat (G-17) not appropriat		16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association 2 (G-21)	Yes (1), No (2)	If yes, Name of G-22
18 Situation of khettara	igth (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in 800	(E-1-1-1)	· · · · · · · · · · · · · · · · · · ·
	(E-1-1-2)	
Khettara as open channel 47		0.83 (E-2-2) 0.5 (E-2-3)
Principal and secondary 160	(E-4-2-1	) 0.5 (E-4-3-1) 0.5 (E-4-1-1)
	(E-4-2-2	
19. Rehabilitation Rehabilitation length of khettara	470 ( (M-7)	m) Rehabilitation length of principal (m) irrigation canal (M-8)
20. Influence of desertification	<u> </u>	
	n catchme	nt area 3 (I-1) Regulation pond 3 (I-5)
(2)Partial damage by desertification Gallery C	of conduit annel khe	(I-2) Irrigation canals <u>3</u> (I-7) ttara <u>3</u> (I-3)
21.Demandes of habitants (water resources )		Yes (1), No (2)
Rehabilitation of khettara 1 (G-1		Protection dike against flood 2 (G-19-4)
Installing pump 2 (G-1 Rehabilitation of irrigation canal 1 (G-1		nstruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual and soci	al support	) Yes (1), No (2)
Agriculture (storage,production, transport R	ehabilitatio	n of roads 1 (G-20-2) Hospital 1 (G-20-6)
		tric supply 1 (G-20-3) Others 2 (G-20-7)
23. Importance of khettara (G (1) Unique source for both of potable water (2) Unique source for irrigtion (3) Main source for irrigation	-23) and irrigation	on (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettara		
1 Yes (1), No (2) If no, the reason (G-24)		(1)Constrains in landscape(3)Existence of other khettaras(2)Prohibited by law(4)Others

1. Khettara Number A-052 (G-1)	MP	2. Name of commune Ferkla Soufla (G-2)
3. Name of khettara Dar O (G-3)	umira	4. Location of khettara $X = 532046.34$ (G-4-1) Y = 111240.53 (G-4-2)
have khettara water right	34 (G-5-2) families	9. Histry of discharge 0 of khettara
6. Number of beneficialies	45 (G-6-2) families	
7. Cycle of kehttara water right	9 (G-7-1) days	
8.Discharge of khettara (latest)	.6 (G-8) lit/sec	(I-10)
10. History of khettara water flow	(I-9)	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The discha	n the dry season in the past five years ra has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased
11. Total area of farmland [	<u>24</u> ha A-1)	12. Irrigated area by the khettara [5]ha (IA-3)
13. The condition of roads 2 (G-15)	appropriate (1) not appropriate (2)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 (G-17	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication2 appropriate (1) (G-18)appropriate (1) (2)
17. Existence of Association	2 Yes (1), (G-21) No (2)	If yes, Name of G-22)
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit	25 (E-1-1-1 150 (E-1-1-2	) <u>1.5</u> (E-1-4-1) <u>0.4</u> (E-1-5-1)
Khettara as open channel	35 (E-2-1)	0.4 (E-2-2) 0.4 (E-2-3)
Principal and secondary irrigation canal	700 (E-4-2-1 0 (E-4-2-2	
19. Rehabilitation Rehabilitation ler khettara	ngth of 200 ( (M-7)	m) Rehabilitation length of principal (m) irrigation canal (M-8)
20. Influence of desertification		
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	(I-2) Irrigation canals 1 (I-7)
21.Demandes of habitants (water res	ources)	Yes (1), No (2)
Rehabilitation of khettara 1 Installing pump 2 Rehabilitation of irrigation canal 1	(G-19-1) (G-19-2) Con (G-19-3)	Protection dike against flood 2 (G-19-4) nstruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultua	I and social support	
Agriculture (storage,production	Rehabilitatio	
23. Importance of khettara (1) Unique source for both of pr (2) Unique source for irrigtion (3) Main source for irrigation		on (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettar 1 Yes (1), No (2) If no, th (G-24)	e reason	(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others

1. Khettara Number A-053 (G-1)	MP	2. Name of commune Ferkla Soufla (G-2)
3. Name of khettara	lghi	4. Location of khettara $X = 532218.41$ (G-4-1) Y = 111025.49 (G-4-2)
have khettara water right	32 (G-5-2) families	9. Histry of discharge 0 of khettara
6. Number of beneficialies	32 (G-6-2) families	
7. Cycle of kehttara water right	8 (G-7-1) days	
8.Discharge of khettara (latest) 0.	64 (G-8) lit/sec	(I-10)
10. History of khettara water flow 7	(I-9)	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The discha	n the dry season in the past five years ra has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased
11. Total area of farmland []	<u>10</u> ha A-1)	12. Irrigated area by the khettara [1]ha (IA-3)
13. The condition of roads 2 (G-15)	appropriate (1) not appropriate (2)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 (G-17	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association	2 Yes (1), (G-21) No (2)	If yes, Name of G-22)
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit	600 (E-1-1-1 0 (E-1-1-2	
Khettara as open channel	400 (E-2-1)	5 (E-2-2) 0.4 (E-2-3)
Principal and secondary irrigation canal	500 (E-4-2-1 0 (E-4-2-2	
19. Rehabilitation Rehabilitation ler khettara	gth of 450 ( (M-7)	m) Rehabilitation length of principal (m) irrigation canal (M-8)
20. Influence of desertification		
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	(I-2) Irrigation canals 3 (I-7)
21.Demandes of habitants (water reso	ources)	Yes (1), No (2)
Rehabilitation of khettara 1 Installing pump 2 Rehabilitation of irrigation canal 11	(G-19-1) (G-19-2) Con (G-19-3)	Protection dike against flood 2 (G-19-4) nstruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultua	l and social support	
Agriculture (storage,productior	Rehabilitatio	
23. Importance of khettara 1 (1) Unique source for both of po (2) Unique source for irrigtion (3) Main source for irrigation		on (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettar 1 (G-24) Yes (1), No (2) If no, the	e reason	(1)Constrains in landscape(3)Existence of other khettaras(2)Prohibited by law(4)Others

1. Khettara Number A-05 (G-1		2. Name of commune Ferkla Soufla (G-2)
3. Name of khettara Da	r Oumira Jdida 3)	4. Location of khettara $X = 529905.01$ (G-4-1) Y = 109659.92 (G-4-2)
5. Number of families who	80 (G-5-2) families	9. Histry of discharge
have khettara water right 6. Number of beneficialies	82 (G-6-2) families	of khettara
7. Cycle of kehttara water right	16 (G-7-1) days	
8.Discharge of khettara (latest)	6.97 (G-8) lit/sec	(I-10)
10. History of khettara water flow	6+7 (I-9)	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khetta year in the (7)The discha	n the dry season in the past five years ra has water flow, but the discharge of khettara is reduced each recent five years. Irge of the khettara is constant Irge of the khettara is increased
11. Total area of farmland	<u>300</u> ha (IA-1)	12. Irrigated area by the khettara 100ha (IA-3)
13. The condition of roads [2] (G	appropriate (1) not appropriate (2)	14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 (G	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association	2 Yes (1), (G-21) No (2)	If yes, Name of G-22)
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit	1000 (E-1-1-1 2000 (E-1-1-2	
Khettara as open channel	0 (E-2-1)	0 (E-2-2) 0 (E-2-3)
Principal and secondary irrigation canal	600 (E-4-2-1 0 (E-4-2-2	
19. Rehabilitation Rehabilitation khettara	length of 450 ( (M-7)	(m) Rehabilitation length of principal 670 (m) irrigation canal (M-8)
20. Influence of desertification		
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	2 (I-2) Irrigation canals (I-7)
21.Demandes of habitants (water	resources)	Yes (1), No (2)
Rehabilitation of khettara Installing pump Rehabilitation of irrigation canal	2 (G-19-2) Co	Protection dike against flood 1 (G-19-4) nstruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicul	tual and social support	
Agriculture (storage,produc	Rehabilitatio	
23. Importance of khettara (1) (1) Unique source for both o (2) Unique source for irrigitio (3) Main source for irrigation	on 1	ion (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khe 1 (G-24) Yes (1), No (2) If no	, the reason	<ul><li>(1)Constrains in landscape (3)Existence of other khettaras</li><li>(2)Prohibited by law (4)Others</li></ul>

1. Khettara Number A-055 (G-1)	MP	2. Name of commune Ferkla Oulia (G-2)
3. Name of khettara Azag N (G-3)	'ouch	4. Location of khettara $X = 516356.72$ (G-4-1) Y = 103206.3 (G-4-2)
5. Number of families who 20 have khettara water right	0 (G-5-2) families	9. Histry of discharge 0
_	0 (G-6-2) families	of khettara
7. Cycle of kehttara water right	2 (G-7-1) days	
8.Discharge of khettara (latest)	4 (G-8) lit/sec	(I-10)
10. History of khettara water flow 6-	-8 (I-9)	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The discha	n the dry season in the past five years ra has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased
11. Total area of farmland [] (IA	50 ha -1)	12. Irrigated area by the khettara [5]ha (IA-3)
13. The condition of roads (G-15)	appropriate (1) not appropriate (2)	14.The condition of schools 1+2 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 (G-17)	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication1 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association	1 Yes (1), (G-21) No (2)	If yes, Name of G-22
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit	<u>1100</u> (E-1-1-1) 2000 (E-1-1-2)	) <u>1.2</u> (E-1-4-1) <u>0.6</u> (E-1-5-1)
Khettara as open channel	100 (E-2-1)	<u>2 (E-2-2)</u> <u>0.6 (E-2-3)</u>
Principal and secondary irrigation canal	3500 (E-4-2-1 0 (E-4-2-2	
19. Rehabilitation Rehabilitation leng khettara	yth of <u>1390</u> ( (M-7)	m) Rehabilitation length of principal 1790 (m) irrigation canal (M-8)
20. Influence of desertification		
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	3 (I-2) Irrigation canals 3 (I-7)
21.Demandes of habitants (water reso	urces)	Yes (1), No (2)
Rehabilitation of khettara 1 Installing pump 1 Rehabilitation of irrigation canal 1	(G-19-1) (G-19-2) Cor (G-19-3)	Protection dike against flood 1 (G-19-4) Instruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual	and social support	
Agriculture (storage,production,	Rehabilitation	
23. Importance of khettara 1 (1) Unique source for both of pot (2) Unique source for irrigition (3) Main source for irrigation		on (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettara 1 Yes (1), No (2) If no, the (G-24)	reason	(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others

1. Khettara Number A-056 MP (G-1)		2. Name of commune	Ferkla Soufla (G-2)
		4. Location of khettara	X = 540707.33 (G-4-1)
(G-3)			Y = 104157.3 (G-4-2)
5. Number of families who 151 (G-5-2)		9. Histry of discharge	0
6. Number of beneficialies 172 (G-6-2)	families	of khettara	
7. Cycle of kehttara water right 15 (G-7-1)	days		
8.Discharge of khettara (latest) 0 (G-8)	it/sec	(I-10)	
10. History of khettara water flow 6	(I-9)		
(2)No water in the last two-decade(6)Th(3)No water in the last decadeye(4)No water in the past five years(7)Th	ne khettara ear in the r ne discharg	the dry season in the past five a has water flow, but the disch- recent five years. ge of the khettara is constant ge of the khettara is increased	arge of khettara is reduced each
11. Total area of farmland 400 ha (IA-1)		12. Irrigated area by the	khettara <u>O</u> ha (IA-3)
13. The condition of roads 1 appropriate ( (G-15) not appropriate		14.The condition of sch	ools 2 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 appropriate ( (G-17) not appropriate		16.Facility of electricity telecomunication	and 1 appropriate (1) (G-18) not appropriate (2)
	′es (1), lo (2)	If yes, Name of Association	(G-22)
18. Situation of khettara Lengt	h (m)	Section hight(m)	n of khettara (average) width (m)
	E-1-1-1) E-1-1-2)	<u>2</u> (E-1-4	-1) <u>0.6</u> (E-1-5-1)
	E-2-1)	<u>1</u> (E-2-2	
	E-4-2-1) E-4-2-2)	· `	· · ·
19. Rehabilitation Rehabilitation length of khettara (M	800 (r  -7)	n) Rehabilitation le irrigation canal	ength of principal 300 (m) (M-8)
20. Influence of desertification			
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertificationGallery in c Gallery of c Open chan	conduit	<u>1</u> (I-2) Iri	egulation pond (I-5) rigation canals (I-7)
21.Demandes of habitants (water resources)		Yes (1), No (2)	
Rehabilitation of khettara 1 (G-19-1			ke against flood 2 (G-19-4)
Installing pump 1 (G-19-2 Rehabilitation of irrigation canal 1 (G-19-3		struction of public wells for	domestic water         2         (G-19-5)           Others         2         (G-19-6)
22.Demandes of habitants (Aglicultual and social	support)	Yes (1), No (2)	
Agriculture (storage,production, transporttion Reh	abilitation	uct , etc.) 2 (G-20-1) of roads 2 (G-20-2) ric supply 2 (G-20-3)	School         2         (G-20-4)           Sanitary system         1         (G-20-5)           Hospital         1         (G-20-6)           Others         2         (G-20-7)
23. Importance of khettara (G-23) (1) Unique source for both of potable water ar (2) Unique source for irrigation (3) Main source for irrigation	,	on (4) Partial source for (5) Supplementary so (6) Neglected	irrigation
24. Possibility of extension of khettara          1       Yes (1), No (2)       If no, the reason         (G-24)       (G-24)		1)Constrains in landscape 2)Prohibited by law	(3)Existence of other khettaras (4)Others

1. Khettara Number A-057 (G-1)		2. Name of commune Ferkla Soufla (G-2)
3. Name of khettara Charb (G-3)	ate Ma	4. Location of khettara $X = 535767.92$ (G-4-1) Y = 107175.25 (G-4-2)
nave knettara water right	_	9. Histry of discharge 0 of khettara
6. Number of beneficialies 1	20 (G-6-2) families	
7. Cycle of kehttara water right	14 (G-7-1) days	
8.Discharge of khettara (latest)	0 (G-8) lit/sec	(I-10)
10. History of khettara water flow	(I-9)	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The discha	n the dry season in the past five years ra has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased
11. Total area of farmland []	70 ha A-1)	12. Irrigated area by the khettara [0]ha (IA-3)
13. The condition of roads [1 (G-15)	appropriate (1) not appropriate (2)	14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 (G-17	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication1 appropriate (1) (G-18)appropriate (1) end appropriate (2)
17. Existence of Association	(G-21) Yes (1), (G-21) No (2)	If yes, Name of G-22
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit	250 (E-1-1-1) 450 (E-1-1-2)	) <u>1.5</u> (E-1-4-1) <u>0.4</u> (E-1-5-1)
Khettara as open channel	<u>500</u> (E-2-1)	1.5 (E-2-2) 0.5 (E-2-3)
Principal and secondary irrigation canal	400 (E-4-2-1 0 (E-4-2-2	
19. Rehabilitation Rehabilitation ler khettara	gth of (M-7)	m) Rehabilitation length of principal (m) irrigation canal (M-8)
20. Influence of desertification		
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	[1] (I-2) Irrigation canals [1] (I-7)
21.Demandes of habitants (water reso	ources)	Yes (1), No (2)
Rehabilitation of khettara 1 Installing pump 2 Rehabilitation of irrigation canal 1	(G-19-1) (G-19-2) Con (G-19-3)	Protection dike against flood 2 (G-19-4) nstruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultua	l and social support	
Agriculture (storage,productior	Rehabilitation	
23. Importance of khettara (1) Unique source for both of po (2) Unique source for irrigtion (3) Main source for irrigation		on (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettar Yes (1), No (2) If no, the (G-24)	e reason	(1)Constrains in landscape(3)Existence of other khettaras(2)Prohibited by law(4)Others

1. Khettara Number A-058 MP (G-1)	2. Name of commune Ferkla Soufla (G-2)
3. Name of khettara Diba (G-3)	4. Location of khettara $X = 535107.7$ (G-4-1) Y = 107049.67 (G-4-2)
5 Number of families who	families 9. Histry of discharge 0
	<sub>families</sub> of khettara
7. Cycle of kehttara water right 12 (G-7-1)	days
8.Discharge of khettara (latest) 3.6 (G-8) lit/	t/sec (I-10)
10. History of khettara water flow 6 (I-	(I-9)
(2)No water in the last two-decade(6)The(3)No water in the last decadeyea(4)No water in the past five years(7)The	o water in the dry season in the past five years e khettara has water flow, but the discharge of khettara is reduced each ar in the recent five years. e discharge of the khettara is constant e discharge of the khettara is increased
11. Total area of farmland 50 ha (IA-1)	12. Irrigated area by the khettara [10]ha (IA-3)
13. The condition of roads 2 appropriate (1) (G-15) not appropriate	
15.Sanitary service 2 appropriate (1) (G-17) not appropriate	
	es (1), If yes, Name of ENNOUR o (2) Association (G-22)
18. Situation of khettara Length	n (m) Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit360 (E- 1275 (E-	E-1-1-1) <u>1.5</u> (E-1-4-1) <u>0.3</u> (E-1-5-1)
Khettara as open channel 120 (E-	
Principal and secondary 140 (E- irrigation canal 0 (E-	E-4-2-1) 0.4 (E-4-3-1) 0.4 (E-4-1-1) E-4-2-2) 0 (E-4-3-2) 0 (E-4-1-2)
	1760 (m) Rehabilitation length of principal 60 (m)
20. Influence of desertification	
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertificationGallery in cat Gallery of co Open channel	
21.Demandes of habitants (water resources )	Yes (1), No (2)
Rehabilitation of khettara 1 (G-19-1) Installing pump 2 (G-19-2) Rehabilitation of irrigation canal 1 (G-19-3)	) Construction of public wells for domestic water 2 (G-19-5)
22.Demandes of habitants (Aglicultual and social su	support) Yes (1), No (2)
Agriculture (storage,production, transporttion o Rehab	School         1         (G-20-4)           of product , etc.)         2         (G-20-1)         Sanitary system         1         (G-20-5)           abilitation of roads         1         (G-20-2)         Hospital         1         (G-20-6)           Electric supply         2         (G-20-3)         Others         2         (G-20-7)
23. Importance of khettara 1 (G-23) (1) Unique source for both of potable water and (2) Unique source for irrigtion (3) Main source for irrigation	
24. Possibility of extension of khettara 1 Yes (1), No (2) If no, the reason (G-24) (G-25)	(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others

1. Khettara Number A-059 (G-1)	MP	2. Name of commune Ferkla Soufla (G-2)
3. Name of khettara Ait Be	en Ama	4. Location of khettara $X = 533607.73$ (G-4-1) Y = 106403.82 (G-4-2)
5. Number of families who have khettara water right	35 (G-5-2) families	9. Histry of discharge
6. Number of beneficialies	56 (G-6-2) families	of khettara
7. Cycle of kehttara water right	13 (G-7-1) days	
8.Discharge of khettara (latest)	9.6 (G-8) lit/sec	(I-10)
10. History of khettara water flow	6 (I-9)	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The discha	n the dry season in the past five years ra has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased
11. Total area of farmland	100 ha IA-1)	12. Irrigated area by the khettara 10ha (IA-3)
13. The condition of roads (G-1	appropriate (1) not appropriate (2)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 (G-1	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication1 appropriate (1) (G-18)1 or appropriate (2)
17. Existence of Association	1 Yes (1), (G-21) No (2)	If yes, Name of G-22)
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in	160 (E-1-1-1	
catchment area and conduit	1300 (E-1-1-2	) <u>2</u> (E-1-4-2) <u>0.5</u> (E-1-5-2)
Khettara as open channel	100 (E-2-1)	0.4 (E-2-2) 0.4 (E-2-3)
Principal and secondary irrigation canal	500 (E-4-2-1 500 (E-4-2-2	
19. Rehabilitation Rehabilitation le khettara		· · · · · · · · · · · · · · · · · · ·
20. Influence of desertification	(	
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	(I-2) Irrigation canals 1 (I-7)
21.Demandes of habitants (water res	sources)	Yes (1), No (2)
Rehabilitation of khettara 1 Installing pump 1 Rehabilitation of irrigation canal 1	(G-19-1) (G-19-2) Con (G-19-3)	Protection dike against flood 2 (G-19-4) nstruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultu	al and social support	
Agriculture (storage,productio	Rehabilitatio	
23. Importance of khettara (1) (1) Unique source for both of p (2) Unique source for irrigition (3) Main source for irrigation	(G-23) otable water and irrigati	on (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khetta 1 Yes (1), No (2) If no, th (G-24)	ne reason	(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others

1. Khettara Number A-060 (G-1)	MP	2. Name of commune	Ferkla Soufla (G-2)
3. Name of khettara Cheikh		4. Location of khettara	X = <u>533497.4</u> (G-4-1)
(G-3)			Y = 104706.3 (G-4-2)
5. Number of families who 11	2 (G-5-2) families	9. Histry of discharge	0
6. Number of beneficialies 50	0 (G-6-2) families	of khettara	
7. Cycle of kehttara water right	2 (G-7-1) days		
8.Discharge of khettara (latest)	1 (G-8) lit/sec	(I-10)	
10. History of khettara water flow 6	(I-9)		
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The discha	n the dry season in the past five ra has water flow, but the discha recent five years. rge of the khettara is constant rge of the khettara is increased	arge of khettara is reduced each
11. Total area of farmland [](IA	40 ha -1)	12. Irrigated area by the	khettara <u>13</u> ha (IA-3)
13. The condition of roads [1 (G-15)	appropriate (1) not appropriate (2)	14.The condition of sch	ools 1 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 (G-17)	appropriate (1) not appropriate (2)	16.Facility of electricity a telecomunication	and 1 appropriate (1) (G-18) not appropriate (2)
17. Existence of Association	1 Yes (1), (G-21) No (2)	If yes, Name of Association	(G-22)
18. Situation of khettara	Length (m)	Section hight(m)	n of khettara (average) width (m)
Gallery of khettara (Gallery in catchment area and conduit	540 (E-1-1-1) 3000 (E-1-1-2)	) <u>3</u> (E-1-4	-1) <u>0.4</u> (E-1-5-1)
Khettara as open channel	2600 (E-2-1)	2 (E-2-2	,
Principal and secondary irrigation canal	290 (E-4-2-1 0 (E-4-2-2		
19. Rehabilitation Rehabilitation leng khettara	gth of 470 ( (M-7)	m) Rehabilitation le irrigation canal	ength of principal (m) (M-8)
20. Influence of desertification			
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	<u>1</u> (I-2) Irr	egulation pond <u>1</u> (I-5) rigation canals <u>1</u> (I-7)
21.Demandes of habitants (water reso	urces)	Yes (1), No (2)	
Rehabilitation of khettara 1 Installing pump 2 Rehabilitation of irrigation canal 2	(G-19-1) (G-19-2) Cor (G-19-3)	Protection dil nstruction of public wells for	ke against flood 2 (G-19-4) domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual	and social support	) Yes (1), No (2)	
Agriculture (storage,production,	transporttion of proc Rehabilitatio	, duct , etc.)2(G-20-1)	School         2         (G-20-4)           Sanitary system         1         (G-20-5)           Hospital         1         (G-20-6)           Others         2         (G-20-7)
23. Importance of khettara 1 (1) Unique source for both of pot (2) Unique source for irrigition (3) Main source for irrigation		on (4) Partial source for (5) Supplementary so (6) Neglected	
24. Possibility of extension of khettara 1 Yes (1), No (2) If no, the (G-24)	reason	(1)Constrains in landscape (2)Prohibited by law	(3)Existence of other khettaras (4)Others

	1	
1. Khettara Number A-061 (G-1)	MP	2. Name of commune Ferkla Oulia (G-2)
3. Name of khettara (G-3)	gourte	4. Location of khettara $X = 537165.18$ (G-4-1) Y = 108757.4 (G-4-2)
E Number of femilies who	50 (G-5-2) families	9. Histry of discharge 0
6. Number of beneficialies 1	50 (G-6-2) families	of khettara
7. Cycle of kehttara water right	10 (G-7-1) days	
8.Discharge of khettara (latest)	16 (G-8) lit/sec	(I-10)
10. History of khettara water flow	6 (I-9)	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The discha	n the dry season in the past five years ra has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased
11. Total area of farmland [	15 <sup>ha</sup> A-1)	12. Irrigated area by the khettara 0.6 ha (IA-3)
13. The condition of roads [2 (G-15)	appropriate (1) not appropriate (2)	14.The condition of schools appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 1 (G-17	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association	1 Yes (1), (G-21) No (2)	If yes, Name of G-22
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit	300 (E-1-1-1 600 (E-1-1-2	
Khettara as open channel	0 (E-2-1)	0 (E-2-2) 0 (E-2-3)
Principal and secondary irrigation canal	300 (E-4-2-1 0 (E-4-2-2	
19. Rehabilitation Rehabilitation ler khettara	ngth of(M-7)	m) Rehabilitation length of principal 450 (m) irrigation canal (M-8)
20. Influence of desertification		
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	2 (I-2) Irrigation canals 2 (I-7)
21.Demandes of habitants (water res	ources)	Yes (1), No (2)
Rehabilitation of khettara 1 Installing pump 2 Rehabilitation of irrigation canal 2	(G-19-1) (G-19-2) Con (G-19-3)	Protection dike against flood 2 (G-19-4) nstruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultua	I and social support	
Agriculture (storage,production	Rehabilitatio	
23. Importance of khettara (1) Unique source for both of p (2) Unique source for irrigition (3) Main source for irrigation		
24. Possibility of extension of khettar 1 Yes (1), No (2) If no, th (G-24)	e reason	(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others

1. Khettara Number A-062 - (G-1)	2. Name of commune Ferkla Soufla (G-2)
3. Name of khettara Tahria (G-3)	4. Location of khettara $X = 536540.56$ (G-4-1) Y = 108653.43 (G-4-2)
5. Number of families who [50] (G-5-2) families	9. Histry of discharge 0
6. Number of beneficialies 50 (G-6-2) families	of khettara
7. Cycle of kehttara water right 6 (G-7-1) days	
8.Discharge of khettara (latest) 0 (G-8) lit/sec	(I-10)
10. History of khettara water flow 8 (I-9)	
(2)No water in the last two-decade(6)The khett(3)No water in the last decadeyear in the(4)No water in the past five years(7)The disch	in the dry season in the past five years ara has water flow, but the discharge of khettara is reduced each re recent five years. aarge of the khettara is constant aarge of the khettara is increased
11. Total area of farmland [7] ha (IA-1)	12. Irrigated area by the khettara [2.5]ha (IA-3)
13. The condition of roads 2 appropriate (1) (G-15) not appropriate (2)	14.The condition of schools     2     appropriate (1)       (G-16)     not appropriate (2)
15.Sanitary service 2 appropriate (1) (G-17) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association Yes (1), (G-21) No (2)	If yes, Name of G-22
18. Situation of khettara Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in60 (E-1-1-	· · · · · · · · · · · · · · · · · · ·
catchment area and conduit [140] (E-1-1-	2) <u>1.5</u> (E-1-4-2) <u>0.5</u> (E-1-5-2)
Khettara as open channel 40 (E-2-1)	2 (E-2-2) 0.5 (E-2-3)
Principal and secondary200 (E-4-2-irrigation canal0 (E-4-2-	
19. Rehabilitation Rehabilitation length of khettara (M-7)	(m) Rehabilitation length of principal (m) irrigation canal (M-8)
20. Influence of desertification	
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification Open channel kh	t (I-2) Irrigation canals 2 (I-7)
21.Demandes of habitants (water resources )	Yes (1), No (2)
Rehabilitation of khettara 1 (G-19-1) Installing pump 2 (G-19-2) C Rehabilitation of irrigation canal 1 (G-19-3)	Protection dike against flood 1 (G-19-4) onstruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual and social suppo	
Agriculture (storage,production, transporttion of pro Rehabilitati	School 2 (G-20-4)
23. Importance of khettara (G-23) (1) Unique source for both of potable water and irriga (2) Unique source for irrigition (3) Main source for irrigation	
24. Possibility of extension of khettara Yes (1), No (2) If no, the reason (G-25) (G-24)	<ul><li>(1)Constrains in landscape</li><li>(2)Prohibited by law</li><li>(3)Existence of other khettaras</li><li>(4)Others</li></ul>

1. Khettara Number A-063 (G-1)	MP	2. Name of commune Ferkla Soufla (G-2)
3. Name of khettara (G-3)	nssine	4. Location of khettara $X = 534323.93$ (G-4-1) Y = 106008.94 (G-4-2)
5. Number of families who	60 (G-5-2) families	9. Histry of discharge 0 of khettara
6. Number of beneficialies	100 (G-6-2) families	
7. Cycle of kehttara water right	12 (G-7-1) days	
8.Discharge of khettara (latest)	1.2 (G-8) lit/sec	(I-10)
10. History of khettara water flow	6+7 (I-9)	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The discha	n the dry season in the past five years ra has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased
11. Total area of farmland	36 ha (IA-1)	12. Irrigated area by the khettara [6]ha (IA-3)
13. The condition of roads [1 (G-1	appropriate (1) 5) not appropriate (2)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service (G-1	appropriate (1) 7) not appropriate (2)	16.Facility of electricity and telecomunication1 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association	1 Yes (1), (G-21) No (2)	If yes, Name of AssociationAlinfitah(G-22)
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit	200 (E-1-1-1 660 (E-1-1-2	
Khettara as open channel	40 (E-2-1)	1 (E-2-2) 0.4 (E-2-3)
Principal and secondary irrigation canal	300 (E-4-2-1 300 (E-4-2-2	
19. Rehabilitation Rehabilitation le khettara	ength of 100 ( (M-7)	m) Rehabilitation length of principal <u>356</u> (m) irrigation canal (M-8)
20. Influence of desertification		
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	3 (I-2) Irrigation canals (I-7)
21.Demandes of habitants (water re	sources)	Yes (1), No (2)
Rehabilitation of khettara 1 Installing pump 2 Rehabilitation of irrigation canal 2	G-19-2) Col	Protection dike against flood 2 (G-19-4) Instruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultu	al and social support	
Agriculture (storage,production	Rehabilitatio	School         1         (G-20-4)           duct , etc.)         2         (G-20-1)         Sanitary system         1         (G-20-5)           n of roads         2         (G-20-2)         Hospital         1         (G-20-6)           tric supply         2         (G-20-3)         Others         2         (G-20-7)
23. Importance of khettara 3 (1) Unique source for both of (2) Unique source for irrigition (3) Main source for irrigation		on (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khetta 1 Yes (1), No (2) If no, t (G-24)	he reason	(1)Constrains in landscape(3)Existence of other khettaras(2)Prohibited by law(4)Others
1. Khettara Number A-064 (G-1)	MP	2. Name of commune Ferkla Soufla (G-2)
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3. Name of khettara El Mac (G-3)	h	4. Location of khettara $X = 535767.92$ (G-4-1) Y = 107175.25 (G-4-2)
E Number of femilies who	35 (G-5-2) families	9. Histry of discharge 0
6. Number of beneficialies 5	5 (G-6-2) families	of khettara
7. Cycle of kehttara water right	8 (G-7-1) days	
8.Discharge of khettara (latest)	2 (G-8) lit/sec	(I-10)
10. History of khettara water flow 7	(I-9)	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The discha	n the dry season in the past five years ra has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased
11. Total area of farmland	<u>20</u> ha A-1)	12. Irrigated area by the khettara [16]ha (IA-3)
13. The condition of roads [1 (G-15	appropriate (1) not appropriate (2)	14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 (G-17	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication1 appropriate (1) (G-18) not appropriate (2)
17. Existence of Association	1 Yes (1), (G-21) No (2)	If yes, Name of G-22)
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit	437 (E-1-1-1) 946 (E-1-1-2)	) <u>2.5</u> (E-1-4-1) <u>0.5</u> (E-1-5-1)
Khettara as open channel	<u>123</u> (E-2-1)	1 (E-2-2) 0.5 (E-2-3)
Principal and secondary irrigation canal	500 (E-4-2-1 0 (E-4-2-2	
19. Rehabilitation Rehabilitation len khettara	gth of 250 ( (M-7)	m) Rehabilitation length of principal (m) irrigation canal (M-8)
20. Influence of desertification		
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	3 (I-2) Irrigation canals 333 (I-7)
21.Demandes of habitants (water reso	ources)	Yes (1), No (2)
Rehabilitation of khettara 1 Installing pump 2 Rehabilitation of irrigation canal 2	(G-19-1) (G-19-2) Cor (G-19-3)	Protection dike against flood 1 (G-19-4) nstruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultua	and social support	
Agriculture (storage,production	Rehabilitation	School         1         (G-20-4)           duct , etc.)         2         (G-20-1)         Sanitary system         2         (G-20-5)           n of roads         1         (G-20-2)         Hospital         1         (G-20-6)           tric supply         2         (G-20-3)         Others         2         (G-20-7)
23. Importance of khettara 1 (1) Unique source for both of po (2) Unique source for irrigtion (3) Main source for irrigation		on (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettara 1 Yes (1), No (2) If no, the (G-24)	e reason	(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others

1. Khettara Number A-065 (G-1)	MP	2. Name of commune Ferkla Oulia (G-2)
3. Name of khettara Ait M'h (G-3)	imed	4. Location of khettara $X = 537330.39$ (G-4-1) Y = 95688.92 (G-4-2)
nave knettara water right	00 (G-5-2) families	9. Histry of discharge 0 of khettara
6. Number of beneficialies	70 (G-6-2) families	
7. Cycle of kehttara water right	15 (G-7-1) days	
8.Discharge of khettara (latest) 1.	24 (G-8) lit/sec	(I-10)
10. History of khettara water flow	(I-9)	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The discha	n the dry season in the past five years a has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased
11. Total area of farmland [	40 ha A-1)	12. Irrigated area by the khettara 0.5 ha (IA-3)
13. The condition of roads 2 (G-15)	appropriate (1) not appropriate (2)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 (G-17	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association	1 Yes (1), (G-21) No (2)	If yes, Name of G-22
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit	100 (E-1-1-1 900 (E-1-1-2	
Khettara as open channel	1000 (E-2-1)	5 (E-2-2) 0.6 (E-2-3)
Principal and secondary irrigation canal	1000 (E-4-2-1 0 (E-4-2-2	
19. Rehabilitation Rehabilitation ler khettara	gth of 1400 ( (M-7)	m) Rehabilitation length of principal (m) irrigation canal (M-8)
20. Influence of desertification		
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	(I-2) Irrigation canals 2 (I-7)
21.Demandes of habitants (water reso	ources)	Yes (1), No (2)
Rehabilitation of khettara 1 Installing pump 2 Rehabilitation of irrigation canal 1	(G-19-1) (G-19-2) Con (G-19-3)	Protection dike against flood 2 (G-19-4) Instruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultua	l and social support	
Agriculture (storage,productior	Rehabilitatio	
23. Importance of khettara 1 (1) Unique source for both of po (2) Unique source for irrigtion (3) Main source for irrigation		on (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettar 1 (G-24) Yes (1), No (2) If no, the	e reason	(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others

1. Khettara Number A-066 (G-1)	MP	2. Name of commune Ferkla Oulia (G-2)
3. Name of khettara Ihanda (G-3)	ır	4. Location of khettara $X = 536469.57$ (G-4-1) Y = 92808.78 (G-4-2)
5. Number of families who have khettara water right		9. Histry of discharge 0 of khettara
6. Number of beneficialies	8 (G-6-2) families	
7. Cycle of kehttara water right	8 (G-7-1) days	
8.Discharge of khettara (latest) 8.	53 (G-8) lit/sec	(I-10)
10. History of khettara water flow 6	(I-9)	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The discha	n the dry season in the past five years a has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased
11. Total area of farmland	<u>32</u> ha A-1)	12. Irrigated area by the khettara <u>30</u> ha (IA-3)
13. The condition of roads (G-15)	appropriate (1) not appropriate (2)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 (G-17	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association	1 Yes (1), (G-21) No (2)	If yes, Name of AssociationAmalou(G-22)
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit	1000 (E-1-1-1) 500 (E-1-1-2)	
Khettara as open channel	600 (E-2-1)	0.5 (E-2-2) 0.5 (E-2-3)
Principal and secondary irrigation canal	400 (E-4-2-1 800 (E-4-2-2	
19. Rehabilitation Rehabilitation len khettara	gth of 600 ( (M-7)	m) Rehabilitation length of principal 0 (m) irrigation canal (M-8)
20. Influence of desertification		
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	(I-2) Irrigation canals (I-7)
21.Demandes of habitants (water reso	ources)	Yes (1), No (2)
Rehabilitation of khettara 1 Installing pump 2 Rehabilitation of irrigation canal 11	(G-19-1) (G-19-2) Con (G-19-3)	Protection dike against flood 2 (G-19-4) nstruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultua	I and social support	) Yes (1), No (2)
Agriculture (storage,production	Rehabilitation	
23. Importance of khettara 1 (1) Unique source for both of po (2) Unique source for irrigtion (3) Main source for irrigation		on (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettar 1 (G-24) Yes (1), No (2) If no, the	e reason	(1)Constrains in landscape(3)Existence of other khettaras(2)Prohibited by law(4)Others

1. Khettara Number A-067 (G-1)	MP	2. Name of commune	Ferkla Soufla (G-2)
3. Name of khettara Tighfarte (G-3)		4. Location of khettara	X = 534080.15 (G-4-1) Y = 103257.55 (G-4-2)
5. Number of families who 195	(G-5-2) families	9. Histry of discharge of khettara	0
6. Number of beneficialies 400	(G-6-2) families	or kneuara	
7. Cycle of kehttara water right 12	(G-7-1) days		
8.Discharge of khettara (latest) 8.55	(G-8) lit/sec	(I-10)	
10. History of khettara water flow 6	(I-9)		
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The dischar	n the dry season in the past five a has water flow, but the disch recent five years. rge of the khettara is constant rge of the khettara is increased	arge of khettara is reduced each
11. Total area of farmland [IA-1	84 ha )	12. Irrigated area by the	e khettara <u>15</u> ha (IA-3)
	ppropriate (1) ot appropriate (2)	14.The condition of sch	nools 2 appropriate (1) (G-16) not appropriate (2)
	ppropriate (1) ot appropriate (2)	16.Facility of electricity telecomunication	and 1 appropriate (1) (G-18) not appropriate (2)
17. Existence of Association	1 Yes (1), (G-21) No (2)	If yes, Name of Association	(G-22)
18. Situation of khettara	Length (m)	Sectio hight(m)	n of khettara (average) )
Gallery of khettara (Gallery in	562 (E-1-1-1) 3738 (E-1-1-2)	) <u>2.5</u> (E-1-4	1-1) <u>0.6</u> (E-1-5-1)
Khettara as open channel	<u>1105</u> (E-2-1)	, <u>1.3</u> (E-2-2	2) <u>0.6</u> (E-2-3)
Principal and secondary irrigation canal	2000 (E-4-2-1) 0 (E-4-2-2)		<i>'</i>
19. Rehabilitation Rehabilitation length khettara	n of <u>980</u> ( (M-7)	m) Rehabilitation I irrigation canal	ength of principal 300 (m) (M-8)
20. Influence of desertification		Ŭ	
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification	allery in catchme allery of conduit pen channel khe	<u>1</u> (I-2) Ir	Regulation pond (I-5) rigation canals 1 (I-7)
21.Demandes of habitants (water resour	ces)	Yes (1), No (2)	
Rehabilitation of khettara 1 Installing pump 1 Rehabilitation of irrigation canal 1	(G-19-1) (G-19-2) Cor (G-19-3)	Protection di nstruction of public wells for	ike against flood 2 (G-19-4) r domestic water 2 (G-19-5) Others 1 (G-19-6)
22.Demandes of habitants (Aglicultual a	nd social support	) Yes (1), No (2)	
Agriculture (storage,production, tr	Rehabilitation		School         1         (G-20-4)           Sanitary system         1         (G-20-5)           Hospital         1         (G-20-6)           Others         1         (G-20-7)
23. Importance of khettara (1) Unique source for both of potab (2) Unique source for irrigtion (3) Main source for irrigation	(G-23) (G	on (4) Partial source for (5) Supplementary so (6) Neglected	
24. Possibility of extension of khettara 1 Yes (1), No (2) If no, the re (G-24)		(1)Constrains in landscape (2)Prohibited by law	(3)Existence of other khettaras (4)Others

1. Khettara Number A-068 (G-1)	MP	2. Name of commune Ferkla Soufla (G-2)
3. Name of khettara Lakdir (G-3)	na (Ai	4. Location of khettara $X = 536346.02$ (G-4-1) Y = 103450.4 (G-4-2)
nave knettara water right		9. Histry of discharge 0 of khettara
	45 (G-6-2) families	
	13 (G-7-1) days	
8.Discharge of khettara (latest)	2 (G-8) lit/sec	(I-10)
10. History of khettara water flow	(I-9)	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The discha	n the dry season in the past five years a has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased
11. Total area of farmland [	10 ha A-1)	12. Irrigated area by the khettara [5]ha (IA-3)
13. The condition of roads 2 (G-15)	appropriate (1) not appropriate (2)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 (G-17	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association	1 Yes (1), (G-21) No (2)	If yes, Name of G-22
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit	200 (E-1-1-1) 2800 (E-1-1-2)	) <u>1.5</u> (E-1-4-1) <u>0.5</u> (E-1-5-1)
Khettara as open channel	(E-2-1)	0 (E-2-2) 0 (E-2-3)
Principal and secondary irrigation canal	60 (E-4-2-1 1000 (E-4-2-2	
19. Rehabilitation Rehabilitation ler khettara	igth of (M-7)	m) Rehabilitation length of principal <u>390</u> (m) irrigation canal (M-8)
20. Influence of desertification		
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	(I-2) Irrigation canals <u>3</u> (I-7)
21.Demandes of habitants (water res	•	Yes (1), No (2)
Rehabilitation of khettara 1 Installing pump 2 Rehabilitation of irrigation canal 1	(G-19-1) (G-19-2) Con (G-19-3)	Protection dike against flood 2 (G-19-4) nstruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultua	I and social support	) Yes (1), No (2)
Agriculture (storage,productior	Rehabilitation	
23. Importance of khettara 3 (1) Unique source for both of por (2) Unique source for irrigtion (3) Main source for irrigation		on (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettar 1 (G-24) Yes (1), No (2) If no, the	e reason	(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others

1. Khettara Number A-069 - (G-1)	2. Name of commune Ferkla Soufla (G-2)	
, , , , , , , , , , , , , , , , , , ,	4. Location of khettara X = 537665.78 (G-4-	-1)
3. Name of khettara (G-3)	Y = 108879.41 (G-4-	
5. Number of families who	a <sup>milies</sup> 9. Histry of discharge 0	
6. Number of beneficialies 86 (G-6-2) <sup>fa</sup>	amilies of khettara	
7. Cycle of kehttara water right 12 (G-7-1)	days	
8.Discharge of khettara (latest) 0 (G-8) lit/	/sec (I-10)	
10. History of khettara water flow (I-	I-9)	
(2)No water in the last two-decade(6)The(3)No water in the last decadeyea(4)No water in the past five years(7)The	o water in the dry season in the past five years e khettara has water flow, but the discharge of khettara is reduced each ar in the recent five years. e discharge of the khettara is constant e discharge of the khettara is increased	
11. Total area of farmland [13] ha (IA-1)	12. Irrigated area by the khettara [0]ha (IA-3)	l
13. The condition of roads 1 appropriate (1) (G-15) not appropriate		(2)
15.Sanitary service 2 appropriate (1) (G-17) not appropriate		
	es (1), If yes, Name of (G-22) Association (G-22)	
18. Situation of khettara Length	(m) Section of khettara (average) hight(m) width (m)	
Gallery of khettara (Gallery in 100 (E- catchment area and conduit 500 (E-		
catchment area and conduit     500 (E-       Khettara as open channel     1.5 (E-	· · · · · · · · · · · · · · · · · · ·	<u>_)</u>
Principal and secondary 150 (E-	-4-2-1) 0.4 (E-4-3-1) 0.4 (E-4-1-	·1)
	-4-2-2) (E-4-3-2) (E-4-1-	·2)
19. Rehabilitation Rehabilitation length of [ khettara (M-7	(m)Rehabilitation length of principal7)irrigation canal(M-8)	(m)
20. Influence of desertification		
	onduit [1] (I-2) Irrigation canals [1] (I	I-5) I-7)
21.Demandes of habitants (water resources)	Yes (1), No (2)	
Rehabilitation of khettara 1 (G-19-1)		19-4)
Installing pump 2 (G-19-2) Rehabilitation of irrigation canal 1 (G-19-3)		19-5) 19-6)
22.Demandes of habitants (Aglicultual and social su		
Agriculture (storage,production, transporttion or Rehab	of product , etc.) 2 (G-20-1) Sanitary system 2 (G bilitation of roads 2 (G-20-2) Hospital 2 (G	G-20-4) G-20-5) G-20-6)
		G-20-7)
23. Importance of khettara (G-23) (1) Unique source for both of potable water and (2) Unique source for irrigition (3) Main source for irrigation		
24. Possibility of extension of khettara		
Yes (1), No (2) If no, the reason (G-24) (G-25	(1)Constrains in landscape (3)Existence of other khetta (2)Prohibited by law (4)Others	aras

	A-070 G-1)	MP	)	2. Nam	e of comm		erkla Sou i-2)	ıfla
3. Name of khettara	Ami Lho (G-3)	oussa		4. Loca	ation of khe		-	3293.45 (G-4-1) 5731.29 (G-4-2)
5. Number of families who have khettara water right	· /	3 (G-5-2)	families		y of discha			
6. Number of beneficialies	123	3 (G-6-2)	families	of khet	lara			
7. Cycle of kehttara water righ	t 1:	2 (G-7-1)	days					
8.Discharge of khettara (latest	)	6 (G-8)	lit/sec			(I-10)		
10. History of khettara water fl	ow 7		(I-9)					
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>		(6) (7)	The khetta year in the The discha	ra has wa recent fiv rge of the		he discharge onstant		a is reduced each
11. Total area of farmland	(IA	10 ha -1)		12. Irrig	gated area	by the khe	ettara	5ha (IA-3)
13. The condition of roads	2 (G-15)	appropriate not approp		14.The	e condition	of schools	6 <u>2</u> (G-16	appropriate (1) ) not appropriate (2)
15.Sanitary service	2 (G-17)	appropriate not approp			cility of elec munication	•	2 (G-18	appropriate (1) not appropriate (2)
17. Existence of Association		1 (G-21)	Yes (1), No (2)	lf yes, Assoc	Name of iation		ettara As ·22)	ssociation entre A
18. Situation of khettara		Leng	gth (m)			Section of ight(m)	khettara	i (average) width (m)
Gallery of khettara (Gallery in catchment area and conduit			(E-1-1-1 (E-1-1-2	,		(E-1-4-1) (E-1-4-2)		0.4 (E-1-5-1) 0.4 (E-1-5-2)
Khettara as open channel		300	(E-2-1)		1.3	(E-2-2)		0.4 (E-2-3)
Principal and secondary irrigation canal			(E-4-2-1 (E-4-2-2	<i>'</i>	0.4	(E-4-3-1) (E-4-3-2)		0.5 (E-4-1-1) 0 (E-4-1-2)
19. Rehabilitation Rehabilita khettara	ition leng		( M-7)	m)	Rehabilit irrigation	tation leng	th of prin	cipal <u>400</u> (m) (M-8)
20. Influence of desertification	ו					_		
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	n n	Gallery in Gallery of Open cha	f conduit		1 (I- 1 (I- 1 (I-	2) Irriga	lation po tion cana	
21.Demandes of habitants (wa	ater resou	urces)		Yes	s (1), No (2)	,		
Rehabilitation of khe Installing p Rehabilitation of irrigation o	ump 2	(G-19) (G-19) (G-19)	9-2) Co	nstructio	Prote n of public v	ction dike a vells for don		ter 1 (G-19-5
22.Demandes of habitants (Ag	licultual	and socia	al support	) Yes	s (1), No (2)		-	
Agriculture (storage,pr	oduction,		habilitatio		ds 1 (G	-20-1) Sa -20-2) -20-3)	initary sys Hos	hool 1 (G-20- stem 2 (G-20- pital 2 (G-20- hers 2 (G-20-
23. Importance of khettara (1) Unique source for b (2) Unique source for ir (3) Main source for irrig	rigtion ation	(G-	,	(	4) Partial so 5) Suppleme 6) Neglected	ntary source		ion
24. Possibility of extension of 1 (G-24) (G-24)	khettara If no, the				trains in land bited by law	• • • •	Existence Others	e of other khettaras

1. Khettara Number A-071 - (G-1)	2. Name of commune Ferkla Soufla (G-2)
3. Name of khettara (G-3)	4. Location of khettara $X = 536349.07$ (G-4-1) Y = 108433.64 (G-4-2)
5. Number of families who [400] (G-5-2) famil	9. Histry of discharge 1999
6. Number of beneficialies 415 (G-6-2) famil	lies of khettara
7. Cycle of kehttara water right 10 (G-7-1) day	'S
8.Discharge of khettara (latest) 0 (G-8) lit/se	ec (I-10)
10. History of khettara water flow (I-9	)
(2)No water in the last two-decade(6)The kh(3)No water in the last decadeyear ir(4)No water in the past five years(7)The dia	ater in the dry season in the past five years nettara has water flow, but the discharge of khettara is reduced each in the recent five years. scharge of the khettara is constant scharge of the khettara is increased
11. Total area of farmland [10] ha (IA-1)	12. Irrigated area by the khettara [0]ha (IA-3)
13. The condition of roads [1] appropriate (1) (G-15) not appropriate (2)	2) 14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 1 appropriate (1) (G-17) not appropriate (2)	2) 16.Facility of electricity and telecomunication (G-18) not appropriate (1) (G-18)
17. Existence of Association Yes ( (G-21) No (2	
18. Situation of khettara Length (m	n) Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in700 (E-1-	
catchment area and conduit [120] (E-1-	-1-2) <u>2.5</u> (E-1-4-2) <u>0.6</u> (E-1-5-2)
Khettara as open channel 0 (E-2-	-1) 0 (E-2-2) 0 (E-2-3)
Principal and secondary500 (E-4-irrigation canal0 (E-4-	
19. Rehabilitation Rehabilitation length of khettara (M-7)	(m) Rehabilitation length of principal (m) irrigation canal (M-8)
20. Influence of desertification	
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertificationGallery in catch Gallery of conc Open channel	duit (I-2) Irrigation canals 1 (I-7)
21.Demandes of habitants (water resources )	Yes (1), No (2)
Rehabilitation of khettara 1 (G-19-1) Installing pump 1 (G-19-2) Rehabilitation of irrigation canal 1 (G-19-3)	Protection dike against flood 2 (G-19-4) Construction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual and social sup	
Agriculture (storage, production, transporttion of	School 2 (G-20-4)
	Electric supply 2 (G-20-3) Others 2 (G-20-7)
23. Importance of khettara (G-23) (1) Unique source for both of potable water and irr (2) Unique source for irrigition (3) Main source for irrigation	igation (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettara Yes (1), No (2) If no, the reason (G-24) (G-25)	(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others

1. Khettara Number A-072 - (G-1)	2. Name of commune Ferkla Soufla (G-2)
3. Name of khettara Labdit	4. Location of khettara X = 558297.13 (G-4-1)
(G-3)	Y = 116343.8 (G-4-2)
5. Number of families who [150] (G-5-2) familie have khettara water right	9. Histry of discharge
6. Number of beneficialies 190 (G-6-2) familie	of khettara
7. Cycle of kehttara water right 20 (G-7-1) days	
8.Discharge of khettara (latest) 0 (G-8) lit/sec	c (I-10)
10. History of khettara water flow (I-9)	
(2)No water in the last two-decade(6)The khe(3)No water in the last decadeyear in(4)No water in the past five years(7)The disc	er in the dry season in the past five years ttara has water flow, but the discharge of khettara is reduced each the recent five years. charge of the khettara is constant charge of the khettara is increased
11. Total area of farmland 6 ha (IA-1)	12. Irrigated area by the khettara [1]ha (IA-3)
13. The condition of roads (G-15) 13. The condition of roads 1 appropriate (1) 1 not appropriate (2)	14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 1 appropriate (1) (G-17) not appropriate (2)	16.Facility of electricity and telecomunication1 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association Yes (1 (G-21) No (2)	
18. Situation of khettara Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in 1200 (E-1-1	I-1) [[-1] (E-1-4-1) [[0.8] (E-1-5-1)
catchment area and conduit [[[] 0 (E-1-1	
Khettara as open channel 480 (E-2-1	) <u>0.4</u> (E-2-2) <u>0.3</u> (E-2-3)
Principal and secondary230 (E-4-2irrigation canal0 (E-4-2	
19. Rehabilitation Rehabilitation length of khettara (M-7)	(m) Rehabilitation length of principal (m) irrigation canal (M-8)
20. Influence of desertification	
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertificationGallery in catche Gallery of condu Open channel k	uit (I-2) Irrigation canals (I-7)
21.Demandes of habitants (water resources )	Yes (1), No (2)
Rehabilitation of khettara 1 (G-19-1)	Protection dike against flood 2 (G-19-4)
Installing pump 2 (G-19-2) Rehabilitation of irrigation canal 1 (G-19-3)	Construction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual and social supp	ort) Yes (1), No (2)
	School         2         (G-20-4)           product , etc.)         2         (G-20-1)         Sanitary system         2         (G-20-5)           ation of roads         1         (G-20-2)         Hospital         2         (G-20-6)           lectric supply         2         (G-20-3)         Others         2         (G-20-7)
23. Importance of khettara (G-23) (1) Unique source for both of potable water and irrig (2) Unique source for irrigation (3) Main source for irrigation	
24. Possibility of extension of khettara Yes (1), No (2) If no, the reason (G-25) (G-24)	<ul><li>(1)Constrains in landscape</li><li>(2)Prohibited by law</li><li>(3)Existence of other khettaras</li><li>(4)Others</li></ul>

KHET	TARA	DAT	BASE

1. Khettara Number A-073 MP	2. Name of commune Ferkla Oulia			
1. Khettara Number A-073 MP (G-1)	2. Name of commune Ferkla Oulia (G-2)			
· · · · · · · · · · · · · · · · · · ·	4. Location of khettara X = 536273.26 (G-4-1)			
3. Name of khettara Taghouchte (G-3)	4. Example 1 (G-4-1) $Y = \frac{87254.3}{(G-4-2)}$			
5. Number of families who	9. Histry of discharge			
6. Number of beneficialies 38 (G-6-2) families	of khettara			
7. Cycle of kehttara water right 10 (G-7-1) days				
8.Discharge of khettara (latest) 4.76 (G-8) lit/sec	(I-10)			
10. History of khettara water flow 6 (I-9)				
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> <li>(5) No water in the dry season in the past five years</li> <li>(6)The khettara has water flow, but the discharge of khettara is reduced each year in the recent five years.</li> <li>(7)The discharge of the khettara is constant</li> <li>(8)The discharge of the khettara is increased</li> </ul>				
11. Total area of farmland [24] ha (IA-1)	12. Irrigated area by the khettara 6ha (IA-3)			
13. The condition of roads 2 appropriate (1) (G-15) not appropriate (2)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)			
15.Sanitary service 2 appropriate (1) (G-17) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)			
17. Existence of Association 2 Yes (1), (G-21) No (2)	If yes, Name of G-22			
18. Situation of khettara Length (m)	Section of khettara (average) hight(m) width (m)			
Gallery of khettara (Gallery in catchment area and conduit200 (E-1-1- 250 (E-1-1-	1) <u>1.5</u> (E-1-4-1) <u>0.45</u> (E-1-5-1)			
Khettara as open channel 0 (E-2-1)	0 (E-2-2) 0 (E-2-3)			
Principal and secondary700 (E-4-2-irrigation canal0 (E-4-2-				
19. Rehabilitation Rehabilitation length of 600 khettara (M-7)	(m) Rehabilitation length of principal 0 (m) irrigation canal (M-8)			
20. Influence of desertification				
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification Open channel kh	t <u>3</u> (I-2) Irrigation canals (I-7)			
21.Demandes of habitants (water resources )	Yes (1), No (2)			
Rehabilitation of khettara 1 (G-19-1) Installing pump 2 (G-19-2) C Rehabilitation of irrigation canal 1 (G-19-3)	Protection dike against flood 1 (G-19-4) onstruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)			
22.Demandes of habitants (Aglicultual and social suppo				
	School         1         (G-20-4)           oduct , etc.)         2         (G-20-1)         Sanitary system         1         (G-20-5)           on of roads         1         (G-20-2)         Hospital         1         (G-20-6)           octric supply         1         (G-20-3)         Others         2         (G-20-7)			
23. Importance of khettara 1 (G-23) (1) Unique source for both of potable water and irriga (2) Unique source for irrigition (3) Main source for irrigation	tion (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected			
24. Possibility of extension of khettara 1 Yes (1), No (2) If no, the reason (G-25) (G-24)	(1)Constrains in landscape(3)Existence of other khettaras(2)Prohibited by law(4)Others			

1. Khettara Number A-074 MP (G-1)	2. Name of commune Ferkla Oulia (G-2)
3. Name of khettara Taghya	4. Location of khettara $X = 536612.11$ (G-4-1) Y = 89969.29 (G-4-2)
(G-3) 5. Number of families who 56 (G-5-2) fam have khettara water right	Y =         89969.29         (G-4-2)           milies         9. Histry of discharge         0
	<sub>nilies</sub> of khettara
7. Cycle of kehttara water right 10 (G-7-1) da	ays
8.Discharge of khettara (latest) 7.4 (G-8) lit/s	sec (I-10)
10. History of khettara water flow 6 (I-s	9)
(2)No water in the last two-decade(6)The k(3)No water in the last decadeyear(4)No water in the past five years(7)The c	water in the dry season in the past five years khettara has water flow, but the discharge of khettara is reduced each r in the recent five years. discharge of the khettara is constant discharge of the khettara is increased
11. Total area of farmland 30 ha (IA-1)	12. Irrigated area by the khettara [1]ha (IA-3)
13. The condition of roads 2 appropriate (1) (G-15) not appropriate (	(2) 14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 appropriate (1) (G-17) not appropriate (	(2) 16.Facility of electricity and telecomunication (G-18) appropriate (1) not appropriate (2)
17. Existence of Association 1 Yes (G-21) No	
18. Situation of khettara Length (	(m) Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in 300 (E-1	· · · · · · · · · · · · · · · · · · ·
catchment area and conduit 730 (E-1	1-1-2) <u>1.2</u> (E-1-4-2) <u>0.5</u> (E-1-5-2)
Khettara as open channel 270 (E-2	2-1) 0.8 (E-2-2) 59 (E-2-3)
Principal and secondary2000 (E-4irrigation canal1000 (E-4	
19. Rehabilitation Rehabilitation length of [13] khettara (M-7)	300 (m) Rehabilitation length of principal 450 (m)
20. Influence of desertification	,
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification Open channe	nduit (I-2) Irrigation canals <u>3</u> (I-7)
21.Demandes of habitants (water resources )	Yes (1), No (2)
Rehabilitation of khettara 1 (G-19-1) Installing pump 1 (G-19-2) Rehabilitation of irrigation canal 2 (G-19-3)	Protection dike against flood 1 (G-19-4) Construction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual and social sup	pport) Yes (1), No (2)
Agriculture (storage, production, transporttion of	School 1 (G-20-4)
23. Importance of khettara 1 (G-23) (1) Unique source for both of potable water and in (2) Unique source for irrigition (3) Main source for irrigation	irrigation (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettara 1 Yes (1), No (2) If no, the reason (G-24) (G-25)	<ul> <li>(1)Constrains in landscape</li> <li>(3)Existence of other khettaras</li> <li>(2)Prohibited by law</li> <li>(4)Others</li> </ul>

1. Khettara Number       A-075       .       2. Name of commune       Ferkla Oulia         3. Name of khettara       Ait Said       .
3. Name of khettara       Ait Said       4. Location of khettara       X = 534223.83       [G-4-1)         5. Number of families who       42       (G-52)       families       9. Histry of discharge of khettara       [G-4-2)         6. Number of beneficialies       42       (G-6-2)       families       9. Histry of discharge of khettara       [G-4-2)         7. Cycle of kehttara water right       12       (G-7-1)       days       [G-10)       [G-10)         8. Discharge of khettara (latest)       0       (G-8)       lit/sec       (I-10)       [I-10)         10. History of khettara water flow       (I-9)       (I-10)       [I-10)       [I-10)       [I-10]         11. Total area of farmland       (IA-1)       (IA-1)       12. Irrigated area by the khettara is constant       [0] ha         (I.A-1)       (IA-1)       14. The condition of schools       1       appropriate (1)       [G-16] not appropriate (2)         15. Sanitary service       2       appropriate (1)       not appropriate (2)       [IA-1]       [G-12] No (2)         15. Stanitary service       2       appropriate (2)       [IA-1]       [I.Sanitary service]       [G-17] Not appropriate (2)         16. Facility of khettara       (G-12)       Not appropriate (2)       [IA-1]       [I.Sitation of khettara
S. Number of families       (G-3)       Y = 89902.24 (G-4-2)         5. Number of families who       42 (G-6-2) families       9. Histry of discharge of khettara water right       12 (G-6-2) families         6. Number of beneficialies       42 (G-6-2) families       9. Histry of discharge of khettara       0         7. Cycle of kehttara water right       12 (G-7-1) days       9. Histry of discharge of khettara       0         8. Discharge of khettara water flow       (I-10)       (I-10)       0       0         10. History of khettara water flow       (I-9)       (I-10)       0         10. History of khettara water flow       (I-9)       (I-10)       0         11. Total area of farmland       400 ha       (I-1)       (I-4-3)         11. Total area of farmland       (IA-1)       14. The condition of schools 1 appropriate (1) (G-15) appropriate (2)       16. Facility of electricity and (IA-3)         13. The condition of roads       2 appropriate (1) (G-15) not appropriate (2)       16. Facility of electricity and (IA-3)       2 appropriate (2)         15. Sanitary service       2 appropriate (1) (G-15) (IA-15)       12. Irrigated area by the khettara (average) high(m)       width (m)         13. The condition of khettara       Length (m)       Secciation of khettara (average)       (IA-15)         14. Existence of Association       (G-11)
have khettara water right       42 (G-5-2) families       9. Histry of discharge of         6. Number of beneficialies       42 (G-6-2) families       of         7. Cycle of kehttara water right       12 (G-7.1) days       of         8. Discharge of khettara water right       12 (G-7.1) days       (I-10)         10. History of khettara water flow       (I-9)       (I-10)         10. History of khettara water flow       (I-9)       (I-10)         11. Total area of farmland       (I-0)       (S) No water in the last two-decade (3)No water in the past five years.       (C) The discharge of the khettara is constant (8)The discharge of the khettara is constant (1)         13. The condition of roads       2 appropriate (1) (G-15) not appropriate (2)       14. The condition of schools (G-16) not appropriate (2)         14. Existence of Association       Y rs (1), If yes, Name of (G-22)       (G-18) not appropriate (2)         15. Sanitary service       2 appropriate (1) (G-17) not appropriate (2)       12. E-14-1         15. Situation of khettara       Length (m)       Section of khettara (average) hight(m)         16. Situation of khettara       Gallery in catchment area and conduit       700 (E-1-1-1)       12. (E-1-4-2)
6. Number of berleintalies       42 (G-6-2) tommas         7. Cycle of kehttara water right       12 (G-7-1) days         8. Discharge of khettara (latest)       0 (G-8) lit/sec         (1) No water from 1950s or 1970s.       (S) No water in the dry season in the past five years         (2) No water in the last wo-dcade (3) No water in the last dcade       (S) The khettara has water flow, but the discharge of khettara is reduced each year in the recent five years.         11. Total area of farmland       400 ha (IA-1)       12. Irrigated area by the khettara is constant (8) The discharge of the khettara is constant (1). Total area of farmland       400 ha (IA-3)         13. The condition of roads       2 appropriate (1) (G-10) not appropriate (2)       14. The condition of schools       1 appropriate (2) (G-18) not appropriate (2)         15. Sanitary service       2 appropriate (1) (G-11) No (2)       16. Facility of electricity and (G-2)       2 appropriate (1) (G-18) not appropriate (2)         16. The tara is conduction       G-10       10       12. Irrigation constant (G-16)
8. Discharge of khettara (latest)       0       (G-8)       lit/sec       (I-10)         10. History of khettara water flow       (I-9)       (I-10)       (I-10)         11. Nowater from 1950s or 1970s.       (S) No water in the dast wordecade       (S) No water in the last wordecade       (S) No water in the last wordecade         (A) No water in the last decade       (G) No water in the resent flow years.       (G) The khettara is constant       (B) The discharge of the khettara is constant         (A) No water in the past flow years       (G) The discharge of the khettara is constant       (IA-3)         11. Total area of farmland       400 ha       12. Irrigated area by the khettara       (IA-3)         13. The condition of roads       2       appropriate (1)       (G-15) not appropriate (2)       16. Facility of electricity and (G-16) not appropriate (2)       2       appropriate (1)         15. Sanitary service       2       appropriate (1)       (G-21) No (2)       Association       (G-22)         18. Situation of khettara       Length (m)       Section of khettara (average)       hight(m)       width (m)         Gallery of khettara (Gallery in catchment area and conduit       500 (E-1-1-1)       1.2 (E-1-4-1)       0.5 (E-1-5-1)         20. Influence of desertification       (H-70)       (H-2-2)       0.4 (E-2-3)       0 (E-4-1-2)
10. History of khettara water flow       (I-10)         11. Total area of farmland       (I-10)         12. Irrigated area by the khettara is constant       (IA-3)         13. The condition of roads       2       appropriate (1)         (G-15) not appropriate (2)       14. The condition of schools       1       appropriate (1)         (G-15) not appropriate (2)       16. Facility of electricity and telecomunication       2       appropriate (2)         15.Sanitary service       2       appropriate (1)       (G-21) No (2)       16. Facility of electricity and telecomunication       2       appropriate (2)         17. Existence of Association       (G-21) No (2)       Association       (G-22)       18. Situation of khettara       Length (m)       Section of khettara (average) hight(m)       width (m)         Gallery of khettara a copen channel       500(E-2-1)       0.4(E-2-2)       0.4(E-2-3)       0.4(E-2-3)         19. Rehabilitation Rehabilitation length of khettara       Gallery in catchment area
(1)No water from 1950s or 1970s.       (5) No water in the day teaded         (2)No water in the last two-decade       (6)The khettara has water flow, but he discharge of khettara is reduced each year in the cast flow years.         (3)No water in the last decade       (A)No water in the last decade         (4)No water in the last decade       (A)No water in the last decade         (4)No water in the last decade       (A)No water in the last decade         (4)No water in the last decade       (A)No water in the last decade         (4)No water in the last decade       (A)No water in the last decade         (4)No water in the last decade       (A)No water in the last decade         (4)No water in the last decade       (A)No water in the last decade         (1). Total area of farmland       (A)O         (A)No water in the last decade       (A)No water in the discharge of the khettara is increased         11. Total area of farmland       (A)O         (A)No water in the last decade       (A)No water in the discharge of the khettara is increased         13. The condition of roads       (B) The discharge of the khettara is increased         14. The condition of schools       1       appropriate (1)         (G-15)       (A)No (2)       16. Facility of electricity and the partificate (2)         17. Existence of Association       Yes (1), If yes, Name of (G-22)       (A) (E-1-5-1)
(2)No water in the last two-decade (4)No water in the last cade (4)No water in the past five years       (6)The khettara has water flow, but the discharge of khettara is reduced each year in the recent five years.         (11. Total area of farmland       400 ha       (12. Irrigated area by the khettara (8)The discharge of the khettara is increased         11. Total area of farmland       400 ha       12. Irrigated area by the khettara       0 ha         (13. The condition of roads       2       appropriate (1) (G-15) not appropriate (2)       14. The condition of schools       1       appropriate (1) (G-16) not appropriate (2)         15. Sanitary service       2       appropriate (1) (G-17) not appropriate (2)       16. Facility of electricity and (G-21) No (2)       2       appropriate (1) (G-21) No (2)         17. Existence of Association       Yes (1), (G-21) No (2)       If yes, Name of Association       (G-22)       (E-1-5-1)         18. Situation of khettara       Length (m)       Section of khettara (average) hight(m)       width (m)         Gallery of khettara (Gallery in catchment area and conduit       500 (E-2-1)       0.4 (E-2-2)       0.4 (E-2-3)         Principal and secondary       76 (E-4-2-1)       0.4 (E-4-3-1)       0.4 (E-4-1-1)         19. Rehabilitation Rehabilitation length of khettara       Gallery in catchment area       (I-1)       0 (I-2)         19. Rehabilitation desecrification (3)Negligible damage by desertific
(IA-1)       (IA-3)         13. The condition of roads       2       appropriate (1) (G-15)       14. The condition of schools       1       appropriate (1) (G-16) not appropriate (2)         15.Sanitary service       2       appropriate (1) not appropriate (2)       16. Facility of electricity and telecomunication       2       appropriate (1) (G-18) not appropriate (2)         17. Existence of Association        Yes (1), (G-21) No (2)       If yes, Name of Association          18. Situation of khettara       Length (m)       Section of khettara (average) hight(m)       width (m)         Gallery of khettara (Gallery in catchment area and conduit       600 (E-1-1-1)       1.2 (E-1-4-1)       0.5 (E-1-5-1)         700 (E-1-1-2)       1.2 (E-1-4-2)       0.5 (E-1-5-2)       0.4 (E-2-3)         Principal and secondary       76 (E-4-2-1)       0.4 (E-4-3-1)       0.4 (E-4-1-1)         irrigation canal
Intervention       Interventin       Interventin       I
10.504 Mdy Service       Impropriate (2)       telecomunication       Impropriate (2)         17. Existence of Association       Impropriate (2)       If yes, Name of (G-22)         18. Situation of khettara       Length (m)       Section of khettara (average) hight(m)         Gallery of khettara (Gallery in catchment area and conduit       600 (E-1-1-1)       1.2 (E-1-4-1)       0.5 (E-1-5-1)         Catchment area and conduit       700 (E-2-1)       0.4 (E-2-2)       0.4 (E-2-3)         Principal and secondary       76 (E-4-2-1)       0.4 (E-4-3-1)       0.4 (E-4-1-1)         irrigation canal       0 (E-4-2-2)       0 (E-4-3-2)       0 (E-4-1-2)         19. Rehabilitation       Rehabilitation length of khettara       Gallery in catchment area (M-7)       Gallery of conduit       Gallery of conduit         (3)Negligible damage by desertification (3)Negligible damage by desertification (3)Negligible damage by desertification       Gallery of conduit
In Existence of Account of the equation equation of the equation of the equation of the equatio
18. Situation of khettara       Length (m)       Section of khettara (average) hight(m)         Gallery of khettara (Gallery in catchment area and conduit       600 (E-1-1-1)       1.2 (E-1-4-1)       0.5 (E-1-5-1)         Catchment area and conduit       700 (E-1-1-2)       1.2 (E-1-4-2)       0.5 (E-1-5-2)         Khettara as open channel       500 (E-2-1)       0.4 (E-2-2)       0.4 (E-2-3)         Principal and secondary irrigation canal       76 (E-4-2-1)       0.4 (E-4-3-1)       0.4 (E-4-1-1)         0 (E-4-2-2)       0 (E-4-2-2)       0 (E-4-3-2)       0 (E-4-1-2)         19. Rehabilitation Rehabilitation length of khettara       (m) (M-7)       Rehabilitation length of principal (M-8)       (m)         20. Influence of desertification (2)Partial damage by desertification (3)Negligible damage by desertification (3)Negligible damage by desertification (Gallery in catchment area Gallery of conduit (3)Negligible damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification (3)Negligible damage by desertification (2)Partial damage by desertification (2)Partial damage by desertification (2)Partial damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification (2)Partial damage by
Gallery of khettara (Gallery in catchment area and conduit       600 (E-1-1-1)       1.2 (E-1-4-1)       0.5 (E-1-5-1)         Khettara as open channel       500 (E-2-1)       0.4 (E-2-2)       0.4 (E-2-3)         Principal and secondary irrigation canal       76 (E-4-2-1)       0.4 (E-4-3-1)       0.4 (E-4-1-1)         19. Rehabilitation Rehabilitation length of khettara       (M-7)       Rehabilitation canal       (M-8)         20. Influence of desertification (2)Partial damage by desertification (3)Negligible damage by desertification (3)Negligible damage by desertification (3)Negligible damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification (3) (G-19-1)       Gallery of conduit (G-19-1)       3 (I-2)         21.Demandes of habitants (water resources )       Yes (1), No (2)       Protection dike against flood 1 (G-19-4)       (G-19-4)         Installing pump (2)       (G-19-2)       Construction of public wells for domestic water 1 (G-19-5)
Khettara as open channel100 (E-1-1-2)1.2 (E-1-2-2)0.3 (E-1-3-2)Principal and secondary irrigation canal76 (E-4-2-1)0.4 (E-2-2)0.4 (E-2-3)Principal and secondary irrigation canal76 (E-4-2-1)0.4 (E-4-3-1)0.4 (E-4-1-1)0 (E-4-3-2)0 (E-4-3-2)0 (E-4-3-2)0 (E-4-1-2)19. Rehabilitation khettara9 (M-7)Rehabilitation length of principal irrigation canal(M)20. Influence of desertification (1)Significant damage by desertification (3)Negligible damage by desertification (3)Negligible damage by desertificationGallery in catchment area Gallery of conduit Open channel khettara(I-1)Regulation pond (I-3)(I-7)21.Demandes of habitants (water resources ) Installing pumpYes (1), No (2)Yes (1), No (2)(G-19-1) (G-19-2)Protection dike against flood (G-19-4)
Principal and secondary irrigation canal       76 (E-4-2-1)       0.4 (E-4-3-1)       0.4 (E-4-1-1)         0 (E-4-2-2)       0 (E-4-3-2)       0 (E-4-1-2)         19. Rehabilitation       Rehabilitation length of khettara       (m) (M-7)       Rehabilitation length of principal irrigation canal       (m) (M-8)         20. Influence of desertification (1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification (3)Negligible damage by desertification       Gallery in catchment area Gallery of conduit Open channel khettara       (I-1)       Regulation pond (I-2)       (I-5)         21. Demandes of habitants (water resources )       Yes (1), No (2)       Yes (1), No (2)         Rehabilitation of khettara       (G-19-1) (G-19-2)       Protection dike against flood (G-19-4)       (G-19-4) (G-19-5)
irrigation canal       0 (E-4-2-2)       0 (E-4-3-2)       0 (E-4-1-2)         19. Rehabilitation       Rehabilitation length of khettara       (M-7)       Rehabilitation length of principal (M-8)       (M)         20. Influence of desertification       Gallery in catchment area       (I-1)       Regulation pond (I-5)       (I-5)         (1)Significant damage by desertification       Gallery of conduit       (I-2)       Irrigation canals       (I-7)         (3)Negligible damage by desertification       Gallery of conduit       (I-3)       (I-3)       (I-7)         21.Demandes of habitants (water resources )       Yes (1), No (2)       Protection dike against flood (G-19-4)       (G-19-4)         Installing pump [2]       (G-19-2)       Construction of public wells for domestic water [1]       (G-19-5)
19. Rehabilitation       Rehabilitation length of khettara       (M-7)       Rehabilitation length of principal (M-8)         20. Influence of desertification       (M-7)       (M-7)       Rehabilitation length of principal (M-8)         20. Influence of desertification       (M-7)       (I-1)       Regulation pond (M-8)         (1)Significant damage by desertification       Gallery in catchment area (Gallery of conduit (Ga
khettara       (M-7)       irrigation canal       (M-8)         20. Influence of desertification       (M-7)       irrigation canal       (M-8)         (1)Significant damage by desertification       Gallery in catchment area       (I-1)       Regulation pond       (I-5)         (2)Partial damage by desertification       Gallery of conduit       (I-2)       Irrigation canals       (I-7)         (3)Negligible damage by desertification       Open channel khettara       (I-3)       (I-3)       (I-7)         21.Demandes of habitants (water resources )       Yes (1), No (2)       Protection dike against flood       (G-19-4)         Installing pump       (G-19-2)       Construction of public wells for domestic water       (I-1)       (G-19-5)
(1)Significant damage by desertification       Gallery in catchment area       (I-1)       Regulation pond       (I-5)         (2)Partial damage by desertification       Gallery of conduit       (I-2)       Irrigation canals       (I-7)         (3)Negligible damage by desertification       Open channel khettara       (I-3)       (I-3)       (I-7)         21.Demandes of habitants (water resources )       Yes (1), No (2)       Protection dike against flood       (G-19-4)         Installing pump       (G-19-2)       Construction of public wells for domestic water       (G-19-5)
(1)Significant damage by desertification       Callery of conduit       (1-2)       Irrigation canals       (1-7)         (3)Negligible damage by desertification       Open channel khettara       (1-3)       (1-3)       (1-3)         21.Demandes of habitants (water resources )       Yes (1), No (2)       Protection dike against flood       (1-9-4)         Installing pump       (G-19-2)       Construction of public wells for domestic water       (1-2)       (G-19-5)
Rehabilitation of khettara 1 (G-19-1) Protection dike against flood 1 (G-19-4) Installing pump 2 (G-19-2) Construction of public wells for domestic water 1 (G-19-5)
Installing pump (G-19-2) Construction of public wells for domestic water (G-19-5)
Installing pump 2 (G-19-2) Construction of public wells for domestic water 1 (G-19-5)
Rehabilitation of irrigation canal 1 (G-19-3) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual and social support) Yes (1), No (2)
Agriculture (storage,production, transporttion of product , etc.) 2 (G-20-1) Sanitary system 2 (G-20- Rehabilitation of roads 1 (G-20-2) Hospital 1 (G-20- Electric supply 1 (G-20-3) Others 2 (G-20-1)
23. Importance of khettara (G-23) (1) Unique source for both of potable water and irrigation (2) Unique source for irrigation (3) Main source for irrigation (6) Neglected
24. Possibility of extension of khettara Yes (1), No (2) If no, the reason (G-25) (1)Constrains in landscape (3)Existence of other khettaras (G-24) (2)Prohibited by law (4)Others

1. Khettara Number A-076 (G-1)	-	2. Name of commune Ferkla Oulia (G-2)
		4. Location of khettara X = 529980.94 (G-4-1)
(G-3)	u	Y = 101115.92 (G-4-2)
5. Number of families who 600 have khettara water right		9. Histry of discharge <sup>0</sup> of khettara
6. Number of beneficialies 600	(G-6-2) families	
7. Cycle of kehttara water right 0	(G-7-1) days	
8.Discharge of khettara (latest) 0	(G-8) lit/sec	(I-10)
10. History of khettara water flow	(I-9)	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The dischar	n the dry season in the past five years a has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased
11. Total area of farmland [IA-1]	100 ha )	12. Irrigated area by the khettara Oha (IA-3)
13. The condition of roads 2 ar	ppropriate (1) ot appropriate (2)	14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)
	opropriate (1) ot appropriate (2)	16.Facility of electricity and telecomunication1 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association	Yes (1), (G-21) No (2)	If yes, Name of G-22
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in	100 (E-1-1-1)	
catchment area and conduit	0 (E-1-1-2)	0 (E-1-4-2) 0 (E-1-5-2)
Khettara as open channel	<u>100</u> (E-2-1)	<u>3 (E-2-2)</u> <u>0.6 (E-2-3)</u>
Principal and secondary irrigation canal	0 (E-4-2-1) 0 (E-4-2-2)	
19. Rehabilitation Rehabilitation length	,	
khettara	(M-7)	irrigation canal (M-8)
20. Influence of desertification		
(2)Partial damage by desertification Ga	allery in catchme allery of conduit oen channel khe	3 (I-2) Irrigation canals (I-7)
21.Demandes of habitants (water resource		Yes (1), No (2)
Rehabilitation of khettara 2	(G-19-1)	Protection dike against flood 1 (G-19-4)
Installing pump 1 Rehabilitation of irrigation canal 2	(G-19-2) Cor (G-19-3)	Astruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual an	d social support	
Agriculture (storage,production, tra	Rehabilitation	n of roads 2 (G-20-2) Hospital 1 (G-20-6)
	Elect	ric supply 2 (G-20-3) Others 2 (G-20-7)
23. Importance of khettara (1) Unique source for both of potabl (2) Unique source for irrigition (3) Main source for irrigation	(G-23) e water and irrigation	on (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettara		1)Constrains in landsonne (2)Evistance of ether literteres
Yes (1), No (2) If no, the rea (G-24)		1)Constrains in landscape(3)Existence of other khettaras2)Prohibited by law(4)Others

1. Khettara Number A-077 - (G-1)	2. Name of commune Ferkla Oulia (G-2)
3. Name of khettara (G-3)	4. Location of khettara $X = 528499.49$ (G-4-1) Y = 98662.82 (G-4-2)
5. Number of families who 325 (G-5-2) famili	9. Histry of discharge
6. Number of beneficialies 325 (G-6-2) famili	of khettara
7. Cycle of kehttara water right 12 (G-7-1) days	S
8.Discharge of khettara (latest) 0 (G-8) lit/se	ис (I-10)
10. History of khettara water flow (I-9)	
(2)No water in the last two-decade(6)The kho(3)No water in the last decadeyear in(4)No water in the past five years(7)The dis	ter in the dry season in the past five years ettara has water flow, but the discharge of khettara is reduced each the recent five years. scharge of the khettara is constant scharge of the khettara is increased
11. Total area of farmland 300 ha (IA-1)	12. Irrigated area by the khettara Oha (IA-3)
13. The condition of roads 2 appropriate (1) (G-15) not appropriate (2)	) 14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 appropriate (1) (G-17) not appropriate (2)	16.Facility of electricity and telecomunication1 appropriate (1) (G-18)1appropriate (1) not appropriate (2)
17. Existence of Association Yes ( (G-21) No (2)	
18. Situation of khettara Length (m	n) Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in 200 (E-1-	
catchment area and conduit [3500] (E-1-	1-2) <u>1.5</u> (E-1-4-2) <u>0.6</u> (E-1-5-2)
Khettara as open channel 300 (E-2-	1) <u>3.5</u> (E-2-2) <u>0.8</u> (E-2-3)
Principal and secondary 3000 (E-4- irrigation canal 0 (E-4-	
19. Rehabilitation Rehabilitation length of [ khettara (M-7)	(m) Rehabilitation length of principal (m) irrigation canal (M-8)
20. Influence of desertification	*
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification Open channel I	luit (I-2) Irrigation canals (I-7)
21.Demandes of habitants (water resources)	Yes (1), No (2)
Rehabilitation of khettara 2 (G-19-1)	Protection dike against flood 2 (G-19-4)
Installing pump 1 (G-19-2) Rehabilitation of irrigation canal 2 (G-19-3)	Construction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual and social supp	
	School         1         (G-20-4)           product , etc.)         2         (G-20-1)         Sanitary system         1         (G-20-5)           ation of roads         1         (G-20-2)         Hospital         1         (G-20-6)           Electric supply         2         (G-20-3)         Others         2         (G-20-7)
23. Importance of khettara (G-23) (1) Unique source for both of potable water and irri (2) Unique source for irrigation (3) Main source for irrigation	
24. Possibility of extension of khettara Yes (1), No (2) If no, the reason (G-25) (G-24)	(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others

1. Khettara Number A-078 - (G-1)		2. Name of commune Ferkla Oulia (G-2)
, , , , , , , , , , , , , , , , , , ,		4. Location of khettara X = 525268.07 (G-4-1)
3. Name of khettara (G-3)		$Y = \frac{93584.03}{(G-4-2)}$
5. Number of families who 325 (G-5-2)		9. Histry of discharge 0
6. Number of beneficialies <u>325</u> (G-6-2)	families	of khettara
7. Cycle of kehttara water right 0 (G-7-1)	days	
8.Discharge of khettara (latest) 0 (G-8) li	t/sec	(I-10)
10. History of khettara water flow	(I-9)	
(2)No water in the last two-decade(6)Th(3)No water in the last decadeye(4)No water in the past five years(7)Th	e khettara ar in the r discharg	n the dry season in the past five years a has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased
11. Total area of farmland [IA-1] ha		12. Irrigated area by the khettara []ha (IA-3)
13. The condition of roads 2 appropriate ( (G-15) not appropriate		14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 appropriate ( (G-17) not appropria		16.Facility of electricity and telecomunication1 (G-18)appropriate (1) not appropriate (2)
	es (1), o (2)	If yes, Name of G-22
18. Situation of khettara Lengtl	n (m)	Section of khettara (average) hight(m) width (m)
	E-1-1-1)	
catchment area and conduit 600 (E	E-1-1-2)	) 0 (E-1-4-2) 0 (E-1-5-2)
Khettara as open channel 0 (E	E-2-1)	0 (E-2-2) 0 (E-2-3)
	E-4-2-1)	
	E-4-2-2)	) 0 (E-4-3-2) 0 (E-4-1-2)
19. Rehabilitation Rehabilitation length of khettara (M	(r -7)	m) Rehabilitation length of principal (m) irrigation canal (M-8)
20. Influence of desertification		
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertificationGallery in c Gallery of c Open chan	onduit	(I-2) Irrigation canals (I-7)
21.Demandes of habitants (water resources )		Yes (1), No (2)
Rehabilitation of khettara 1 (G-19-1		Protection dike against flood 2 (G-19-4)
Installing pump $2$ (G-19-2 Rehabilitation of irrigation canal $2$ (G-19-3		nstruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual and social s	support)	
Agriculture (storage,production, transporttion Reha	abilitation	n of roads 1 (G-20-2) Hospital 1 (G-20-6)
		rric supply 2 (G-20-3) Others 2 (G-20-7)
23. Importance of khettara (G-23 (1) Unique source for both of potable water an (2) Unique source for irrigation (3) Main source for irrigation	,	on (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettara		
Yes (1), No (2) If no, the reason (G-24)		(1)Constrains in landscape(3)Existence of other khettaras(2)Prohibited by law(4)Others

1. Khettara Number A-079 (G-1)	-	2. Name of commune Ferkla Oulia (G-2)
3. Name of khettara Barra N (G-3)	l'set	4. Location of khettara $X = 531305.31$ (G-4-1) Y = 99604.57 (G-4-2)
5. Number of families who 32 have khettara water right	0 (G-5-2) families	9. Histry of discharge 0
6. Number of beneficialies 50	0 (G-6-2) families	of khettara
7. Cycle of kehttara water right	6 (G-7-1) days	
8.Discharge of khettara (latest)	0 (G-8) lit/sec	(I-10)
10. History of khettara water flow	(I-9)	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The discha	n the dry season in the past five years ra has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased
11. Total area of farmland []	ha -1)	12. Irrigated area by the khettara [0]ha (IA-3)
13. The condition of roads [2 (G-15)	appropriate (1) not appropriate (2)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 1 (G-17)	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication1 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association	(G-21) Yes (1),	If yes, Name of G-22
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit	200 (E-1-1-1) 4300 (E-1-1-2)	) <u>3</u> (E-1-4-1) <u>0.8</u> (E-1-5-1)
Khettara as open channel	(E-2-1)	0 (E-2-2) 0 (E-2-3)
Principal and secondary irrigation canal	4500 (E-4-2-1 0 (E-4-2-2	
19. Rehabilitation Rehabilitation leng	gth of (M-7)	m) Rehabilitation length of principal (m) irrigation canal (M-8)
20. Influence of desertification		
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	1 (I-2) Irrigation canals 1+2 (I-7)
21.Demandes of habitants (water reso	urces)	Yes (1), No (2)
Rehabilitation of khettara 1 Installing pump 2 Rehabilitation of irrigation canal 1	(G-19-1) (G-19-2) Cor (G-19-3)	Protection dike against flood 2 (G-19-4) Instruction of public wells for domestic water 2 (G-19-5) Others 1 (G-19-6)
22.Demandes of habitants (Aglicultual	and social support	
Agriculture (storage,production,	Rehabilitatio	
23. Importance of khettara (1) Unique source for both of por (2) Unique source for irrigition (3) Main source for irrigation		on (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettara Yes (1), No (2) If no, the (G-24)	reason	(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others

1. Khettara Number A-080 (G-1)	-	2. Name of commune Ferkla Oulia (G-2)
3. Name of khettara [Tafadouzte (G-3)		4. Location of khettara $X = 531000.89$ (G-4-1) Y = 99880.83 (G-4-2)
5 Number of families who	i-5-2) families	9. Histry of discharge 1973: tarie
6. Number of beneficialies 500 (G	i-6-2) families	of khettara
7. Cycle of kehttara water right 17 (G	i-7-1) days	
8.Discharge of khettara (latest) 0 (G	i-8) lit/sec	(I-10)
10. History of khettara water flow	(I-9)	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The discha	n the dry season in the past five years ra has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased
11. Total area of farmland (IA-1)	ha	12. Irrigated area by the khettara Oha (IA-3)
	opriate (1) appropriate (2)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)
	opriate (1) appropriate (2)	16.Facility of electricity and telecomunication1 appropriate (1) (G-18)appropriate (1) appropriate (2)
17. Existence of Association	Yes (1), i-21) No (2)	If yes, Name of Association (G-22)
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in	<u>200</u> (E-1-1-1) 3300 (E-1-1-2)	) <u>3</u> (E-1-4-1) <u>1</u> (E-1-5-1)
Khettara as open channel	0 (E-2-1)	0 (E-2-2) 0 (E-2-3)
	2000 (E-4-2-1 3000 (E-4-2-2	
19. Rehabilitation Rehabilitation length o khettara		m) Rehabilitation length of principal (m) irrigation canal (M-8)
20. Influence of desertification	, , ,	
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification	ery in catchme ery of conduit n channel khe	(I-2) Irrigation canals 1 (I-7)
21.Demandes of habitants (water resources	S )	Yes (1), No (2)
	(G-19-1) (G-19-2) Cor (G-19-3)	Protection dike against flood 1 (G-19-4) nstruction of public wells for domestic water 0 (G-19-5) Others 1 (G-19-6)
22.Demandes of habitants (Aglicultual and social support) Yes (1), No (2)		
Agriculture (storage,production, trans	Rehabilitatio	
23. Importance of khettara (1) Unique source for both of potable v (2) Unique source for irrigation (3) Main source for irrigation	G-23) water and irrigation	on (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettara Yes (1), No (2) If no, the rease (G-24)		(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others

1. Khettara Number A-081 - (G-1)	2. Name of commune Ferkla Oulia (G-2)
3. Name of khettara Ait Assem	4. Location of khettara X = 532054.41 (G-4-1)
(G-3)	Y = 101405.78 (G-4-2)
5. Number of families who 375 (G-5-2) families have khettara water right	families 9. Histry of discharge 0
6. Number of beneficialies 425 (G-6-2) fa	families of khettara
7. Cycle of kehttara water right [12] (G-7-1)	days
8.Discharge of khettara (latest) 0 (G-8) lit	lit/sec (I-10)
10. History of khettara water flow (I	(I-9)
(2)No water in the last two-decade(6)The(3)No water in the last decadeyea(4)No water in the past five years(7)The	No water in the dry season in the past five years he khettara has water flow, but the discharge of khettara is reduced each ear in the recent five years. he discharge of the khettara is constant he discharge of the khettara is increased
11. Total area of farmland [IA-1]	12. Irrigated area by the khettara Oha (IA-3)
13. The condition of roads [1] appropriate (1) (G-15) not appropriate	
15.Sanitary service 1 appropriate (1) (G-17) not appropriate	
	Ves (1), If yes, Name of Association (G-22)
18. Situation of khettara Length	h (m) Section of khettara (average) hight(m) width (m)
	E-1-1-1)2(E-1-4-1)0.5(E-1-5-1)E-1-1-2)2(E-1-4-2)0.5(E-1-5-2)
Khettara as open channel 1000 (E-	· · · · · · · · · · · · · · · · · · ·
	E-4-2-1)0.4(E-4-3-1)0.4(E-4-1-1)E-4-2-2)0.4(E-4-3-2)0.4(E-4-1-2)
19. Rehabilitation Rehabilitation length of khettara (M-7	(m) Rehabilitation length of principal (m)
20. Influence of desertification	
21.Demandes of habitants (water resources)	Yes (1), No (2)
Rehabilitation of khettara 1 (G-19-1) Installing pump 1 (G-19-2) Rehabilitation of irrigation canal 1 (G-19-3)	2) Construction of public wells for domestic water 2 (G-19-5)
22.Demandes of habitants (Aglicultual and social su	support) Yes (1), No (2)
Agriculture (storage,production, transporttion	School 2 (G-20-4
23. Importance of khettara (G-23) (1) Unique source for both of potable water and (2) Unique source for irrigition (3) Main source for irrigation 24. Possibility of extension of khettara	3)
G-24) [G-25] [G-	(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others

	Î	
1. Khettara Number A-082 (G-1)		2. Name of commune Ferkla Oulia (G-2)
3. Name of khettara Toujdit	e N'	4. Location of khettara X = 536607.31 (G-4-1)
(G-3)		Y = <u>92704.55</u> (G-4-2)
5. Number of families who 4	0 (G-5-2) families	9. Histry of discharge 2002: tarie
	0 (G-6-2) families	of khettara
7. Cycle of kehttara water right	8 (G-7-1) days	
8.Discharge of khettara (latest)	0 (G-8) lit/sec	(I-10)
10. History of khettara water flow	(I-9)	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The dischar	n the dry season in the past five years a has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased
11. Total area of farmland	ha 1)	12. Irrigated area by the khettara Oha (IA-3)
13. The condition of roads [ (G-15)	appropriate (1) not appropriate (2)	14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 (G-17)	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association	(G-21) Yes (1),	If yes, Name of G-22
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in	500 (E-1-1-1)	
catchment area and conduit	800 (E-1-1-2)	
Khettara as open channel	<u>200</u> (E-2-1)	0.6 (E-2-2) 0.5 (E-2-3)
Principal and secondary	500 (E-4-2-1	
irrigation canal	500 (E-4-2-2)	
19. Rehabilitation Rehabilitation leng	ath of	
khettara	(M-7)	m) Rehabilitation length of principal (m) irrigation canal (M-8)
20. Influence of desertification		
(1)Significant damage by desertification	Gallery in catchme	
<ul><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery of conduit Open channel khe	(I-2) Irrigation canals 1 (I-7) ttara 1 (I-3)
21.Demandes of habitants (water reso	urces)	Yes (1), No (2)
Rehabilitation of khettara 1	(G-19-1)	Protection dike against flood 2 (G-19-4)
Installing pump 2 Rehabilitation of irrigation canal 1	(G-19-2) Cor (G-19-3)	nstruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual	and social support	
Agriculture (storage,production,	transporttion of proc	School 1 (G-20-4) duct , etc.) 2 (G-20-1) Sanitary system 2 (G-20-5)
	Rehabilitation	n of roads 1 (G-20-2) Hospital 1 (G-20-6) tric supply 1 (G-20-3) Others 2 (G-20-7)
23. Importance of khettara	(G-23)	
(1) Unique source for both of por	\ /	on (4) Partial source for irrigation
(2) Unique source for irrigtion		(5) Supplementary source for irrigation
(3) Main source for irrigation		(6) Neglected
24. Possibility of extension of khettara		
Yes (1), No (2) If no, the (G-24)		(1)Constrains in landscape(3)Existence of other khettaras(2)Prohibited by law(4)Others

1. Khettara Number A-083 - (G-1)	2. Name of commune Ferkla Oulia (G-2)
3. Name of khettara Aadouche (G-3)	4. Location of khettara X = <u>537822.83</u> (G-4-1) Y = <u>98124.15</u> (G-4-2)
5. Number of families who [60] (G-5-2) families	<sup>3</sup> 9. Histry of discharge 1976: tarie
6. Number of beneficialies 80 (G-6-2) families	of khettara
7. Cycle of kehttara water right [3] (G-7-1) days	7
8.Discharge of khettara (latest) 0 (G-8) lit/sec	(I-10)
10. History of khettara water flow (I-9)	
(2)No water in the last two-decade(6)The khet(3)No water in the last decadeyear in the(4)No water in the past five years(7)The discl	r in the dry season in the past five years tara has water flow, but the discharge of khettara is reduced each ne recent five years. harge of the khettara is constant harge of the khettara is increased
11. Total area of farmland 30 ha (IA-1)	12. Irrigated area by the khettara []0ha (IA-3)
13. The condition of roads 2 appropriate (1) (G-15) not appropriate (2)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 appropriate (1) (G-17) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association Yes (1) (G-21) No (2)	If yes, Name of G-22
18. Situation of khettara Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in 100 (E-1-1	1) <u>0</u> (E-1-4-1) <u>0</u> (E-1-5-1)
catchment area and conduit [1000] (E-1-1-	
Khettara as open channel 600 (E-2-1)	······································
Principal and secondary0 (E-4-2)irrigation canal0 (E-4-2)	
19. Rehabilitation Rehabilitation length of [ khettara (M-7)	(m) Rehabilitation length of principal (m) irrigation canal (M-8)
20. Influence of desertification	
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification Open channel kh	it (I-2) Irrigation canals (I-7)
21.Demandes of habitants (water resources )	Yes (1), No (2)
Rehabilitation of khettara 1 (G-19-1) Installing pump 1 (G-19-2) C Rehabilitation of irrigation canal 2 (G-19-3)	Protection dike against flood 2 (G-19-4) Construction of public wells for domestic water 1 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual and social suppo	ort) Yes (1), No (2)
Agriculture (storage,production, transporttion of pr Rehabilitat	School 2 (G-20-4)
23. Importance of khettara (G-23) (1) Unique source for both of potable water and irriga (2) Unique source for irrigation (3) Main source for irrigation	
24. Possibility of extension of khettara Yes (1), No (2) If no, the reason (G-25) (G-24)	<ul><li>(1)Constrains in landscape (3)Existence of other khettaras</li><li>(2)Prohibited by law (4)Others</li></ul>

1. Khettara Number A-084 (G-1)		2. Name of commune Ferkla Oulia (G-2)
( )	Dughan	4. Location of khettara X = <u>535480.9</u> (G-4-1) Y = <u>93026.97</u> (G-4-2)
5. Number of families who		9. Histry of discharge 1995: tarie
6. Number of beneficialies	40 (G-6-2) families	Of KITERIAIA
7. Cycle of kehttara water right	8 (G-7-1) days	
8.Discharge of khettara (latest)	0 (G-8) lit/sec	(I-10)
10. History of khettara water flow	(I-9)	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The dischar	n the dry season in the past five years ra has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased
11. Total area of farmland [	ha A-1)	12. Irrigated area by the khettara 0ha (IA-3)
13. The condition of roads (G-15)	appropriate (1) not appropriate (2)	14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 (G-17	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication2 appropriate (1) (G-18)appropriate (2)
17. Existence of Association	G-21) Yes (1), (G-21) No (2)	If yes, Name of G-22
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit	340 (E-1-1-1) 860 (E-1-1-2)	
Khettara as open channel	<u>300</u> (E-2-1)	3 (E-2-2) 0.5 (E-2-3)
Principal and secondary irrigation canal	500 (E-4-2-1 500 (E-4-2-2	
19. Rehabilitation Rehabilitation ler khettara	ngth of (M-7)	m) Rehabilitation length of principal (m) irrigation canal (M-8)
20. Influence of desertification		
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	(I-2) Irrigation canals 1 (I-7)
21.Demandes of habitants (water res	ources)	Yes (1), No (2)
Rehabilitation of khettara 1 Installing pump 2 Rehabilitation of irrigation canal 1	(G-19-1) (G-19-2) Cor (G-19-3)	Protection dike against flood 2 (G-19-4) nstruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultua	I and social support	
Agriculture (storage,productior	Rehabilitation	
23. Importance of khettara (1) Unique source for both of por (2) Unique source for irrigition (3) Main source for irrigation		on (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettar Yes (1), No (2) If no, the (G-24)	e reason	<ul><li>(1)Constrains in landscape (3)Existence of other khettaras</li><li>(2)Prohibited by law (4)Others</li></ul>

1. Khettara Number A-085 (G-1)		2. Name of commune Ferkla Oulia (G-2)
	nto	4. Location of khettara X = 536296.81 (G-4-1)
3. Name of khettara (G-3)	nte	$Y = \frac{93100.77}{(G-4-2)}$
5. Number of families who have khettara water right	80 (G-5-2) families	9. Histry of discharge 0
6. Number of beneficialies	91 (G-6-2) families	of khettara
7. Cycle of kehttara water right	8 (G-7-1) days	
8.Discharge of khettara (latest)	0 (G-8) lit/sec	(I-10)
10. History of khettara water flow	(I-9)	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The discha	n the dry season in the past five years ra has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased
11. Total area of farmland [	100 ha A-1)	12. Irrigated area by the khettara 0.1 ha (IA-3)
13. The condition of roads 2 (G-15	appropriate (1) not appropriate (2)	14.The condition of schools appropriate (1) (G-16) not appropriate (2)
15.Sanitary service (G-17	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunicationappropriate (1) not appropriate (2)
17. Existence of Association	(G-21) Yes (1), (G-21) No (2)	If yes, Name of G-22
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit	1000 (E-1-1-1) 500 (E-1-1-2)	
Khettara as open channel	500 (E-1-1-2) 500 (E-2-1)	) <u>4</u> (E-1-4-2) <u>0.5</u> (E-1-5-2) <u>0.52</u> (E-2-2) <u>0.5</u> (E-2-3)
Principal and secondary irrigation canal	2000 (E-4-2-1	
	0 (E-4-2-2	) 0 (E-4-3-2) 0 (E-4-1-2)
19. Rehabilitation Rehabilitation ler khettara	ngth of (M-7)	m) Rehabilitation length of principal (m) irrigation canal (M-8)
20. Influence of desertification		
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	3 (I-2) Irrigation canals 1 (I-7)
21.Demandes of habitants (water res	ources)	Yes (1), No (2)
Rehabilitation of khettara 1	(G-19-1)	Protection dike against flood 1 (G-19-4)
Installing pump 2 Rehabilitation of irrigation canal 1	(G-19-2) Cor (G-19-3)	nstruction of public wells for domestic water 1 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultua	I and social support	) Yes (1), No (2)
Agriculture (storage,production		
	Rehabilitation Elect	n of roads 1 (G-20-2) Hospital 1 (G-20-6) tric supply 1 (G-20-3) Others 2 (G-20-7)
23. Importance of khettara (1) Unique source for both of pr (2) Unique source for irrigtion (3) Main source for irrigation	(G-23) otable water and irrigation	on (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettar Yes (1), No (2) If no, th (G-24)	e reason	(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others

1. Khettara Number A-086 - (G-1)	2. Name of commune Ferkla Oulia (G-2)
	4. Location of khettara X = 534624.8 (G-4-1)
3. Name of khettara (G-3)	$Y = \frac{00102 \text{ He}}{93113.27} (\text{G-4-2})$
5. Number of families who 30 (G-5-2) families have khettara water right	9. Histry of discharge 1955: tarie
6. Number of beneficialies 30 (G-6-2) families	of khettara
7. Cycle of kehttara water right 15 (G-7-1) days	
8.Discharge of khettara (latest) 0 (G-8) lit/sec	(I-10)
10. History of khettara water flow (I-9)	
(2)No water in the last two-decade(6)The khetta(3)No water in the last decadeyear in the(4)No water in the past five years(7)The disch	in the dry season in the past five years ara has water flow, but the discharge of khettara is reduced each e recent five years. arge of the khettara is constant arge of the khettara is increased
11. Total area of farmland [IA-1]	12. Irrigated area by the khettara Oha (IA-3)
13. The condition of roads 1 appropriate (1) (G-15) not appropriate (2)	14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 appropriate (1) (G-17) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association Yes (1), (G-21) No (2)	If yes, Name of Association (G-22)
18. Situation of khettara Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit400 (E-1-1- 600 (E-1-1-)	
Khettara as open channel1000 (E-2-1)	0.5 (E-2-2) 0.7 (E-2-3)
Principal and secondary 900 (E-4-2- irrigation canal 0 (E-4-2-	
khettara (M-7)	(m) Rehabilitation length of principal (m) irrigation canal (M-8)
20. Influence of desertification	
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification Open channel kh	t (I-2) Irrigation canals 1 (I-7)
21.Demandes of habitants (water resources )	Yes (1), No (2)
Rehabilitation of khettara 1 (G-19-1)	Protection dike against flood 1 (G-19-4)
	onstruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual and social suppo	rt) Yes (1), No (2)
Agriculture (storage,production, transporttion of pro Rehabilitati	School         1         (G-20-4)           oduct , etc.)         2         (G-20-1)         Sanitary system         2         (G-20-5)           on of roads         2         (G-20-2)         Hospital         1         (G-20-6)
	ctric supply 2 (G-20-3) Others 2 (G-20-7)
<ul> <li>23. Importance of khettara (G-23)</li> <li>(1) Unique source for both of potable water and irriga</li> <li>(2) Unique source for irrigition</li> <li>(3) Main source for irrigation</li> </ul>	tion (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettara Yes (1), No (2) If no, the reason	(1)Constrains in landscape (3)Existence of other khettaras
(G-24) (G-25)	(2)Prohibited by law (4)Others

1. Khettara Number A-087 - (G-1)	2. Name of commune Ferkla Oulia (G-2)		
3. Name of khettara Amatous	4. Location of khettara X = 539210.98 (G-4-1)		
(G-3)	Y = 84875.13 (G-4-2)		
5. Number of families who38 (G-5-2) fame38 (G-5-2)	<sup>nilies</sup> 9. Histry of discharge <sup>0</sup>		
6. Number of beneficialies 38 (G-6-2) fan	nilies of khettara		
7. Cycle of kehttara water right [7] (G-7-1) da	ays		
8.Discharge of khettara (latest) 0 (G-8) lit/s	sec (I-10)		
10. History of khettara water flow (I-	9)		
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> <li>(5) No water in the dry season in the past five years</li> <li>(6)The khettara has water flow, but the discharge of khettara is reduced each year in the recent five years.</li> <li>(7)The discharge of the khettara is constant</li> <li>(8)The discharge of the khettara is increased</li> </ul>			
11. Total area of farmlandha (IA-1)	12. Irrigated area by the khettara Oha (IA-3)		
13. The condition of roads 2 appropriate (1) (G-15) not appropriate	(2) 14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)		
15.Sanitary service 2 appropriate (1) (G-17) not appropriate	(2) 16.Facility of electricity and telecomunication (G-18) appropriate (1) not appropriate (2)		
17. Existence of Association Yes (G-21) No			
18. Situation of khettara Length (	m) Section of khettara (average) hight(m) width (m)		
Gallery of khettara (Gallery in 0 (E-			
catchment area and conduit [100] (E-	· · · · · · · · · · · · · · · · · · ·		
Khettara as open channel <u>600</u> (E-2			
Principal and secondary   0 (E-4)     irrigation canal   0 (E-4)			
19. Rehabilitation Rehabilitation length of khettara (M-7	(m) Rehabilitation length of principal (m) irrigation canal (M-8)		
20. Influence of desertification			
(1)Significant damage by desertification       Gallery in catchment area       3       (I-1)       Regulation pond       (I-5)         (2)Partial damage by desertification       Gallery of conduit       3       (I-2)       Irrigation canals       (I-7)         (3)Negligible damage by desertification       Open channel khettara       (I-3)       (I-3)			
21.Demandes of habitants (water resources ) Yes (1), No (2)			
Rehabilitation of khettara 1 (G-19-1) Protection dike against flood 2 (G-19-4)			
Installing pump 2 (G-19-2) Rehabilitation of irrigation canal 1 (G-19-3)	Construction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)		
22.Demandes of habitants (Aglicultual and social support) Yes (1), No (2)			
Agriculture (storage,production, transporttion of product , etc.)       2       (G-20-1)       Sanitary system       2       (G-20-5)         Rehabilitation of roads       1       (G-20-2)       Hospital       1       (G-20-6)			
	Electric supply 2 (G-20-3) Others 2 (G-20-7)		
<ul> <li>23. Importance of khettara (G-23) <ul> <li>(1) Unique source for both of potable water and irrigation</li> <li>(2) Unique source for irrigation</li> <li>(3) Main source for irrigation</li> </ul> </li> <li>(4) Partial source for irrigation</li> <li>(5) Supplementary source for irrigation</li> <li>(6) Neglected</li> </ul>			
24. Possibility of extension of khettara Yes (1), No (2) If no, the reason	(1)Constrains in landscape (3)Existence of other khettaras		
(G-24) (G-25)	) (2)Prohibited by law (4)Others		

1. Khettara Number A-088 - (G-1)	2. Name of commune Ferkla Oulia (G-2)		
3. Name of khettara Imdouane (G-3)	4. Location of khettara $X = 535476.3$ (G-4-1) Y = 98004.6 (G-4-2)		
5. Number of families who 12 (G-5-2) families	9. Histry of discharge		
6. Number of beneficialies 20 (G-6-2) families	of khettara		
7. Cycle of kehttara water right 7 (G-7-1) days			
8.Discharge of khettara (latest) 0 (G-8) lit/sec	(I-10)		
10. History of khettara water flow (I-9)			
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> <li>(5) No water in the dry season in the past five years</li> <li>(6)The khettara has water flow, but the discharge of khettara is reduced each year in the recent five years.</li> <li>(7)The discharge of the khettara is constant</li> <li>(8)The discharge of the khettara is increased</li> </ul>			
11. Total area of farmland [15] ha (IA-1)	12. Irrigated area by the khettara []		
13. The condition of roads1appropriate (1)(G-15)not appropriate (2)	14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)		
15.Sanitary service 1 appropriate (1) (G-17) not appropriate (2)	16.Facility of electricity and telecomunication1 appropriate (1) not appropriate (2)		
17. Existence of Association Yes (1), (G-21) No (2)	If yes, Name of G-22)		
18. Situation of khettara Length (m)	Section of khettara (average) hight(m) width (m)		
Gallery of khettara (Gallery in catchment area and conduit150 (E-1-1-1 850 (E-1-1-2)			
Khettara as open channel 50 (E-2-1)	2 (E-2-2) 0.5 (E-2-3)		
Principal and secondary1500 (E-4-2-1)irrigation canal0 (E-4-2-2)			
19. Rehabilitation Rehabilitation length of (M-7)	(m) Rehabilitation length of principal (m) irrigation canal (M-8)		
20. Influence of desertification			
Commented of decontineation(1)Significant damage by desertification(2)Partial damage by desertification(3)Negligible damage by desertification(3)Negligible damage by desertification(3)Negligible damage by desertification			
21.Demandes of habitants (water resources ) Yes (1), No (2)			
Rehabilitation of khettara1(G-19-1)Protection dike against flood2(G-19-4)Installing pump2(G-19-2)Construction of public wells for domestic water2(G-19-5)Rehabilitation of irrigation canal2(G-19-3)Others2			
22.Demandes of habitants (Aglicultual and social support) Yes (1), No (2)			
Agriculture (storage,production, transporttion of product , etc.)ContentSchoolContentConte			
23. Importance of khettara       (G-23)         (1) Unique source for both of potable water and irrigation       (4) Partial source for irrigation         (2) Unique source for irrigation       (5) Supplementary source for irrigation         (3) Main source for irrigation       (6) Neglected			
24. Possibility of extension of khettara Yes (1), No (2) If no, the reason (G-25) (G-24)	(1)Constrains in landscape(3)Existence of other khettaras(2)Prohibited by law(4)Others		

1. Khettara Number A-089 - (G-1)	2. Name of commune Ferkla Oulia (G-2)		
	4. Location of khettara X = 536887.19 (G-4-1)		
(G-3)	Y = 98416.33 (G-4-2)		
5. Number of families who (G-5-2) familie have khettara water right	9. Histry of discharge		
6. Number of beneficialies 30 (G-6-2) familie	of khettara		
7. Cycle of kehttara water right 12 (G-7-1) days			
8.Discharge of khettara (latest) 0 (G-8) lit/sec	(I-10)		
10. History of khettara water flow 1 (I-9)			
(2)No water in the last two-decade(6)The khe(3)No water in the last decadeyear in(4)No water in the past five years(7)The disc	er in the dry season in the past five years ettara has water flow, but the discharge of khettara is reduced each the recent five years. charge of the khettara is constant charge of the khettara is increased		
11. Total area of farmland 20 ha (IA-1)	12. Irrigated area by the khettara Oha (IA-3)		
13. The condition of roads 2 appropriate (1) (G-15) not appropriate (2)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)		
15.Sanitary service 2 appropriate (1) (G-17) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)		
17. Existence of Association Yes (1 (G-21) No (2)			
18. Situation of khettara Length (m)	) Section of khettara (average) hight(m) width (m)		
Gallery of khettara (Gallery in catchment area and conduit500 (E-1-1 1000 (E-1-1			
Khettara as open channel     2000       (E-2-1)			
Principal and secondary 400 (E-4-2 irrigation canal 6 (E-4-2			
19. Rehabilitation Rehabilitation length of khettara (M-7)	(m) Rehabilitation length of principal (m) irrigation canal (M-8)		
20. Influence of desertification			
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertificationGallery in catchment area3(I-1)Regulation pond1(I-5)Gallery of conduit Open channel khettara3(I-2)Irrigation canals1(I-7)			
21.Demandes of habitants (water resources)	Yes (1), No (2)		
Rehabilitation of khettara 1 (G-19-1) Protection dike against flood 1 (G-19-4)			
Installing pump 1 (G-19-2) Rehabilitation of irrigation canal 1 (G-19-3)	Construction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)		
22.Demandes of habitants (Aglicultual and social supp	ort) Yes (1), No (2)		
Agriculture (storage,production, transporttion of product , etc.)ContentSchool1(G-20-4)Agriculture (storage,production, transporttion of product , etc.)ContentContentContentContentRehabilitation of roadsContentContentContentContentContentElectric supplyContentConten			
	lectric supply 1 (G-20-3) Others 2 (G-20-7)		
23. Importance of khettara (G-23) (1) Unique source for both of potable water and irrig (2) Unique source for irrigation (3) Main source for irrigation	gation (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected		
24. Possibility of extension of khettara			
Yes (1), No (2) If no, the reason (G-24) (G-25)	<ul><li>(1)Constrains in landscape</li><li>(2)Prohibited by law</li><li>(3)Existence of other khettaras</li><li>(4)Others</li></ul>		

1. Khettara Number A-090 - (G-1)	2. Name of commune Ferkla Oulia (G-2)		
3. Name of khettara Tighdouine (G-3)	4. Location of khettara $X = 533505.93$ (G-4-1) Y = 102183.7 (G-4-2)		
5. Number of families who	<sup>25</sup> 9. Histry of discharge 0		
6. Number of beneficialies 34 (G-6-2) familie	of khettara		
7. Cycle of kehttara water right 9 (G-7-1) days			
8.Discharge of khettara (latest) 0 (G-8) lit/sec	c (I-10)		
10. History of khettara water flow 1 (I-9)			
(1)No water from 1950s or 1970s. (2)No water in the last two-decade (3)No water in the last decade (4)No water in the past five years(5) No water in the dry season in the past five years (6)The khettara has water flow, but the discharge of khettara is reduced each year in the recent five years. (7)The discharge of the khettara is constant (8)The discharge of the khettara is increased			
11. Total area of farmland 25 ha (IA-1)	12. Irrigated area by the khettara 0.85 ha (IA-3)		
13. The condition of roads (G-15) appropriate (1) not appropriate (2)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)		
15.Sanitary service 1 appropriate (1) (G-17) not appropriate (2)	16.Facility of electricity and telecomunication1 appropriate (1) (G-18)appropriate (1) (2)		
17. Existence of Association Yes (1 (G-21) No (2)			
18. Situation of khettara Length (m)	Section of khettara (average) hight(m) width (m)		
Gallery of khettara (Gallery in 36 (E-1-1	· · · · · · · · · · · · · · · · · · ·		
catchment area and conduit [864] (E-1-1			
Khettara as open channel <u>60</u> (E-2-1	) <u>3</u> (E-2-2) <u>1</u> (E-2-3)		
Principal and secondary500 (E-4-2irrigation canal0 (E-4-2			
19. Rehabilitation Rehabilitation length of khettara (M-7)	(m) Rehabilitation length of principal (m) irrigation canal (M-8)		
20. Influence of desertification			
CommunicationGallery in catchment areaI(I-1)Regulation pond(I-5)(1)Significant damage by desertificationGallery of conduitGallery of conduitIrrigation canalsI(I-7)(3)Negligible damage by desertificationOpen channel khettaraI(I-3)Irrigation canalsI(I-7)			
21.Demandes of habitants (water resources ) Yes (1), No (2)			
Rehabilitation of khettara1(G-19-1)Protection dike against flood2(G-19-4)Installing pump1(G-19-2)Construction of public wells for domestic water2(G-19-5)Rehabilitation of irrigation canal1(G-19-3)Others2			
22.Demandes of habitants (Aglicultual and social support) Yes (1), No (2)			
Agriculture (storage,production, transporttion of product , etc.)ContentSchool(G-20-4)Agriculture (storage,production, transporttion of product , etc.)ContentContentContentContentRehabilitation of roadsContentContentContentContentContentElectric supplyContent			
23. Importance of khettara       (G-23)         (1) Unique source for both of potable water and irrigation       (4) Partial source for irrigation         (2) Unique source for irrigation       (5) Supplementary source for irrigation         (3) Main source for irrigation       (6) Neglected			
24. Possibility of extension of khettara Yes (1), No (2) If no, the reason (G-25) (G-24)	<ul><li>(1)Constrains in landscape</li><li>(2)Prohibited by law</li><li>(3)Existence of other khettaras</li><li>(4)Others</li></ul>		

1. Khettara Number A-091 - (G-1)	2. Name of commune Ferkla Oulia (G-2)		
3. Name of khettara Gardmit (G-3)	4. Location of khettara $X = 534816.21$ (G-4-1) Y = 102539.35 (G-4-2)		
5. Number of families who [150] (G-5-2) familie	<sup>is</sup> 9. Histry of discharge 0		
6. Number of beneficialies 900 (G-6-2) familie	of khettara		
7. Cycle of kehttara water right 15 (G-7-1) days			
8.Discharge of khettara (latest) 0 (G-8) lit/sec	: (I-10)		
10. History of khettara water flow (I-9)			
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> <li>(5) No water in the dry season in the past five years</li> <li>(6)The khettara has water flow, but the discharge of khettara is reduced each year in the recent five years.</li> <li>(7)The discharge of the khettara is constant</li> <li>(8)The discharge of the khettara is increased</li> </ul>			
11. Total area of farmland 2 ha (IA-1)	12. Irrigated area by the khettara [2]ha (IA-3)		
13. The condition of roads (G-15) appropriate (1) not appropriate (2)	14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)		
15.Sanitary service 1 appropriate (1) (G-17) not appropriate (2)	16.Facility of electricity and telecomunication1 appropriate (1) (G-18)appropriate (1) (1) not appropriate (2)		
17. Existence of Association Yes (1 (G-21) No (2)			
18. Situation of khettara Length (m)	Section of khettara (average) hight(m) width (m)		
Gallery of khettara (Gallery in 1000 (E-1-1	· · · · · · · · · · · · · · · · · · ·		
catchment area and conduit [2000] (E-1-1	-2) <u>1.5</u> (E-1-4-2) <u>0.6</u> (E-1-5-2)		
Khettara as open channel 300 (E-2-1	) 0.8 (E-2-2) 0.6 (E-2-3)		
Principal and secondary2000 (E-4-2irrigation canal0.4 (E-4-2			
19. Rehabilitation Rehabilitation length of khettara (M-7)	(m) Rehabilitation length of principal (m) irrigation canal (M-8)		
20. Influence of desertification	```````		
Commented of desertification(1)Significant damage by desertification(2)Partial damage by desertification(3)Negligible damage by desertification(3)Negligible damage by desertification(1)Significant damage by desertification(3)Negligible damage by desertification(3)Negligible damage by desertification(1)Significant damage by desertification(3)Negligible damage by desertification(3)Negligible damage by desertification(3)Negligible damage by desertification			
21.Demandes of habitants (water resources )	Yes (1), No (2)		
Rehabilitation of khettara1(G-19-1)Protection dike against flood2(G-19-4)Installing pump(G-19-2)Construction of public wells for domestic water2(G-19-5)			
Rehabilitation of irrigation canal 1 (G-19-3)	Others $2$ (G-19-6)		
22.Demandes of habitants (Aglicultual and social support) Yes (1), No (2)			
Agriculture (storage,production, transporttion of product , etc.)Content (G-20-1)SchoolContent (G-20-4)Rehabilitation of roads(G-20-2)(G-20-2)(G-20-3)(G-20-5)Electric supply(G-20-3)Others(G-20-7)			
23. Importance of khettara (G-23) (1) Unique source for both of potable water and irrigation (2) Unique source for irrigation (3) Main source for irrigation (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected			
24. Possibility of extension of khettara Yes (1), No (2) If no, the reason (G-25) (G-24)	(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others		

1. Khettara Number A-092 - (G-1)		2. Name of commune Ferkla Oulia (G-2)	
3. Name of khettara (G-3)		4. Location of khettara $X = 530903.29$ (G-4-1) Y = 102400.09 (G-4-2)	
5. Number of families who 600 (G-5-2)		9. Histry of discharge 0	
6. Number of beneficialies 600 (G-6-2)	families	of khettara	
7. Cycle of kehttara water right 10 (G-7-1)	days		
8.Discharge of khettara (latest) 0 (G-8)	lit/sec	(I-10)	
10. History of khettara water flow 1	(I-9)		
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> <li>(5) No water in the dry season in the past five years</li> <li>(6)The khettara has water flow, but the discharge of khettara is reduced each year in the recent five years.</li> <li>(7)The discharge of the khettara is constant</li> <li>(8)The discharge of the khettara is increased</li> </ul>			
11. Total area of farmland [20] ha (IA-1)		12. Irrigated area by the khettara Oha (IA-3)	
13. The condition of roads 2 appropriate (G-15) not appropriate		14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)	
15.Sanitary service 2 appropriate (G-17) not appropri		16.Facility of electricity and telecomunication1 appropriate (1) (G-18)1 or appropriate (2)	
	Yes (1), No (2)	If yes, Name of G-22	
18 Situation of khettara	th (m)	Section of khettara (average) hight(m) width (m)	
Gallery of khettara (Gallery in 100	(E-1-1-1)		
catchment area and conduit0	(E-1-1-2)	) 0 (E-1-4-2) 0 (E-1-5-2)	
Khettara as open channel 3400	(E-2-1)	1.5 (E-2-2) (E-2-3)	
	(E-4-2-1) (E-4-2-2)		
19. Rehabilitation Rehabilitation length of	· · · ·	m) Rehabilitation length of principal (m)	
khettara (M	Л-7)	irrigation canal (M-8)	
20. Influence of desertification			
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertificationGallery in catchment area3(I-1)Regulation pond(I-5)Gallery of conduitIrrigation canalsIrrigation canals(I-7)Open channel khettara3(I-3)			
21.Demandes of habitants (water resources ) Yes (1), No (2)			
Rehabilitation of khettara 2 (G-19-1) Protection dike against flood 1 (G-19-4)			
Installing pump1(G-19-2)Construction of public wells for domestic water2(G-19-5)Rehabilitation of irrigation canal1(G-19-3)Others2(G-19-6)			
22.Demandes of habitants (Aglicultual and social support) Yes (1), No (2) School 2 (G-20-4)			
Agriculture (storage,production, transporttion of product , etc.) 2 (G-20-1) Sanitary system 1 (G-20-5) Rehabilitation of roads 1 (G-20-2) Hospital 1 (G-20-6) Electric supply 2 (G-20-3) Others 2 (G-20-7)			
23. Importance of khettara       (G-23)         (1) Unique source for both of potable water and irrigation       (4) Partial source for irrigation         (2) Unique source for irrigation       (5) Supplementary source for irrigation         (3) Main source for irrigation       (6) Neglected			
24. Possibility of extension of khettara (G-24) Yes (1), No (2) If no, the reason (G		(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others	

1. Khettara Number A-093 (G-1)	] -	2. Name of commune Ferkla Oulia (G-2)	
	1. ck	4. Location of khettara X = 542189.63 (G-4-1)	
(G-3)	nek	Y = 113057.4 (G-4-2)	
5. Number of families who 460 460	· · ·	9. Histry of discharge <sup>0</sup> of khettara	
6. Number of beneficialies 460	(G-6-2) families	or knettara	
7. Cycle of kehttara water right	(G-7-1) <sup>days</sup>		
8.Discharge of khettara (latest)	(G-8) lit/sec	(I-10)	
10. History of khettara water flow	(I-9)		
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The dischar	n the dry season in the past five years a has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased	
11. Total area of farmland [IA-	40 ha 1)	12. Irrigated area by the khettara []ha (IA-3)	
13. The condition of roads 2	appropriate (1) not appropriate (2)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)	
	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication1 (G-18)appropriate (1) not appropriate (2)	
17. Existence of Association	(G-21) Yes (1),	If yes, Name of G-22	
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)	
Gallery of khettara (Gallery in catchment area and conduit	880 (E-1-1-1)		
	0 (E-1-1-2)		
Khettara as open channel	0 (E-2-1)	0 (E-2-2) 0 (E-2-3)	
Principal and secondary irrigation canal	0 (E-4-2-1) 0 (E-4-2-2)		
19. Rehabilitation Rehabilitation lengt khettara	h of (M-7)	m) Rehabilitation length of principal (m) irrigation canal (M-8)	
20. Influence of desertification			
(1)Significant damage by desertification       Gallery in catchment area       3       (I-1)       Regulation pond       (I-5)         (2)Partial damage by desertification       Gallery of conduit       (I-2)       Irrigation canals       (I-7)         (3)Negligible damage by desertification       Open channel khettara       (I-3)			
21.Demandes of habitants (water resources ) Yes (1), No (2)			
Rehabilitation of khettara 1 (G-19-1) Protection dike against flood 1 (G-19-4)			
Installing pump <u>1</u> Rehabilitation of irrigation canal 1	(G-19-2) Cor (G-19-3)	nstruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)	
22.Demandes of habitants (Aglicultual and social support) Yes (1), No (2)			
Agriculture (storage,production, transporttion of product , etc.)ContentSchoolContentConte			
	i		
23. Importance of khettara (1) Unique source for both of pota (2) Unique source for irrigtion (3) Main source for irrigation	(G-23) ble water and irrigation	on (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected	
24. Possibility of extension of khettara			
Yes (1), No (2) If no, the r (G-24)		(1)Constrains in landscape(3)Existence of other khettaras(2)Prohibited by law(4)Others	

1. Khettara Number A-094 - (G-1)	2. Name of commune Ferkla Oulia (G-2)		
3. Name of khettara Tangarfa	4. Location of khettara X = 530911.58 (G-4-1)		
(G-3)	Y = 102279.99 (G-4-2)		
5. Number of families who 600 (G-5-2) far	9. Histry of discharge		
6. Number of beneficialies 600 (G-6-2) far	amilies of khettara		
7. Cycle of kehttara water right 0 (G-7-1) d	days		
8.Discharge of khettara (latest) 0 (G-8) lit/	/sec (I-10)		
10. History of khettara water flow 1 (I-	-9)		
(1)No water from 1950s or 1970s.(5) No water in the dry season in the past five years(2)No water in the last two-decade(6)The khettara has water flow, but the discharge of khettara is reduced each year in the recent five years.(3)No water in the past five years(7)The discharge of the khettara is constant (8)The discharge of the khettara is increased			
11. Total area of farmlandha (IA-1)	12. Irrigated area by the khettara Oha (IA-3)		
13. The condition of roads 2 appropriate (1) (G-15) not appropriate	14. The condition of schools 2 appropriate (1)		
15.Sanitary service 2 appropriate (1) (G-17) not appropriate			
	s (1), If yes, Name of (2) Association (G-22)		
18. Situation of khettara Length	(m) Section of khettara (average) hight(m) width (m)		
	-1-1-1) 0 (E-1-4-1) 0 (E-1-5-1)		
catchment area and conduit [2000] (E-	-1-1-2) 0 (E-1-4-2) 0 (E-1-5-2)		
Khettara as open channel [0] (E-	-2-1) 0 (E-2-2) 0 (E-2-3)		
Principal and secondary 0 (E-	-4-2-1) 0 (E-4-3-1) 0 (E-4-1-1)		
irrigation canal (E-	-4-2-2) 0 (E-4-3-2) 0 (E-4-1-2)		
19. Rehabilitation Rehabilitation length of khettara (M-7	(m) Rehabilitation length of principal (m) irrigation canal (M-8)		
20. Influence of desertification			
Commented of desertification(1)Significant damage by desertification(2)Partial damage by desertification(3)Negligible damage by desertification(3)Negligible damage by desertification(1) Comment area(1) Comment area			
21.Demandes of habitants (water resources )	Yes (1), No (2)		
Rehabilitation of khettara 2 (G-19-1) Protection dike against flood 2 (G-19-4)			
Installing pump 1 (G-19-2) Rehabilitation of irrigation canal 2 (G-19-3)			
22.Demandes of habitants (Aglicultual and social su			
Agriculture (storage,production, transporttion of product , etc.) 2 (G-20-1) Sanitary system 2 (G-20-5) Rehabilitation of roads 2 (G-20-2) Hospital 2 (G-20-6) Fleatric supply 2 (G-20-2) Hospital 2 (G-20-6)			
	Electric supply 2 (G-20-3) Others 2 (G-20-7)		
23. Importance of khettara (G-23) (1) Unique source for both of potable water and (2) Unique source for irrigition (3) Main source for irrigation			
24. Possibility of extension of khettara			
Yes (1), No (2) If no, the reason (G-24) (G-25	(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others		

1. Khettara Number A-095 (G-1)	-	2. Name of commune Ferkla Oulia (G-2)	
3. Name of khettara Ait Hamm (G-3)	iou-	4. Location of khettara $X = 532019.11$ (G-4-1) Y = 102526.84 (G-4-2)	
5 Number of femilies who	(G-5-2) families	9. Histry of discharge 0	
6. Number of beneficialies 185	(G-6-2) families	of khettara	
7. Cycle of kehttara water right 15	(G-7-1) days		
8.Discharge of khettara (latest) 0	(G-8) lit/sec	(I-10)	
10. History of khettara water flow 1	(I-9)		
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> <li>(5) No water in the dry season in the past five years</li> <li>(6)The khettara has water flow, but the discharge of khettara is reduced each year in the recent five years.</li> <li>(7)The discharge of the khettara is constant</li> <li>(8)The discharge of the khettara is increased</li> </ul>			
11. Total area of farmland [IA-1	40 ha )	12. Irrigated area by the khettara [5]ha (IA-3)	
	opropriate (1) ot appropriate (2)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)	
	opropriate (1) ot appropriate (2)	16.Facility of electricity and telecomunication1 (G-18)appropriate (1) not appropriate (2)	
17. Existence of Association	Yes (1), (G-21) No (2)	If yes, Name of G-22	
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)	
Gallery of khettara (Gallery in catchment area and conduit	400 (E-1-1-1) 0 (E-1-1-2)	) <u>2</u> (E-1-4-1) <u>1</u> (E-1-5-1)	
Khettara as open channel	3500 (E-2-1)	8 (E-2-2) (E-2-3)	
Principal and secondary irrigation canal	<u>3000</u> (E-4-2-1) 0 (E-4-2-2)		
19. Rehabilitation Rehabilitation length khettara	of (M-7)	m) Rehabilitation length of principal (m) irrigation canal (M-8)	
20. Influence of desertification			
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertificationGallery in catchment area3(I-1)Regulation pond2(I-5)Gallery of conduitII-2)Irrigation canals2(I-7)Open channel khettaraI(I-3)			
21.Demandes of habitants (water resources ) Yes (1), No (2)			
Rehabilitation of khettara2(G-19-1)Protection dike against flood1(G-19-4)Installing pump1(G-19-2)Construction of public wells for domestic water2(G-19-5)Rehabilitation of irrigation canal1(G-19-3)Others2			
22.Demandes of habitants (Aglicultual and social support) Yes (1), No (2)			
Agriculture (storage,production, transporttion of product , etc.) 2 (G-20-1) Sanitary system 1 (G-20-5) Rehabilitation of roads 1 (G-20-2) Hospital 1 (G-20-6) Electric supply 2 (G-20-3) Others 2 (G-20-7)			
23. Importance of khettara (G-23) (1) Unique source for both of potable water and irrigation (2) Unique source for irrigation (3) Main source for irrigation (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected			
24. Possibility of extension of khettara Yes (1), No (2) If no, the re (G-24)		(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others	

1. Khettara Number A-096 - (G-1)	2. Name of commune Ferkla Oulia (G-2)		
	4. Location of khettara X = 535226.48 (G-4-1)		
3. Name of khettara (G-3)	Y = 107382.75 (G-4-2)		
5. Number of families who86 (G-5-2) fami	9. Histry of discharge		
6. Number of beneficialies 86 (G-6-2) fami	lies of khettara		
7. Cycle of kehttara water right 12 (G-7-1) day	/s		
8.Discharge of khettara (latest) 0 (G-8) lit/se	ec (I-10)		
10. History of khettara water flow 1 (I-9	)		
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> <li>(5) No water in the dry season in the past five years</li> <li>(6)The khettara has water flow, but the discharge of khettara is reduced each year in the recent five years.</li> <li>(7)The discharge of the khettara is constant</li> <li>(8)The discharge of the khettara is increased</li> </ul>			
11. Total area of farmland [3] ha (IA-1)	12. Irrigated area by the khettara Oha (IA-3)		
13. The condition of roads 2 appropriate (1) (G-15) not appropriate (2)	14. The condition of schools 2 appropriate (1)		
15.Sanitary service 2 appropriate (1) (G-17) not appropriate (2)	2) 16.Facility of electricity and telecomunication (G-18) appropriate (1) (G-18)		
17. Existence of Association Yes ( (G-21) No (			
18. Situation of khettara Length (n	n) Section of khettara (average) hight(m) width (m)		
Gallery of khettara (Gallery in 100 (E-1-	-1-1) <u>1.2</u> (E-1-4-1) <u>0.5</u> (E-1-5-1)		
catchment area and conduit [300] (E-1-	-1-2) <u>1.2</u> (E-1-4-2) <u>0.5</u> (E-1-5-2)		
Khettara as open channel 0 (E-2-	-1) 0 (E-2-2) 0 (E-2-3)		
Principal and secondary 800 (E-4	-2-1) 0.3 (E-4-3-1) 0.4 (E-4-1-1)		
irrigation canal 0 (E-4	-2-2) 0 (E-4-3-2) 0 (E-4-1-2)		
19. Rehabilitation Rehabilitation length of (M-7)	(m) Rehabilitation length of principal (m) irrigation canal (M-8)		
20. Influence of desertification			
20. Indende of desertification (1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertificationGallery in catchment area1(I-1)Regulation pond1(I-5)Gallery of conduit Open channel khettara1(I-2)Irrigation canals1(I-7)			
21.Demandes of habitants (water resources )	Yes (1), No (2)		
Rehabilitation of khettara 2 (G-19-1) Protection dike against flood 2 (G-19-4)			
Installing pump 2 (G-19-2) Rehabilitation of irrigation canal 2 (G-19-3)	Construction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)		
22.Demandes of habitants (Aglicultual and social sup			
Agriculture (storage,production, transporttion of product , etc.)2(G-20-1)Sanitary system2(G-20-5)Rehabilitation of roads2(G-20-2)Hospital2(G-20-6)Electric supply2(G-20-3)Others2(G-20-7)			
	Electric supply 2 (G-20-3) Others 2 (G-20-7)		
23. Importance of khettara (G-23) (1) Unique source for both of potable water and irr (2) Unique source for irrigation (3) Main source for irrigation	rigation (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected		
24. Possibility of extension of khettara			
Yes (1), No (2) If no, the reason (G-25)	<ul><li>(1)Constrains in landscape</li><li>(2)Prohibited by law</li><li>(4)Others</li></ul>		

1. Khettara Number A-097 (G-1)	]	2. Name of commune Ferkla Oulia (G-2)	
3. Name of khettara Abdel Ka (G-3)	adri	4. Location of khettara $X = 535375.66$ (G-4-1) Y = 120987.79 (G-4-2)	
5. Number of families who 86 86 86 86	-	9. Histry of discharge 1930: tarie	
6. Number of beneficialies 86	G-6-2) families	of khettara	
7. Cycle of kehttara water right 12	2 (G-7-1) days		
8.Discharge of khettara (latest)	) (G-8) lit/sec	(I-10)	
10. History of khettara water flow 1	(I-9)		
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> <li>(5) No water in the dry season in the past five years</li> <li>(6)The khettara has water flow, but the discharge of khettara is reduced each year in the recent five years.</li> <li>(7)The discharge of the khettara is constant</li> <li>(8)The discharge of the khettara is increased</li> </ul>			
11. Total area of farmland (IA-	0 ha 1)	12. Irrigated area by the khettara [0]ha (IA-3)	
	appropriate (1) not appropriate (2)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)	
	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)	
17. Existence of Association	G-21) Yes (1), (G-21) No (2)	If yes, Name of G-22)	
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)	
Gallery of khettara (Gallery in catchment area and conduit	<u>100</u> (E-1-1-1) 900 (E-1-1-2)		
Khettara as open channel	0 (E-2-1)	0 (E-2-2) 0 (E-2-3)	
Principal and secondary irrigation canal	<u>300</u> (E-4-2-1) 0 (E-4-2-2)		
19. Rehabilitation Rehabilitation lengt khettara	th of (M-7)	m) Rehabilitation length of principal (m) irrigation canal (M-8)	
20. Influence of desertification			
CommunicationGallery in catchment areaI(I-1)Regulation pondI(I-5)(1)Significant damage by desertificationGallery in catchment areaI(I-1)Regulation pondI(I-5)(3)Negligible damage by desertificationGallery of conduitI(I-2)Irrigation canalsI(I-7)Open channel khettaraI(I-3)I(I-3)IIII			
21.Demandes of habitants (water resources ) Yes (1), No (2)			
Rehabilitation of khettara1(G-19-1)Protection dike against flood2(G-19-4)Installing pump1(G-19-2)Construction of public wells for domestic water2(G-19-5)Rehabilitation of irrigation canal2(G-19-3)Others2			
22.Demandes of habitants (Aglicultual and social support) Yes (1), No (2)			
Agriculture (storage,production, transporttion of product , etc.)ContentSchoolContentConte			
23. Importance of khettara       (G-23)         (1) Unique source for both of potable water and irrigation       (4) Partial source for irrigation         (2) Unique source for irrigation       (5) Supplementary source for irrigation         (3) Main source for irrigation       (6) Neglected			
24. Possibility of extension of khettara Yes (1), No (2) If no, the r (G-24)		(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others	

1. Khettara Number A-098 (G-1)	MP	2. Name of commune Assoul (G-2)	
(0-1)			
3. Name of khettara (G-3)	Assoul	4. Location of khettara $X = 515630.50$ (G-4-1) Y = 146899.99 (G-4-2)	
5. Number of families who 22 have khettara water right	0 (G-5-2) families	9. Histry of discharge <sup>0</sup>	
6. Number of beneficialies	0 (G-6-2) families	of khettara	
7. Cycle of kehttara water right	8 (G-7-1) days		
8.Discharge of khettara (latest)	0 (G-8) lit/sec	(I-10)	
10. History of khettara water flow	(I-9)		
(1)No water from 1950s or 1970s.(5) No water in the dry season in the past five years(2)No water in the last two-decade(6)The khettara has water flow, but the discharge of khettara is reduced each year in the recent five years.(4)No water in the past five years(7)The discharge of the khettara is constant (8)The discharge of the khettara is increased			
11. Total area of farmland	120 ha \-1)	12. Irrigated area by the khettara [120]ha (IA-3)	
13. The condition of roads (G-15)	appropriate (1)	14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)	
15.Sanitary service 1 (G-17)	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)	
17. Existence of Association	2 Yes (1), (G-21) No (2)	If yes, Name of G-22	
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)	
Gallery of khettara (Gallery in catchment area and conduit	640 (E-1-1-1) 360 (E-1-1-2)		
Khettara as open channel	200 (E-2-1)	1.6 (E-2-2) 1.2 (E-2-3)	
Principal and secondary irrigation canal	4000 (E-4-2-1 0 (E-4-2-2		
19. Rehabilitation Rehabilitation len khettara	gth of 20 ( (M-7)	m) Rehabilitation length of principal 1500 (m) irrigation canal (M-8)	
20. Influence of desertification			
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	3 (I-2) Irrigation canals 3 (I-7)	
21.Demandes of habitants (water reso	urces)	Yes (1), No (2)	
Rehabilitation of khettara1(G-19-1)Protection dike against flood1(G-19-4)Installing pump2(G-19-2)Construction of public wells for domestic water2(G-19-5)Rehabilitation of irrigation canal1(G-19-3)Others2			
22.Demandes of habitants (Aglicultual	and social support		
Agriculture (storage,production, transporttion of product , etc.)School2(G-20-4)Rehabilitation of roads1(G-20-2)Kospital2(G-20-5)Electric supply1(G-20-3)Others2(G-20-7)			
23. Importance of khettara       3       (G-23)         (1) Unique source for both of potable water and irrigation       (4) Partial source for irrigation         (2) Unique source for irrigation       (5) Supplementary source for irrigation         (3) Main source for irrigation       (6) Neglected			
24. Possibility of extension of khettara 1 (G-24) Yes (1), No (2) If no, the	reason	(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others	

1. Khettara Number A-099 - (G-1)	2	2. Name of commune	Assoul (G-2)	
		1 Leastion of lubetters		
3. Name of khettara Jdida Assou (G-3)	4	<ol> <li>Location of khettara</li> </ol>	X = <u>517180.36</u> (G-4-1) Y = <u>146933.36</u> (G-4-2)	
5. Number of families who [150] (G-5-2) the second		9. Histry of discharge	0	
6. Number of beneficialies 20 (G-6-2)	amilies O	of khettara		
7. Cycle of kehttara water right 20 (G-7-1)	days			
8.Discharge of khettara (latest) 0 (G-8) li	t/sec	(I-10)		
10. History of khettara water flow   3   (I-9)				
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> <li>(5) No water in the dry season in the past five years</li> <li>(6)The khettara has water flow, but the discharge of khettara is reduced each year in the recent five years.</li> <li>(7)The discharge of the khettara is constant</li> <li>(8)The discharge of the khettara is increased</li> </ul>				
11. Total area of farmland 40 ha (IA-1)	1	12. Irrigated area by the	khettara 0 <sub>ha</sub> (IA-3)	
13. The condition of roads 2 appropriate (1 (G-15) not appropriate		14.The condition of sch	ools 1 appropriate (1) (G-16) not appropriate (2)	
15.Sanitary service 1 appropriate (1 (G-17) not appropriate		16.Facility of electricity telecomunication	and 2 appropriate (1) (G-18) not appropriate (2)	
		If yes, Name of Association	(G-22)	
18. Situation of khettara Length	n (m)	Section hight(m)	n of khettara (average) width (m)	
	-1-1-1) -1-1-2)	<u>1.6</u> (E-1-4 <u>1.6</u> (E-1-4	, , , , , , , , , , , , , , , , , , , ,	
Khettara as open channel 1200 (E		2 (E-2-2		
Principal and secondary 2000 (E irrigation canal 0) (E	E-4-2-1) E-4-2-2)	0.4 (E-4-3 0 (E-4-3		
19. Rehabilitation       Rehabilitation length of khettara       (m)       Rehabilitation length of principal (m)       (m)				
20. Influence of desertification				
(1)Significant damage by desertification       Gallery in catchment area       (I-1)       Regulation pond       (I-5)         (2)Partial damage by desertification       Gallery of conduit       (I-2)       Irrigation canals       (I-7)         (3)Negligible damage by desertification       Open channel khettara       (I-3)       (I-3)				
21.Demandes of habitants (water resources)		Yes (1), No (2)		
Rehabilitation of khettara1(G-19-1)Protection dike against flood2(G-19-4)Installing pump2(G-19-2)Construction of public wells for domestic water2(G-19-5)Rehabilitation of irrigation canal1(G-19-3)Others2(G-19-6)				
22.Demandes of habitants (Aglicultual and social s	support)	Yes (1), No (2)		
Agriculture (storage,production, transporttion of product , etc.)ContentSchoolContentConte				
23. Importance of khettara       (G-23)         (1) Unique source for both of potable water and irrigation       (4) Partial source for irrigation         (2) Unique source for irrigation       (5) Supplementary source for irrigation         (3) Main source for irrigation       (6) Neglected				
Yes (1), No (2) If no, the reason (G-24)		<ul><li>Constrains in landscape</li><li>Prohibited by law</li></ul>	(3)Existence of other khettaras (4)Others	
1. Khettara Number A-100 (G-1)	MP	2. Name of commune	Ait Hani (G-2)	
--	--	---	--	--
	Tamta	4. Location of khettara	X = (G-4-1) Y = (G-4-2)	
E Number of femilies who	00 (G-5-2) families	of monty of alcontargo	0	
6. Number of beneficialies 5	00 (G-6-2) families	of khettara		
7. Cycle of kehttara water right	10 (G-7-1) days			
8.Discharge of khettara (latest)	10 (G-8) lit/sec	(I-10)		
10. History of khettara water flow	6 (I-9)			
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The discha	n the dry season in the past five ra has water flow, but the discha recent five years. rge of the khettara is constant rge of the khettara is increased		
11. Total area of farmland [	100 ha A-1)	12. Irrigated area by the I	khettara <u>25</u> ha (IA-3)	
13. The condition of roads [1 (G-15)	appropriate (1) not appropriate (2)	14.The condition of scho	ools 1 appropriate (1) (G-16) not appropriate (2)	
15.Sanitary service 1 (G-12)	appropriate (1) not appropriate (2)	16.Facility of electricity a telecomunication	and 1 appropriate (1) (G-18) not appropriate (2)	
17. Existence of Association	2 Yes (1), (G-21) No (2)	If yes, Name of Association	(G-22)	
18. Situation of khettara	Length (m)	Section hight(m)	of khettara (average) width (m)	
Gallery of khettara (Gallery in catchment area and conduit	0 (E-1-1-1 0 (E-1-1-2	) <u> </u>	1) <u>0</u> (E-1-5-1)	
Khettara as open channel	(E-2-1)	0 (E-2-2)		
Principal and secondary irrigation canal	0 (E-4-2-1 0 (E-4-2-2		· · ·	
19. Rehabilitation Rehabilitation lei khettara	ngth of (M-7)	m) Rehabilitation le irrigation canal	ngth of principal 200 (m) (M-8)	
20. Influence of desertification				
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	<u>2</u> (I-2) Irri	egulation pond <u>2</u> (I-5) gation canals <u>2</u> (I-7)	
21.Demandes of habitants (water res	ources)	Yes (1), No (2)		
Rehabilitation of khettara 1 Installing pump 2 Rehabilitation of irrigation canal 1	(G-19-1) (G-19-2) Con (G-19-3)	Protection dik nstruction of public wells for o	e against flood 2 (G-19-4) domestic water 2 (G-19-5) Others 2 (G-19-6)	
22.Demandes of habitants (Aglicultual and social support) Yes (1), No (2)				
Agriculture (storage,production	Rehabilitatio		School         2         (G-20-4)           Sanitary system         2         (G-20-5)           Hospital         1         (G-20-6)           Others         2         (G-20-7)	
23. Importance of khettara (1) Unique source for both of p (2) Unique source for irrigtion (3) Main source for irrigation		on (4) Partial source for i (5) Supplementary sou (6) Neglected		
24. Possibility of extension of khettar 1 Yes (1), No (2) If no, th (G-24)	e reason	(1)Constrains in landscape (2)Prohibited by law	(3)Existence of other khettaras (4)Others	

KHET	TARA	A DA	TBASE			
1. Khettara Number A-101 M (G-1)	IP	2. Nam	e of commune	Ait ⊢ (G-2		
3. Name of khettara [Tamajjal No (G-3)		4. Loca	tion of khettara	X = Y =	<u>487149</u> 122750.07	(G-4-1) (G-4-2)
5. Number of families who have khettara water right500 (G-5-6. Number of beneficialies500 (G-6-	,	9. Histr of khett	y of discharge ara		0.5 litter/sec uillet: 3L/sec	
7. Cycle of kehttara water right 10 (G-7-	,					
8.Discharge of khettara (latest) 3 (G-8)	,		(I-10	))		
10. History of khettara water flow 6	(I-9)					
(2)No water in the last two-decade (3)No water in the last decade (4)No water in the past five years	6)The khetta year in the (7)The discha	ra has wat recent fiv rge of the	eason in the past fi er flow, but the disc e years. khettara is constan khettara is increase	charge of	khettara is reduce	∋d each
11. Total area of farmland [100 h (IA-1)	а	12. Irrig	ated area by th	e khetta	ara (IA-3)	100 ha )
13. The condition of roads 2 appropria (G-15) not appro-	ate (1) opriate (2)	14.The	condition of sc	hools	(G-16) appropr	iate (1) ropriate (2)
15.Sanitary service 1 appropria (G-17) not appro-	ate (1) opriate (2)		ility of electricity nunication	y and		riate (1) propriate (2)
17. Existence of Association 1 (G-21	Yes (1), ) No (2)	lf yes, Associ	Name of ation	(G-22	2)	
18. Situation of khettara Le	ngth (m)		Secti hight(m		nettara (averag widt	ge) h (m)
and the second sec	0 (E-1-1-1 0 (E-1-1-2	,	1 (E-1- 0.5 (E-1-	,		E-1-5-1) E-1-5-2)
Khettara as open channel 20	0 (E-2-1)		0.5 (E-2-	·2)	<u>0.5</u> (E	-2-3)
	0 (E-4-2-1 0 (E-4-2-2	· ·	0.3 (E-4- 0 (E-4-	,	· · · · · · · · · · · · · · · · · · ·	E-4-1-1) E-4-1-2)
19. Rehabilitation Rehabilitation length of khettara	0 ( (M-7)	m)	Rehabilitation irrigation cana		of principal	160 (m) (M-8)
20. Influence of desertification				Pogulat	ion pond	3 (I-5)
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification	in catchme of conduit hannel khe	ettara	3 (I-2) I 3 (I-3)	-	· ·	<u>3</u> (I-3) 3 (I-7)
21.Demandes of habitants (water resources )		Yes	(1), No (2)			
Installing pump 2 (G-	19-1) 19-2) Co 19-3)	nstructio	Protection of public wells for		inst flood 2 stic water 2 Others 2	(G-19-4) (G-19-5) (G-19-6)
22.Demandes of habitants (Aglicultual and soc	•	) Yes	(1), No (2)		<u>∠</u>	
Agriculture (storage,production, transpor	ttion of proo Rehabilitatio	duct , etc	s 2 (G-20-2)	Carin	School 2 ary system 2 Hospital 2 Others 2	(G-20-4 (G-20-5 (G-20-6 (G-20-7
23. Importance of khettara 2 (C (1) Unique source for both of potable wate (2) Unique source for irrigition (3) Main source for irrigation	G-23) er and irrigati	(!	<ol> <li>Partial source fo</li> <li>Supplementary s</li> <li>Neglected</li> </ol>	or irrigatio source fo	on or irrigation	
24. Possibility of extension of khettara 1 Yes (1), No (2) If no, the reason (G-24)			rains in landscape ited by law	e (3)Ex (4)Ot	kistence of othe hers	r khettaras

KH	ETTARA	DATBASE	
1. Khettara Number A-102 (G-1)	MP	2. Name of commune	Ait Hani (G-2)
3. Name of khettara (G-3)	azirt	4. Location of khettara	a $X = 486750.69$ (G-4-1) Y = 120286.64 (G-4-2)
5. Number of families who have khettara water right500 (06. Number of beneficialies500 (0		9. Histry of discharge of khettara	1998: 7 litter/sec 2005juillet: 8.5 L/sec
	G-7-1) days		
8.Discharge of khettara (latest) 8.5 (0	G-8) lit/sec	(I-1	10)
10. History of khettara water flow 6	(I-9)		
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The discha	n the dry season in the past ra has water flow, but the dis recent five years. rge of the khettara is consta rge of the khettara is increas	scharge of khettara is reduced each
11. Total area of farmland [10] (IA-1)	)0 ha	12. Irrigated area by t	the khettara <u>100</u> ha (IA-3)
	ropriate (1) appropriate (2)	14.The condition of s	(G-16) not appropriate (2)
	ropriate (1) appropriate (2)	16.Facility of electrici telecomunication	ity and 1 appropriate (1) (G-18) not appropriate (2)
17. Existence of Association	Yes (1), G-21) No (2)	If yes, Name of Association	(G-22)
18. Situation of khettara	Length (m)	Sec hight(	tion of khettara (average) (m) width (m)
Gallery of khettara (Gallery in	70 (E-1-1-1) 380 (E-1-1-2)		
Khettara as open channel	0 (E-2-1)	0 (E-2	2-2) 0 (E-2-3)
Principal and secondary irrigation canal	1600 (E-4-2-1 0 (E-4-2-2		4-3-1) 0.7 (E-4-1-1) 4-3-2) 0 (E-4-1-2)
19. Rehabilitation Rehabilitation length o khettara	of 0 ( (M-7)	m) Rehabilitation irrigation can	n length of principal 400 (m) nal (M-8)
20. Influence of desertification			Regulation pond <u>3</u> (I-5)
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification	lery in catchme lery of conduit en channel khe	3 (I-2) ttara <u>3</u> (I-3)	Irrigation canals 3 (I-7)
21.Demandes of habitants (water resource	,	Yes (1), No (2)	
Rehabilitation of khettara 1 Installing pump 2 Rehabilitation of irrigation canal 1	(G-19-1) (G-19-2) Cor (G-19-3)	Protection nstruction of public wells	a dike against flood         2         (G-19-4)           for domestic water         1         (G-19-5)           Others         2         (G-19-6)
22.Demandes of habitants (Aglicultual and	social support	) Yes (1), No (2)	
Agriculture (storage,production, tran	Rehabilitatio		2) Hospital 1 (G-20-6
23. Importance of khettara (1) Unique source for both of potable (2) Unique source for irrigition (3) Main source for irrigation	] (G-23) water and irrigation	on (4) Partial source (5) Supplementary (6) Neglected	for irrigation v source for irrigation
24. Possibility of extension of khettara 1 Yes (1), No (2) If no, the reas (G-24)		(1)Constrains in landscap (2)Prohibited by law	pe (3)Existence of other khettaras (4)Others

1. Khettara Number A-103 MP (G-1)	2. Name of commune Ait Hani (G-2)
	、
3. Name of khettara (G-3)	4. Location of khettara X = <u>489544.64</u> (G-4-1) Y = <u>122038.86</u> (G-4-2)
5. Number of families who 500 (G-5-2) families have khettara water right	9. Histry of discharge 1998: 6 litter/sec
6. Number of beneficialies 500 (G-6-2) families	of khettara 2005juillet: 10 L/sec
7. Cycle of kehttara water right 10 (G-7-1) days	7
8.Discharge of khettara (latest) 10 (G-8) lit/sec	(I-10)
10. History of khettara water flow (I-9)	
(2)No water in the last two-decade(6)The khet(3)No water in the last decadeyear in the(4)No water in the past five years(7)The discl	r in the dry season in the past five years tara has water flow, but the discharge of khettara is reduced each ne recent five years. harge of the khettara is constant harge of the khettara is increased
11. Total area of farmland [100] ha (IA-1)	12. Irrigated area by the khettara [12]ha (IA-3)
13. The condition of roads (G-15) appropriate (1) not appropriate (2)	14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 1 appropriate (1) (G-17) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association 2 Yes (1) (G-21) No (2)	If yes, Name of G-22
18. Situation of khettara Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in 340 (E-1-1-	
catchment area and conduit [100 (E-1-1-	
Khettara as open channel 15 (E-2-1)	
Principal and secondary 4100 (E-4-2-	
irrigation canal 0 (E-4-2	
	(m) Rehabilitation length of principal 900 (m)
khettara (M-7)	irrigation canal (M-8)
20. Influence of desertification	
(1)Significant damage by desertification Gallery in catchn	
(2)Partial damage by desertification (3)Negligible damage by desertification Open channel kh	
21.Demandes of habitants (water resources )	Yes (1), No (2)
Rehabilitation of khettara 1 (G-19-1)	Protection dike against flood 2 (G-19-4)
Installing pump 2 (G-19-2) C Rehabilitation of irrigation canal 1 (G-19-3)	Construction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual and social suppo	
Agriculture (storage,production, transporttion of pr	
	ion of roads 2 (G-20-2) Hospital 1 (G-20-6) ectric supply 2 (G-20-3) Others 2 (G-20-7)
23. Importance of khettara 2 (G-23)	
(1) Unique source for both of potable water and irrigation	ation (4) Partial source for irrigation
<ul><li>(2) Unique source for irrigition</li><li>(3) Main source for irrigation</li></ul>	<ul><li>(5) Supplementary source for irrigation</li><li>(6) Neglected</li></ul>
24. Possibility of extension of khettara	
1 Yes (1), No (2) If no, the reason	(1)Constrains in landscape (3)Existence of other khettaras
(G-24) (G-25)	(2)Prohibited by law (4)Others

1. Khettara Number A-104 (G-1)	MP	2. Name of commune An (G	nellago -2)	
3. Name of khettara Drain	Imide	4. Location of khettara X		
(G-3)		Y	= (G-4-2)	
5. Number of families who 2 have khettara water right	00 (G-5-2) families		5 juillet: 23 L/sec	
6. Number of beneficialies	(G-6-2) families	of khettara		
7. Cycle of kehttara water right	(G-7-1) days			
8.Discharge of khettara (latest)	23 (G-8) lit/sec	(I-10)		
10. History of khettara water flow	5 (I-9)		_	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The discha	n the dry season in the past five year a has water flow, but the discharge of recent five years. rge of the khettara is constant rge of the khettara is increased		
11. Total area of farmland	70 ha A-1)	12. Irrigated area by the khe	ttara ha (IA-3)	
13. The condition of roads (G-15)	appropriate (1) not appropriate (2)	14.The condition of schools	(G-16) appropriate (1) (G-16) not appropriate (2)	
15.Sanitary service (G-17	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication	(G-18) appropriate (1)	
17. Existence of Association	2 Yes (1), (G-21) No (2)	If yes, Name of G-	22)	
18. Situation of khettara	Length (m)	Section of hight(m)	khettara (average) width (m)	
Gallery of khettara (Gallery in catchment area and conduit	20 (E-1-1-1) 4500 (E-1-1-2)	) <u>1.8</u> (E-1-4-1)	1 (E-1-5-1) 1 (E-1-5-2)	
Khettara as open channel	<u>1600</u> (E-2-1)	1 (E-2-2)	0.6 (E-2-3)	
Principal and secondary irrigation canal	600 (E-4-2-1 0 (E-4-2-2		1 (E-4-1-1) 0 (E-4-1-2)	
19. Rehabilitation Rehabilitation ler khettara	gth of 20 ( (M-7)	m) Rehabilitation lengt irrigation canal	h of principal 2100 (m) (M-8)	
20. Influence of desertification	. ,	•		
<ul> <li>(1)Significant damage by desertification</li> <li>(2)Partial damage by desertification</li> <li>(3)Negligible damage by desertification</li> </ul>	Gallery in catchme Gallery of conduit Open channel khe	<u>3</u> (I-2) Irrigat	ation pond <u>3</u> (I-5) ion canals <u>3</u> (I-7)	
21.Demandes of habitants (water res	•	Yes (1), No (2)		
Rehabilitation of khettara	(G-19-1)	Protection dike ag	gainst flood (G-19-4)	
Installing pump Rehabilitation of irrigation canal		nstruction of public wells for dom		
22.Demandes of habitants (Aglicultual and social support) Yes (1), No (2)				
Agriculture (storage,productior	Rehabilitatio		School         (G-20-4)           nitary system         (G-20-5)           Hospital         (G-20-6)           Others         (G-20-7)	
23. Importance of khettara (1) (1) Unique source for both of pa (2) Unique source for irrigtion (3) Main source for irrigation 24. Possibility of extension of khettar	(G-23) otable water and irrigation		ation	
	e reason	• • • • • • • • • • • • • • • • • • • •	Existence of other khettaras Others	

1. Khettara Number A-105 MP (G-1)	2. Name of commune Amellago (G-2)		
3. Name of khettara Idmouma (G-3)	4. Location of khettara $X = 551735.11$ (G-4-1) Y = 160096.7 (G-4-2)		
5. Number of families who 60 (G-5-2) families	9. Histry of discharge 2005 juillet: 3L /sec		
6. Number of beneficialies 60 (G-6-2) families	of khettara		
7. Cycle of kehttara water right 17 (G-7-1) days	1		
8.Discharge of khettara (latest) 3 (G-8) lit/sec	(I-10)		
10. History of khettara water flow 6 (I-9)			
(2)No water in the last two-decade(6)The khetta(3)No water in the last decadeyear in the(4)No water in the past five years(7)The disch	in the dry season in the past five years ara has water flow, but the discharge of khettara is reduced each e recent five years. arge of the khettara is constant arge of the khettara is increased		
11. Total area of farmland 30 ha (IA-1)	12. Irrigated area by the khettara 30ha (IA-3)		
13. The condition of roads 2 appropriate (1) (G-15) not appropriate (2)	14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)		
15.Sanitary service 2 appropriate (1) (G-17) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)		
17. Existence of Association1Yes (1),(G-21)No (2)	If yes, Name of Association (G-22)		
18. Situation of khettara Length (m)	Section of khettara (average) hight(m) width (m)		
Gallery of khettara (Gallery in 650 (E-1-1-			
catchment area and conduit [500] (E-1-1-2			
Khettara as open channel 400 (E-2-1)	0.8 (E-2-2) 0.65 (E-2-3)		
Principal and secondary 1100 (E-4-2-			
irrigation canal 0 (E-4-2-2			
	(m) Rehabilitation length of principal 900 (m)		
khettara (M-7)	irrigation canal (M-8)		
20. Influence of desertification			
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification Open channel kh	t <u>3</u> (I-2) Irrigation canals <u>3</u> (I-7)		
21.Demandes of habitants (water resources )	Yes (1), No (2)		
Rehabilitation of khettara 1 (G-19-1)	Protection dike against flood 2 (G-19-4)		
	onstruction of public wells for domestic water 1 (G-19-5) Others 2 (G-19-6)		
22.Demandes of habitants (Aglicultual and social support			
School 2 (G-20-4)			
Rehabilitati	oduct , etc.)       2       (G-20-1)       Sanitary system       2       (G-20-5)         on of roads       1       (G-20-2)       Hospital       1       (G-20-6)         ctric supply       1       (G-20-3)       Others       2       (G-20-7)		
23. Importance of khettara 3 (G-23)			
<ul> <li>(1) Unique source for both of potable water and irrigation</li> <li>(2) Unique source for irrigation</li> <li>(3) Main source for irrigation</li> </ul>	tion (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected		
24. Possibility of extension of khettara			
1 Yes (1), No (2) If no, the reason	(1)Constrains in landscape (3)Existence of other khettaras		
(G-24) (G-25)	(2)Prohibited by law (4)Others		

1. Khettara Number A-106 MP (G-1)	2. Name of commune Amellago (G-2)			
	4. Location of khettara X = <u>550532.43</u> (G-4-1)			
3. Name of khettara Agoudime (G-3)	4. Location of knettara $X = 550532.43$ (G-4-1) Y = 171556.03 (G-4-2)			
5. Number of families who (G-5-2) familie	9. Histry of discharge 2005 juillet: 1 L/sec			
6. Number of beneficialies 3 (G-6-2) familie				
7. Cycle of kehttara water right 19 (G-7-1) days	-			
8.Discharge of khettara (latest) 1 (G-8) lit/sec	c (I-10)			
10. History of khettara water flow 6 (I-9)				
(2)No water in the last two-decade(6)The khe(3)No water in the last decadeyear in(4)No water in the past five years(7)The dis	ter in the dry season in the past five years ettara has water flow, but the discharge of khettara is reduced each the recent five years. charge of the khettara is constant charge of the khettara is increased			
11. Total area of farmland 18 ha (IA-1)	12. Irrigated area by the khettara [18]ha (IA-3)			
13. The condition of roads (G-15) appropriate (1) not appropriate (2)	14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)			
15.Sanitary service 2 appropriate (1) (G-17) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)			
17. Existence of Association 2 Yes (1 (G-21) No (2				
18. Situation of khettara Length (m	) Section of khettara (average) hight(m) width (m)			
Gallery of khettara (Gallery in catchment area and conduit       70 (E-1-2)         Catchment area and conduit       400 (E-1-2)	1-1) <u>1.7</u> (E-1-4-1) <u>1</u> (E-1-5-1)			
Khettara as open channel 500 (E-2-7				
Principal and secondary1300 (E-4-2)irrigation canal0 (E-4-2)				
19. Rehabilitation Rehabilitation length of khettara (M-7)	(m) Rehabilitation length of principal (m) irrigation canal (M-8)			
20. Influence of desertification				
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification Open channel	uit <u>3</u> (I-2) Irrigation canals <u>3</u> (I-7)			
21.Demandes of habitants (water resources)	Yes (1), No (2)			
Rehabilitation of khettara 1 (G-19-1) Installing pump 2 (G-19-2) Rehabilitation of irrigation canal 1 (G-19-3)	Protection dike against flood 1 (G-19-4) Construction of public wells for domestic water (G-19-5) Others 2 (G-19-6)			
22.Demandes of habitants (Aglicultual and social support) Yes (1), No (2)				
Agriculture (storage,production, transporttion of product , etc.)CartonSchoolCartonG-20-4)Agriculture (storage,production, transporttion of product , etc.)CartonCartonCartonCartonCartonCartonRehabilitation of roadsCartonCartonCartonCartonCartonCartonCartonElectric supplyCarton <t< td=""></t<>				
23. Importance of khettara3(G-23)(1) Unique source for both of potable water and irrigation (2) Unique source for irrigation (3) Main source for irrigation(4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected				
24. Possibility of extension of khettara 2 Yes (1), No (2) If no, the reason 4 (G-24) (G-25)	<ul><li>(1)Constrains in landscape</li><li>(2)Prohibited by law</li><li>(3)Existence of other khettaras</li><li>(4)Others</li></ul>			

1. Khettara Number A-107	MP	2. Name of commune Amellago (G-2)	
(G-1)	ł		
3. Name of khettara Oje (G-3)		4. Location of khettara $X = 547516.91$ (G-4-1) Y = 162727.06 (G-4-2)	
5. Number of families who have khettara water right		9. Histry of discharge of khettara 1987: 5 litter/sec 2005juillet: 1.2 L/sec	
6. Number of beneficialies	19 (G-6-2) families	of khettara 2005juillet: 1.2 L/sec	
7. Cycle of kehttara water right	12 (G-7-1) days		
8.Discharge of khettara (latest)	I.2 (G-8) lit/sec	(I-10)	
10. History of khettara water flow 1	(I-9)		
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The dischar	n the dry season in the past five years ra has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased	
11. Total area of farmland	<u>12</u> ha A-1)	12. Irrigated area by the khettara 6ha (IA-3)	
13. The condition of roads (G-15	appropriate (1) not appropriate (2)	14.The condition of schools (G-16) not appropriate (2)	
15.Sanitary service (G-17	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication2 appropriate (1) (G-18)appropriate (1) (C-18)	
17. Existence of Association	(G-21) Ves (1), (G-21) No (2)	If yes, Name of G-22	
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)	
Gallery of khettara (Gallery in	10 (E-1-1-1)		
catchment area and conduit	630 (E-1-1-2)		
Khettara as open channel	250 (E-2-1)	0.4 (E-2-2) 0.4 (E-2-3)	
Principal and secondary irrigation canal	700 (E-4-2-1) 0 (E-4-2-2)		
19. Rehabilitation Rehabilitation len khettara	ngth of 0 (I (M-7)	m) Rehabilitation length of principal 250 (m) irrigation canal (M-8)	
20. Influence of desertification			
(1)Significant damage by desertification	Gallery in catchme	ent area <u>3</u> (I-1) Regulation pond <u>3</u> (I-5)	
(2)Partial damage by desertification (3)Negligible damage by desertification	Gallery of conduit Open channel khe	(I-2) Irrigation canals <u>3</u> (I-7)	
21.Demandes of habitants (water reso		Yes (1), No (2)	
Rehabilitation of khettara 1	(G-19-1)	Protection dike against flood 2 (G-19-4)	
Installing pump 2 Rehabilitation of irrigation canal 1	(G-19-2) Cor (G-19-3)	nstruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)	
22.Demandes of habitants (Aglicultua	I and social support		
School 2 (G-20-4)			
Agriculture (Storage, production	Rehabilitation		
23. Importance of khettara	(G-23)		
<ul> <li>(1) Unique source for both of po (2) Unique source for irrigition (3) Main source for irrigation</li> </ul>	、 <i>`</i> ,	on (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected	
24. Possibility of extension of khettar	a		
2 Yes (1), No (2) If no, the (G-24)		(1)Constrains in landscape(3)Existence of other khettaras(2)Prohibited by law(4)Others	

KHETT	ARA	DA	<b>FBASE</b>	-			
1. Khettara Number A-108 MP (G-1)		2. Name	e of commur		Amellago (G-2)		
3. Name of khettara Tasskountit (G-3)		4. Locat	ion of khetta	ara		452.58 ( 960.22 (	,
have khettara water right		9. Histry of khetta	of discharg		2002 juillet: 2 2005 juillet 0		
6. Number of beneficialies2 (G-6-2)7. Cycle of kehttara water right7 (G-7-1)	days						
	lit/sec		(	I-10)			
10. History of khettara water flow 6	(I-9)						
(2)No water in the last two-decade(6)Th(3)No water in the last decadeyet(4)No water in the past five years(7)Th	he khettara ear in the he dischar	a has wate recent five ge of the k	eason in the pa er flow, but the years. chettara is cons chettara is incre	dischare stant		is reduced	each
11. Total area of farmland [4] ha (IA-1)		12. Irriga	ated area by	y the k	hettara	(IA-3)	4 ha
13. The condition of roads 2 appropriate ( (G-15) not appropriate		14.The	condition of	fschoo	ols <u>2</u> (G-16)	appropriat not approp	e (1) oriate (2)
15.Sanitary service 2 appropriate ( (G-17) not appropria			lity of electr nunication	icity ar	nd 2 (G-18	appropria not appro	
	′es (1), lo (2)	lf yes, N Associa		(1	G-22)		
18. Situation of khettara Lengt	h (m)			ection nt(m)	of khettara	(average width	
Leaded and a set of the set of th	E-1-1-1) E-1-1-2)			-1-4-1 -1-4-2	·	0.8 (E-′ 0.8 (E-′	
Khettara as open channel 84 (I	E-2-1)		1.2 (E			1.4 (E-2	
	E-4-2-1) E-4-2-2)			E-4-3-1 E-4-3-2	· ·	0.3 (E- 0 (E-	·4-1-1) ·4-1-2)
19. Rehabilitation Rehabilitation length of Khettara (M	0 (r 1-7)	m)	Rehabilitat		igth of prin		0 (m) ⁄/-8)
20. Influence of desertification				Por	gulation po	nd 3	(I-5)
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertificationGallery in c Gallery of c Open chan	conduit		3 (I-1) 3 (I-2) 3 (I-3)		jation cana		(I-3) (I-7)
21.Demandes of habitants (water resources )		Yes	(1), No (2)				_
Rehabilitation of khettara1(G-19-1)Installing pump2(G-19-2)Rehabilitation of irrigation canal1(G-19-3)	2) Con	struction	Protecti of public wel		against floo omestic wat Othe	er 2	(G-19-4) (G-19-5) (G-19-6)
22.Demandes of habitants (Aglicultual and social	<i>·</i>	Yes	(1), No (2)			2	
School 1 (G-20-4) Agriculture (storage,production, transporttion of product , etc.) 2 (G-20-1) Sanitary system 2 (G-20-5)							
		ric supply				pital <u>1</u> ners <u>2</u>	(G-20-6) (G-20-7)
23. Importance of khettara 1 (G-23 (1) Unique source for both of potable water an (2) Unique source for irrigtion (3) Main source for irrigation	,	(5)	) Partial sourc ) Supplementa ) Neglected	ce for in ary sour	rigation ce for irrigat	ion	
24. Possibility of extension of khettara 2 Yes (1), No (2) If no, the reason 4 (G-24)	-		ains in landso ted by law		(3)Existence (4)Others	e of other k	hettaras

1. Khettara Number A-109 (G-1)	MP	2. Name of commune Amellago (G-2)	)
3. Name of khettara Outalan (G-3)	nine		<u>56263.93</u> (G-4-1) 61830.74 (G-4-2)
E Number of femilies who	G-5-2) families	9. Histry of discharge 1998 juille	t: 6 litter/sec
6. Number of beneficialies	6 (G-6-2) families	of khettara	
7. Cycle of kehttara water right	2 (G-7-1) days		
8.Discharge of khettara (latest)	7 (G-8) lit/sec	(I-10)	
10. History of khettara water flow 6	(I-9)		
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The dischar	the dry season in the past five years a has water flow, but the discharge of khetta recent five years. ge of the khettara is constant ge of the khettara is increased	ara is reduced each
11. Total area of farmland [IA	16 ha -1)	12. Irrigated area by the khettara	<u>2</u> ha (IA-3)
13. The condition of roads (G-15)	appropriate (1) not appropriate (2)	14.The condition of schools (G-1	appropriate (1) 16) not appropriate (2)
15.Sanitary service 1 (G-17)	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-2)	appropriate (1) not appropriate (2)
17. Existence of Association	1 Yes (1), (G-21) No (2)	If yes, Name of Cooperat Association (G-22)	ive Outalamine
18. Situation of khettara	Length (m)	Section of khetta hight(m)	ra (average) width (m)
Gallery of khettara (Gallery in catchment area and conduit	<u>45</u> (E-1-1-1) 60 (E-1-1-2)	<u>1.2</u> (E-1-4-1)	0.8 (E-1-5-1) 0.8 (E-1-5-2)
Khettara as open channel	400 (E-2-1)	0.5 (E-2-2)	0.4 (E-2-3)
Principal and secondary irrigation canal	1800 (E-4-2-1) 0 (E-4-2-2		0.4 (E-4-1-1) 0 (E-4-1-2)
19. Rehabilitation Rehabilitation leng khettara	th of 0 (	m) Rehabilitation length of pr irrigation canal	incipal <u>450</u> (m) (M-8)
20. Influence of desertification			
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification	Gallery in catchme Gallery of conduit Open channel khe	3 (I-2) Irrigation ca	
21.Demandes of habitants (water resou	urces)	Yes (1), No (2)	
Rehabilitation of khettara 1 Installing pump 2 Rehabilitation of irrigation canal 1	(G-19-1) (G-19-2) Cor (G-19-3)	Protection dike against f nstruction of public wells for domestic w Ot	
22.Demandes of habitants (Aglicultual	and social support		
Agriculture (storage,production,	Rehabilitation	luct , etc.) 2 (G-20-1) Sanitary s n of roads 1 (G-20-2) He	School         2         (G-20-4)           system         2         (G-20-5)           ospital         1         (G-20-6)           Others         2         (G-20-7)
23. Importance of khettara 1 (1) Unique source for both of pota (2) Unique source for irrigition (3) Main source for irrigation	(G-23) able water and irrigation	on (4) Partial source for irrigation (5) Supplementary source for irrig (6) Neglected	gation
24. Possibility of extension of khettara 2 Yes (1), No (2) If no, the (G-24)		1)Constrains in landscape (3)Existen 2)Prohibited by law (4)Others	ice of other khettaras

1. Khettara Number A-110 (G-1)	MP	2. Name of commune Ait Hani (G-2)
3. Name of khettara Oukhalk (G-3)	ζ	4. Location of khettara $X = 554899.67$ (G-4-1) Y = 160464.9 (G-4-2)
5. Number of families who 12 have khettara water right	· /	9. Histry of discharge 0
6. Number of beneficialies	2 (G-6-2) families	of khettara
7. Cycle of kehttara water right 12	2 (G-7-1) days	
8.Discharge of khettara (latest)	3 (G-8) lit/sec	(I-10)
10. History of khettara water flow 5	(I-9)	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The dischar	n the dry season in the past five years a has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased
11. Total area of farmland [IA·	8 ha 1)	12. Irrigated area by the khettara [1.5]ha (IA-3)
13. The condition of roads (G-15)	appropriate (1) not appropriate (2)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 (G-17)	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association	(G-21) Yes (1), (2)	If yes, Name of G-22
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit	100 (E-1-1-1) 450 (E-1-1-2)	
Khettara as open channel	<u>0</u> (E-2-1)	0 (E-2-2) 0 (E-2-3)
Principal and secondary irrigation canal	2100 (E-4-2-1) 0 (E-4-2-2)	
19. Rehabilitation Rehabilitation leng khettara	th of (M-7)	m) Rehabilitation length of principal (m) irrigation canal (M-8)
20. Influence of desertification	( )	
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification	Gallery in catchme Gallery of conduit Open channel khe	(I-2) Irrigation canals (I-7)
21.Demandes of habitants (water resou	irces)	Yes (1), No (2)
Rehabilitation of khettara 1 Installing pump 2 Rehabilitation of irrigation canal 2	(G-19-1) (G-19-2) Cor (G-19-3)	Protection dike against flood 2 (G-19-4) nstruction of public wells for domestic water (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual	and social support	
Agriculture (storage,production,		School 1 (G-20-4)
	Rehabilitation	
23. Importance of khettara (1) Unique source for both of pota (2) Unique source for irrigition (3) Main source for irrigation	(G-23) able water and irrigation	on (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettara (G-24) Yes (1), No (2) If no, the		(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others

KHET	TARA	DAT	BASE

1. Khettara Number A-111 MP (G-1)	2. Name of commune Ait Hani (G-2)
3. Name of khettara Ait Mkhoun (G-3)	4. Location of khettara $X = 546874$ (G-4-1) Y = 163897.34 (G-4-2)
5. Number of families who have khettara water right	9. Histry of discharge 1987: 4 litter/sec of khettara 2005: 1 L/sec
6. Number of beneficialies 16 (G-6-2) families	
7. Cycle of kehttara water right 12 (G-7-1) days	
8.Discharge of khettara (latest) 1 (G-8) lit/sec	(I-10)
10. History of khettara water flow 6 (I-9)	
(2)No water in the last two-decade(6)The khetta(3)No water in the last decadeyear in the(4)No water in the past five years(7)The discharge	in the dry season in the past five years ara has water flow, but the discharge of khettara is reduced each e recent five years. arge of the khettara is constant arge of the khettara is increased
11. Total area of farmland [IA-1] ha	12. Irrigated area by the khettara [4]ha (IA-3)
13. The condition of roads (G-15) appropriate (1) not appropriate (2)	14. The condition of schools 1 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 appropriate (1) (G-17) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association 2 Yes (1), (G-21) No (2)	If yes, Name of Association (G-22)
18. Situation of khettara Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit0 (E-1-1-2 700 (E-1-1-2	1) <u>1.4</u> (E-1-4-1) <u>6.8</u> (E-1-5-1)
Khettara as open channel 260 (E-2-1)	0.3 (E-2-2) 0.3 (E-2-3)
Principal and secondary400 (E-4-2-2)irrigation canal0 (E-4-2-2)	
19. Rehabilitation Rehabilitation length of 0 khettara (M-7)	(m) Rehabilitation length of principal 200 (m) irrigation canal (M-8)
20. Influence of desertification	
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertificationGallery in catchm Gallery of conduit Open channel khe	(I-2) Irrigation canals 3 (I-7)
21.Demandes of habitants (water resources )	Yes (1), No (2)
Rehabilitation of khettara 1 (G-19-1) Installing pump 2 (G-19-2) Co Rehabilitation of irrigation canal 1 (G-19-3)	Protection dike against flood 2 (G-19-4) onstruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual and social suppor	
	School         2         (G-20-4)           oduct , etc.)         2         (G-20-1)         Sanitary system         2         (G-20-5)           on of roads         2         (G-20-2)         Hospital         1         (G-20-6)           ctric supply         1         (G-20-3)         Others         2         (G-20-7)
23. Importance of khettara 1 (G-23) (1) Unique source for both of potable water and irrigat (2) Unique source for irrigation (3) Main source for irrigation	tion (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettara 2 Yes (1), No (2) If no, the reason 4 (G-24) (G-25)	(1)Constrains in landscape(3)Existence of other khettaras(2)Prohibited by law(4)Others

1. Khettara Number A-112 (G-1)	MP	2. Name of commune Tadighouste (G-2)
3. Name of khettara [delss (G-3)	ene	4. Location of khettara $X = 556517.92$ (G-4-1) Y = 153670.94 (G-4-2)
E Number of femilies who	20 (G-5-2) families	9. Histry of discharge 1997 augt: 12 litter/sec
-	20 (G-6-2) families	of khettara
7. Cycle of kehttara water right	13 (G-7-1) days	
8.Discharge of khettara (latest) 2.	08 (G-8) lit/sec	(I-10)
10. History of khettara water flow 6	(I-9)	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The discha	n the dry season in the past five years a has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased
11. Total area of farmland	<u>100</u> ha A-1)	12. Irrigated area by the khettara [33]ha (IA-3)
13. The condition of roads 2 (G-15	appropriate (1) not appropriate (2)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 (G-17	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association	2 Yes (1), (G-21) No (2)	If yes, Name of G-22
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit	0 (E-1-1-1) 0 (E-1-1-2)	) <u>9.5</u> (E-1-4-1) <u>0.5</u> (E-1-5-1)
Khettara as open channel	236 (E-2-1)	0.7 (E-2-2) 0.5 (E-2-3)
Principal and secondary irrigation canal	1400 (E-4-2-1 0 (E-4-2-2	
19. Rehabilitation Rehabilitation ler khettara	gth of (M-7)	m) Rehabilitation length of principal 950 (m) irrigation canal (M-8)
20. Influence of desertification		
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	3 (I-2) Irrigation canals 3 (I-7)
21.Demandes of habitants (water reso	ources)	Yes (1), No (2)
Rehabilitation of khettara 1 Installing pump 1 Rehabilitation of irrigation canal 1	(G-19-1) (G-19-2) Cor (G-19-3)	Protection dike against flood 2 (G-19-4) nstruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultua	l and social support	) Yes (1), No (2)
Agriculture (storage,production	Rehabilitation	
23. Importance of khettara 1 (1) Unique source for both of po (2) Unique source for irrigtion (3) Main source for irrigation		on (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettar 1 (G-24) Yes (1), No (2) If no, the	e reason	(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others

1. Khettara Number	A-113 (G-1)	MP		2. Nam	e of commu	ne Tac (G-2	lighouste 2)
3. Name of khettara	Taltafro (G-3)	ute		4. Loca	tion of khett	ara X = Y =	
5. Number of families who have khettara water right	120	) (G-5-2)	families	9. Histr	y of dischar		7: 40 litter/sec
6. Number of beneficialies	20	) (G-6-2)	families		aia		
7. Cycle of kehttara water ri	ght 1	1 (G-7-1)	days				
8.Discharge of khettara (late	est) 20.	7 (G-8)	lit/sec		(	I-10)	
10. History of khettara wate	r flow 6		(I-9)				
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	9	(6)T ( (7)T (7)T	The khettai /ear in the The discha	ra has wat recent five rge of the		discharge o	s f khettara is reduced each
11. Total area of farmland	(IA	200 ha -1)		12. Irrig	ated area b	y the khet	tara <u>25</u> ha (IA-3)
13. The condition of roads	2 (G-15)	appropriate not appropri			condition o		1 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service	2 (G-17)	appropriate not appropri			ility of electi nunication	icity and	1 appropriate (1) (G-18) not appropriate (2)
17. Existence of Association	n		Yes (1), No (2)	lf yes, l Associa	Name of ation	(G-2	22)
18. Situation of khettara		Leng	th (m)			ection of k ht(m)	hettara (average) width (m)
Gallery of khettara (Gallery catchment area and condu			(E-1-1-1 (E-1-1-2	·	2.9 (1	E-1-4-1) E-1-4-2)	0.8 (E-1-5-1) 0.6 (E-1-5-2)
Khettara as open channel		<u></u>	(E-2-1)	, 	0.4 (6		<u>0.6</u> (E-2-3)
Principal and secondary irrigation canal			(E-4-2-1 (E-4-2-2	· ·		E-4-3-1) E-4-3-2)	0.4 (E-4-1-1) 0 (E-4-1-2)
19. Rehabilitation Rehabilitation khettar	litation leng		<u>0</u> ( Л-7)	m)	Rehabilitat		of principal <u>3200</u> (m) (M-8)
20. Influence of desertificat	ion					<b>_</b>	
<ul><li>(1)Significant damage by desertific</li><li>(2)Partial damage by desertificatio</li><li>(3)Negligible damage by desertific</li></ul>	n n	Gallery in Gallery of Open chai	conduit		3 (I-1) 3 (I-2) 3 (I-3)	Irrigatio	ation pond <u>3</u> (I-5) on canals <u>3</u> (I-7)
21.Demandes of habitants (	water resou	urces)		Yes	(1), No (2)		
Rehabilitation of k Installin Rehabilitation of irrigatio	g pump 2	(G-19- (G-19- (G-19-	2) Co	nstructior	Protect of public we	ion dike aga Ils for dome	
22.Demandes of habitants	Aglicultual	and social	support	:) Yes	(1), No (2)		
Agriculture (storage	e,production,		nabilitatio		s1 (G-2	0-2)	School         2         (G-20-4)           itary system         2         (G-20-5)           Hospital         1         (G-20-6)           Others         2         (G-20-7)
23. Importance of khettara (1) Unique source fo (2) Unique source fo (3) Main source for	or irrigtion irrigation	G-2 (G-2	,	(5	<ul> <li>Partial source</li> <li>Supplemente</li> <li>Neglected</li> </ul>		
24. Possibility of extension 1 (G-24) (G-24)	of khettara If no, the				ains in lands ited by law		xistence of other khettaras

1. Khettara Number A-114 (G-1)	MP	2. Name of commune Gheriss Soufla (G-2)
· · · · · · · · · · · · · · · · · · ·		4. Location of khettara X = 560238.17 (G-4-1)
(G-3)		Y = 116524.83 (G-4-2)
5. Number of families who have khettara water right		9. Histry of discharge 1998: 1.5 litter/sec
-	52 (G-6-2) families	of khettara
7. Cycle of kehttara water right	12 (G-7-1) days	
8.Discharge of khettara (latest)	3.8 (G-8) lit/sec	(I-10)
10. History of khettara water flow	7 (I-9)	
(1)No water from 1950s or 1970s. (2)No water in the last two-decade (3)No water in the last decade (4)No water in the past five years	(6)The khettar year in the (7)The dischar	n the dry season in the past five years ra has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased
11. Total area of farmland	<u>12</u> ha A-1)	12. Irrigated area by the khettara [2]ha (IA-3)
13. The condition of roads 2 (G-15)	appropriate (1)	14.The condition of schools (G-16) not appropriate (2)
15.Sanitary service 2 (G-17	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication1 appropriate (1) (G-18)appropriate (1) (1) not appropriate (2)
17. Existence of Association	2 Yes (1), (G-21) No (2)	If yes, Name of G-22
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit	900 (E-1-1-1) 0 (E-1-1-2)	) <u>2</u> (E-1-4-1) <u>0.5</u> (E-1-5-1)
Khettara as open channel	<u>64</u> (E-2-1)	0.4 (E-2-2) 0.4 (E-2-3)
Principal and secondary irrigation canal	1770 (E-4-2-1) 0 (E-4-2-2)	
19. Rehabilitation Rehabilitation ler khettara	ngth of (M-7)	m) Rehabilitation length of principal 990 (m) irrigation canal (M-8)
20. Influence of desertification	<u> </u>	
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	3 (I-2) Irrigation canals 3 (I-7)
21.Demandes of habitants (water res	ources)	Yes (1), No (2)
Rehabilitation of khettara 1 Installing pump 2 Rehabilitation of irrigation canal 1	(G-19-1) (G-19-2) Cor (G-19-3)	Protection dike against flood 2 (G-19-4) nstruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultua	l and social support	:) Yes (1), No (2)
Agriculture (storage,production	n, transporttion of proc Rehabilitation	School <u>2</u> (G-20-4) duct , etc.) <u>2</u> (G-20-1) Sanitary system <u>2</u> (G-20-5)
23. Importance of khettara 3 (1) Unique source for both of p (2) Unique source for irrigition (3) Main source for irrigation		on (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettar 1 Yes (1), No (2) If no, th (G-24)	e reason (	(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others

1. Khettara Number A-1 (G-		2. Name of commune Gheriss Soufla (G-2)
3. Name of khettara	ouhadachia	4. Location of khettara X = <u>559365.52</u> (G-4-1) Y = <u>116593.48</u> (G-4-2)
5. Number of families who have khettara water right	7 (G-5-2) families	9. Histry of discharge 1998: 0.5 litter/sec
6. Number of beneficialies	7 (G-6-2) families	of khettara
7. Cycle of kehttara water right	55 (G-7-1) days	
8.Discharge of khettara (latest)	0.1 (G-8) lit/sec	(I-10)
10. History of khettara water flow	6+7 (I-9)	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The discha	n the dry season in the past five years ra has water flow, but the discharge of khettara is reduced each recent five years. arge of the khettara is constant arge of the khettara is increased
11. Total area of farmland	<u>10</u> ha (IA-1)	12. Irrigated area by the khettara 2ha (IA-3)
13. The condition of roads	1 appropriate (1) G-15) not appropriate (2)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service	2 appropriate (1) G-17) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association	2 Yes (1), (G-21) No (2)	If yes, Name of G-22)
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in	<u>117</u> (E-1-1-1	) <u>1.7</u> (E-1-4-1) <u>0.7</u> (E-1-5-1)
catchment area and conduit	<u>600</u> (E-1-1-2	
Khettara as open channel	<u>390</u> (E-2-1)	0.7 (E-2-2) 0.4 (E-2-3)
Principal and secondary irrigation canal	86 (E-4-2-1 0 (E-4-2-2	
19. Rehabilitation Rehabilitatio khettara	on length of 0 (M-7)	(m) Rehabilitation length of principal 0 (m) irrigation canal (M-8)
20. Influence of desertification		
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	3 (I-2) Irrigation canals 3 (I-7)
21.Demandes of habitants (water	r resources)	Yes (1), No (2)
Rehabilitation of khettar Installing pum Rehabilitation of irrigation cana	пр <mark>2</mark> (G-19-2) Сог	Protection dike against flood 2 (G-19-4) nstruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglice	ultual and social support	
Agriculture (storage,produ	uction, transporttion of proc Rehabilitatio Elec	
(2) Unique source for irrigt (3) Main source for irrigatio	n of potable water and irrigati tion on	ion (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of kho 1 (G-24) Yes (1), No (2) If n	no, the reason	<ul><li>(1)Constrains in landscape</li><li>(2)Prohibited by law</li><li>(3)Existence of other khettaras</li><li>(4)Others</li></ul>

1. Khettara Number A-116 (G-1)	MP	2. Name of commune	Gheriss Soufla (G-2)
, , , , , , , , , , , , , , , , , , ,	gkzen	4. Location of khettara	X = 559124.48 (G-4-1) Y = 116801.48 (G-4-2)
5 Number of families who		9. Histry of discharge	1998: 3.5 litter/sec
6. Number of beneficialies	200 (G-6-2) families	of khettara	
7. Cycle of kehttara water right	16 (G-7-1) days		
8.Discharge of khettara (latest)	4 (G-8) lit/sec	(I-10)	
10. History of khettara water flow	6+7 (I-9)		
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The dischar	n the dry season in the past five ra has water flow, but the discha recent five years. Irge of the khettara is constant Irge of the khettara is increased	arge of khettara is reduced each
11. Total area of farmland	10 ha IA-1)	12. Irrigated area by the	khettara <u>6</u> ha (IA-3)
13. The condition of roads [1 (G-1)	appropriate (1) not appropriate (2)	14.The condition of sch	(G-16) not appropriate (2)
15.Sanitary service 1 (G-1)	appropriate (1) not appropriate (2)	16.Facility of electricity a telecomunication	and 1 appropriate (1) (G-18) not appropriate (2)
17. Existence of Association	1 Yes (1), (G-21) No (2)	If yes, Name of Association	Enakhil (G-22)
18. Situation of khettara	Length (m)	Section hight(m)	n of khettara (average) width (m)
Gallery of khettara (Gallery in	<u>60</u> (E-1-1-1)	) <u>2</u> (E-1-4	
catchment area and conduit	1740 (E-1-1-2)	) <u> </u>	····
Khettara as open channel	<u>132</u> (E-2-1)	<u>0.6</u> (E-2-2	
Principal and secondary irrigation canal	750 (E-4-2-1) 0 (E-4-2-2)		· ·
19. Rehabilitation Rehabilitation le khettara	ngth of 0 (I (M-7)	m) Rehabilitation le irrigation canal	ength of principal 750 (m) (M-8)
20. Influence of desertification	• •		
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khei	<u>3</u> (I-2) Irr	egulation pond <u>3</u> (I-5) rigation canals <u>3</u> (I-7)
21.Demandes of habitants (water res	ources)	Yes (1), No (2)	
Rehabilitation of khettara 1	(G-19-1) (G-19-2) Cor	Protection dil nstruction of public wells for	ke against flood 2 (G-19-4) domestic water 2 (G-19-5)
Installing pump 2 Rehabilitation of irrigation canal 1	(G-19-2) (G-19-3)		Others 2 (G-19-5)
22.Demandes of habitants (Aglicultua	al and social support	t) Yes (1), No (2)	
Agriculture (storage,productio	Rehabilitation	duct , etc.) 2 (G-20-1) n of roads 2 (G-20-2) tric supply 2 (G-20-3)	School         2         (G-20-4)           Sanitary system         2         (G-20-5)           Hospital         2         (G-20-6)           Others         2         (G-20-7)
23. Importance of khettara (1) Unique source for both of p (2) Unique source for irrigtion (3) Main source for irrigation	(G-23)		irrigation
24. Possibility of extension of khettar 1 (G-24) Yes (1), No (2) If no, the	e reason (	(1)Constrains in landscape (2)Prohibited by law	(3)Existence of other khettaras (4)Others

1. Khettara Number A-117 (G-1)	MP		Gheriss Soufla G-2)
3. Name of khettara El Bo (G-3)	utahir		$\begin{array}{c c} X = & 536691.9 & (G-4-1) \\ Y = & 108376.78 & (G-4-2) \end{array}$
5. Number of families who 2 have khettara water right	00 (G-5-2) families	9. Histry of discharge 0 of khettara	
6. Number of beneficialies	00 (G-6-2) families		
7. Cycle of kehttara water right	9 (G-7-1) days		
8.Discharge of khettara (latest)	0 (G-8) lit/sec	(I-10)	
10. History of khettara water flow	3 (I-9)		
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The discha	n the dry season in the past five ye ra has water flow, but the discharg recent five years. rge of the khettara is constant rge of the khettara is increased	
11. Total area of farmland	4 ha A-1)	12. Irrigated area by the kh	nettara <u>4</u> ha (IA-3)
13. The condition of roads [1 (G-1)	appropriate (1) not appropriate (2)	14.The condition of schoo	Is appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 1 (G-1)	appropriate (1) not appropriate (2)	16.Facility of electricity an telecomunication	d 1 appropriate (1) (G-18) not appropriate (2)
17. Existence of Association	1 Yes (1), (G-21) No (2)		nakhil G-22)
18. Situation of khettara	Length (m)	Section c hight(m)	of khettara (average) width (m)
Gallery of khettara (Gallery in catchment area and conduit	0 (E-1-1-1 0 (E-1-1-2	) <u> </u>	) <u> </u>
Khettara as open channel	0 (E-2-1)	0 (E-2-2)	<u> </u>
Principal and secondary irrigation canal	0 (E-4-2-1 0 (E-4-2-2	, , , , , , , , , , , , , , , , , , , ,	/ I
19. Rehabilitation Rehabilitation le khettara	ngth of 0 ( (M-7)	m) Rehabilitation lengitieringation canal	gth of principal 0 (m) (M-8)
20. Influence of desertification			
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	<u>3</u> (I-2) Irriga	ulation pond <u>3</u> (I-5) ation canals <u>3</u> (I-7)
21.Demandes of habitants (water res	ources)	Yes (1), No (2)	
Rehabilitation of khettara 1 Installing pump 1 Rehabilitation of irrigation canal 1	(G-19-1) (G-19-2) Con (G-19-3)	Protection dike nstruction of public wells for do	
22.Demandes of habitants (Aglicultua	al and social support	) Yes (1), No (2)	
Agriculture (storage,productio	Rehabilitatio		School         1         (G-20-4)           Sanitary system         1         (G-20-5)           Hospital         1         (G-20-6)           Others         1         (G-20-7)
23. Importance of khettara 3 (1) Unique source for both of p (2) Unique source for irrigtion (3) Main source for irrigation		on (4) Partial source for irri (5) Supplementary source (6) Neglected	
24. Possibility of extension of khetta 1 Yes (1), No (2) If no, th (G-24)	e reason		3)Existence of other khettaras 4)Others

1. Khettara Number A-118 (G-1)	MP	2. Name of commune	Gheriss Soufla (G-2)
3. Name of khettara Chrif (G-3)		4. Location of khettara	X = 555108.02 (G-4-1) Y = 115965.17 (G-4-2)
5. Number of families who [17] (G-5]	-2) families	9. Histry of discharge	Y = 115965.17 (G-4-2) 1998: 0.5 litter/sec
6. Number of beneficialies 17 (G-6	-2) families	of khettara	
7. Cycle of kehttara water right 11 (G-7	′-1) days		
8.Discharge of khettara (latest) 1 (G-8	) lit/sec	(I-10)	
10. History of khettara water flow 6	(I-9)		
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The dischar	n the dry season in the past five a has water flow, but the dischare recent five years. 'ge of the khettara is constant 'ge of the khettara is increased	arge of khettara is reduced each
11. Total area of farmland [6] (IA-1)	ha	12. Irrigated area by the	khettara 0.5ha (IA-3)
	riate (1) propriate (2)	14.The condition of sch	ools 1 appropriate (1) (G-16) not appropriate (2)
	riate (1) propriate (2)	16.Facility of electricity telecomunication	and 1 appropriate (1) (G-18) not appropriate (2)
17. Existence of Association 1 (G-2	Yes (1), (1) No (2)	If yes, Name of Association	(G-22)
18 Situation of khettara	ength (m)	Section hight(m)	n of khettara (average) width (m)
	50 (E-1-1-1) 92 (E-1-1-2)	) <u>1.5</u> (E-1-4	-1) <u>0.6</u> (E-1-5-1)
+	37 (E-2-1)	0.4 (E-2-2	
Principal and secondary 2 irrigation canal	00 (E-4-2-1) 0 (E-4-2-2)		
19. Rehabilitation Rehabilitation length of khettara	(M-7)		ength of principal 0 (m) (M-8)
20. Influence of desertification	. ,		
(2)Partial damage by desertification Gallery	/ in catchme / of conduit channel khe	<u>3</u> (I-2) Irr	egulation pond <u>3</u> (I-5) rigation canals <u>3</u> (I-7)
21.Demandes of habitants (water resources )		Yes (1), No (2)	
Installing pump $2$ (G	i-19-1) i-19-2) Cor i-19-3)	Protection di nstruction of public wells for	ke against flood 2 (G-19-4) domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual and sc	cial support	) Yes (1), No (2)	
Agriculture (storage,production, transpo	Rehabilitation	luct , etc.) 2 (G-20-1) n of roads 2 (G-20-2) ric supply 2 (G-20-3)	School         2         (G-20-4)           Sanitary system         2         (G-20-5)           Hospital         1         (G-20-6)           Others         2         (G-20-7)
<ul> <li>(1) Unique source for both of potable was</li> <li>(2) Unique source for irrigation</li> <li>(3) Main source for irrigation</li> </ul>	G-23) ter and irrigation	on (4) Partial source for (5) Supplementary so (6) Neglected	
24. Possibility of extension of khettara <u>1</u> Yes (1), No (2) If no, the reason (G-24)		1)Constrains in landscape 2)Prohibited by law	(3)Existence of other khettaras (4)Others

1. Khettara Number A-11 (G-1		2. Name of commune Gheriss Soufla (G-2)
	aj Thami	4. Location of khettara X = <u>554643.73</u> (G-4-1) Y = <u>116051.92</u> (G-4-2)
5. Number of families who have khettara water right	53 (G-5-2) families	9. Histry of discharge 1993: 0.8 litter/sec
6. Number of beneficialies	30 (G-6-2) families	of khettara
7. Cycle of kehttara water right	9 (G-7-1) days	
8.Discharge of khettara (latest)	1.92 (G-8) lit/sec	(I-10)
10. History of khettara water flow	6+7 (I-9)	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The discha	n the dry season in the past five years ra has water flow, but the discharge of khettara is reduced each recent five years. Irge of the khettara is constant Irge of the khettara is increased
11. Total area of farmland	40 ha (IA-1)	12. Irrigated area by the khettara 6ha (IA-3)
13. The condition of roads [1 (G	appropriate (1) not appropriate (2)	14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 (G	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication1 appropriate (1) (G-18)1appropriate (2)
17. Existence of Association	2 Yes (1), (G-21) No (2)	If yes, Name of G-22)
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit	800 (E-1-1-1 0 (E-1-1-2	
Khettara as open channel	<u>171</u> (E-2-1)	0.6 (E-2-2) 0.4 (E-2-3)
Principal and secondary irrigation canal	660 (E-4-2-1 0 (E-4-2-2	
19. Rehabilitation Rehabilitation khettara	length of (M-7)	m) Rehabilitation length of principal 0 (m) irrigation canal (M-8)
20. Influence of desertification		
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	3 (I-2) Irrigation canals 3 (I-7)
21.Demandes of habitants (water	resources)	Yes (1), No (2)
Rehabilitation of khettara Installing pump Rehabilitation of irrigation canal	(G-19-2) Co	Protection dike against flood 2 (G-19-4) nstruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicu	Itual and social support	
Agriculture (storage,produc	Rehabilitatio	
23. Importance of khettara (1) Unique source for both o (2) Unique source for irrigitio (3) Main source for irrigation	on n	ion (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khe 1 (G-24) Yes (1), No (2) If no	, the reason	<ul><li>(1)Constrains in landscape (3)Existence of other khettaras</li><li>(2)Prohibited by law (4)Others</li></ul>

1. Khettara Number A-120 MP (G-1)		2. Name of commur	ne Ghei (G-2	riss Soufla )
		4. Location of khetta	ara X=	554505.17 (G-4-1)
3. Name of khettara (G-3)			αια ×= Y=	115370.47 (G-4-1)
5. Number of families who 50 (G-5-2) f		9. Histry of discharg	je 0	
6. Number of beneficialies 30 (G-6-2) f	families	of khettara		
7. Cycle of kehttara water right 12 (G-7-1)	days			
8.Discharge of khettara (latest) 0 (G-8) lit	t/sec	(1	-10)	
10. History of khettara water flow 4 (	(I-9)			
(2)No water in the last two-decade(6)Th(3)No water in the last decadeye(4)No water in the past five years(7)Th	e khettara ar in the r e discharg	the dry season in the pa a has water flow, but the recent five years. ge of the khettara is cons ge of the khettara is incre	discharge of I	khettara is reduced each
11. Total area of farmland [70] ha (IA-1)		12. Irrigated area by	/ the khetta	ara <u>10</u> ha (IA-3)
13. The condition of roads 1 appropriate (1 (G-15) not appropriate		14.The condition of	schools	1 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 appropriate (1 (G-17) not appropriat		16.Facility of electric telecomunication	icity and	1 appropriate (1) (G-18) not appropriate (2)
	es (1), o (2)	If yes, Name of Association	(G-22	2)
18. Situation of khettara Length	n (m)		ection of kh ht(m)	nettara (average) width (m)
Gallery of khettara (Gallery in 100 (E	-1-1-1)	1.7 (E	-1-4-1)	1 (E-1-5-1)
	E-1-1-2)		-1-4-2)	1 (E-1-5-2)
Khettara as open channel 400 (E			-2-2)	0.5 (E-2-3)
Principal and secondary 300 (E	E-4-2-1)	0.3 (E	-4-3-1)	0.4 (E-4-1-1)
irrigation canal (E	E-4-2-2)	<u> </u>	E-4-3-2)	0 (E-4-1-2)
19. Rehabilitation Rehabilitation length of	0 (n -7)	n) Rehabilitat irrigation ca	-	of principal 0 (m) (M-8)
20. Influence of desertification				
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification (3)Negligible damage by desertification	onduit	<u>3</u> (I-2)	-	ion pond (I-5) n canals (I-7)
21.Demandes of habitants (water resources )	lei kilet	tara <u>1</u> (I-3) Yes (1), No (2)		
Rehabilitation of khettara 1 (G-19-1	)	Protecti	on dike agai	inst flood 2 (G-19-4)
Installing pump 2 (G-19-2 Rehabilitation of irrigation canal 1 (G-19-3	) Con	struction of public wel		
22.Demandes of habitants (Aglicultual and social s	support)	Yes (1), No (2)		
Agriculture (storage,production, transporttion Reha	abilitation	uct , etc.) 2 (G-20 o of roads 2 (G-20 ric supply 2 (G-20	)-2)	School         2         (G-20-4)           ary system         2         (G-20-5)           Hospital         1         (G-20-6)           Others         2         (G-20-7)
23. Importance of khettara 3 (G-23 (1) Unique source for both of potable water and (2) Unique source for irrigition (3) Main source for irrigation	,	on (4) Partial sourc (5) Supplementa (6) Neglected		on
24. Possibility of extension of khettara 1 Yes (1), No (2) If no, the reason (G-24) (G-2		1)Constrains in landsc 2)Prohibited by law	ape (3)Ex (4)Ot	istence of other khettaras hers

1. Khettara Number A-121 (G-1)	MP	2. Name of commune Gheriss Soufla (G-2)
3. Name of khettara	issania	4. Location of khettara $X = 555406.17$ (G-4-1)
(G-3)		Y = 115899.08 (G-4-2)
5. Number of families who families who	600 (G-5-2) families	9. Histry of discharge 2003 juillet: 5 litter/sec
6. Number of beneficialies	30 (G-6-2) families	of khettara
7. Cycle of kehttara water right	20 (G-7-1) days	
8.Discharge of khettara (latest)	6 (G-8) lit/sec	(I-10)
10. History of khettara water flow	7 (I-9)	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The discha	n the dry season in the past five years a has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased
11. Total area of farmland	300 ha IA-1)	12. Irrigated area by the khettara 300 ha (IA-3)
13. The condition of roads [] (G-1	appropriate (1)	14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 1 (G-1	appropriate (1) 7) not appropriate (2)	16.Facility of electricity and telecomunication1 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association	1 Yes (1), (G-21) No (2)	If yes, Name of G-22
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit	1650 (E-1-1-1) 100 (E-1-1-2)	) <u>1.5</u> (E-1-4-1) <u>1</u> (E-1-5-1)
Khettara as open channel	0 (E-2-1)	0.4 (E-2-2) 0.25 (E-2-3)
Principal and secondary irrigation canal	1185 (E-4-2-1 0 (E-4-2-2	
19. Rehabilitation Rehabilitation le khettara	ength of 0 ( (M-7)	m) Rehabilitation length of principal 200 (m) irrigation canal (M-8)
20. Influence of desertification		
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	3 (I-2) Irrigation canals 3 (I-7)
21.Demandes of habitants (water res	sources)	Yes (1), No (2)
Rehabilitation of khettara 1 Installing pump 2 Rehabilitation of irrigation canal 2	(G-19-2) Cor	Protection dike against flood 2 (G-19-4) nstruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
		2
22.Demandes of habitants (Aglicultu	ai and social support	) Yes (1), No (2) School 2 (G-20-4)
Agriculture (storage,productio	Rehabilitation	duct, etc.) 2 (G-20-1) Sanitary system 2 (G-20-5)
23. Importance of khettara (1) Unique source for both of p (2) Unique source for irrigition (3) Main source for irrigation	(G-23) potable water and irrigation	
24. Possibility of extension of khetta 11 Yes (1), No (2) If no, th (G-24)	ne reason	(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others

1. Khettara Number A-122 - (G-1)	2. Name of commune Gheriss Soufla (G-2)
3. Name of khettara Boukharia	4. Location of khettara X = <u>555775.68</u> (G-4-1)
(G-3)	Y = 116267.68 (G-4-2)
5. Number of families who 30 (G-5-2) families have khettara water right	9. Histry of discharge
6. Number of beneficialies 160 (G-6-2) families	of khettara
7. Cycle of kehttara water right 9 (G-7-1) days	
8.Discharge of khettara (latest) 0 (G-8) lit/sec	(I-10)
10. History of khettara water flow (I-9)	· ·
(2)No water in the last two-decade(6)The khet(3)No water in the last decadeyear in the(4)No water in the past five years(7)The disc	r in the dry season in the past five years tara has water flow, but the discharge of khettara is reduced each he recent five years. harge of the khettara is constant harge of the khettara is increased
11. Total area of farmland [4] ha (IA-1)	12. Irrigated area by the khettara 0.5 ha (IA-3)
13. The condition of roads (G-15) appropriate (1) not appropriate (2)	14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 1 appropriate (1) (G-17) not appropriate (2)	16.Facility of electricity and telecomunication1 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association Yes (1) (G-21) No (2)	If yes, Name of G-22
18. Situation of khettara Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit     200 (E-1-1)	
catchment area and conduit     200 (E-1-1)       Khettara as open channel     200 (E-2-1)	
Principal and secondary 47 (E-4-2	
irrigation canal 0 (E-4-2	
19. Rehabilitation Rehabilitation length of [ khettara (M-7)	(m) Rehabilitation length of principal (m) irrigation canal (M-8)
20. Influence of desertification	
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification Open channel kł	it (I-2) Irrigation canals (I-7)
21.Demandes of habitants (water resources)	Yes (1), No (2)
Rehabilitation of khettara 1 (G-19-1)	Protection dike against flood 2 (G-19-4)
Installing pump 2 (G-19-2) C Rehabilitation of irrigation canal 1 (G-19-3)	Construction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual and social suppo	
Agriculture (storage,production, transporttion of pr	
	tion of roads 2 (G-20-2) Hospital 1 (G-20-6) ectric supply 2 (G-20-3) Others 2 (G-20-7)
23. Importance of khettara (G-23) (1) Unique source for both of potable water and irriga (2) Unique source for irrigation (3) Main source for irrigation	ation (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettara Yes (1), No (2) If no, the reason	(1)Constrains in landscape (3)Existence of other khettaras
(G-24) (G-25)	(2)Prohibited by law (4)Others

1. Khettara Number A-123 - (G-1)	2. Name of commune Gheriss Soufla (G-2)
3. Name of khettara Rjal (G-3)	4. Location of khettara $X = 557088.99$ (G-4-1) Y = 116555.45 (G-4-2)
5 Number of families who	<sup>ilies</sup> 9. Histry of discharge 0
6. Number of beneficialies 350 (G-6-2) fam	of khettara
7. Cycle of kehttara water right 30 (G-7-1) da	iys
8.Discharge of khettara (latest) 0 (G-8) lit/s	sec (I-10)
10. History of khettara water flow 3 (I-	9)
(2)No water in the last two-decade(6)The last(3)No water in the last decadeyear(4)No water in the past five years(7)The control	vater in the dry season in the past five years chettara has water flow, but the discharge of khettara is reduced each in the recent five years. discharge of the khettara is constant discharge of the khettara is increased
11. Total area of farmland [100 ha (IA-1)	12. Irrigated area by the khettara 0.5ha (IA-3)
13. The condition of roads (G-15) appropriate (1) not appropriate (1)	(2) 14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 1 appropriate (1) (G-17) not appropriate	(2) 16.Facility of electricity and telecomunication (G-18) not appropriate (1) (G-18) not appropriate (2)
17. Existence of Association Yes (G-21) No	
18. Situation of khettara Length (	m) Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit       160 (E-1         240 (E-1	I-1-1) <u>1.2</u> (E-1-4-1) <u>1</u> (E-1-5-1)
Khettara as open channel 100 (E-2	
Principal and secondary 1200 (E-4 irrigation canal 0 (E-4	
19. Rehabilitation Rehabilitation length of khettara (M-7)	(m) Rehabilitation length of principal (m)
20. Influence of desertification	
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification Open channe	nduit (I-2) Irrigation canals (I-7)
21.Demandes of habitants (water resources )	Yes (1), No (2)
Rehabilitation of khettara 1 (G-19-1) Installing pump 2 (G-19-2) Rehabilitation of irrigation canal 1 (G-19-3)	Protection dike against flood 2 (G-19-4) Construction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual and social su	oport) Yes (1), No (2)
Agriculture (storage,production, transporttion of	School 2 (G-20-4)
23. Importance of khettara (G-23) (1) Unique source for both of potable water and in (2) Unique source for irrigition (3) Main source for irrigation	
24. Possibility of extension of khettara Yes (1), No (2) If no, the reason (G-25) (G-24)	(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others

1. Khettara Number A-124 - (G-1)	2. Name of commune Gheriss Soufla (G-2)
	4. Location of khettara X = 548965.51 (G-4-1)
(G-3)	Y = 117112.31 (G-4-2)
5. Number of families who 65 (G-5-2) fa	families 9. Histry of discharge 0
6. Number of beneficialies 65 (G-6-2) <sup>fa</sup>	families of khettara
7. Cycle of kehttara water right [] 8 (G-7-1)	days
8.Discharge of khettara (latest) 0 (G-8) lit/	t/sec (I-10)
10. History of khettara water flow 3 (I-	(I-9)
(2)No water in the last two-decade(6)The(3)No water in the last decadeyea(4)No water in the past five years(7)The	o water in the dry season in the past five years he khettara has water flow, but the discharge of khettara is reduced each ear in the recent five years. he discharge of the khettara is constant he discharge of the khettara is increased
11. Total area of farmland [IA-1]	12. Irrigated area by the khettara [0]ha (IA-3)
13. The condition of roads [1] appropriate (1) (G-15) not appropriate	
15.Sanitary service 2 appropriate (1) (G-17) not appropriate	
	es (1), If yes, Name of o (2) Association (G-22)
18. Situation of khettara Length	n (m) Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit76 (E- 2200 (E-	E-1-1-1) 2 (E-1-4-1) 1 (E-1-5-1) E-1-1-2) 2 (E-1-4-2) 1 (E-1-5-2)
Khettara as open channel 380 (E-	
Principal and secondary 300 (E- irrigation canal	
	E-4-2-2) 0 (E-4-3-2) 0 (E-4-1-2)
19. Rehabilitation Rehabilitation length of khettara (M-7	(m)Rehabilitation length of principal(m)-7)irrigation canal(M-8)
20. Influence of desertification	
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification Open channe	
21.Demandes of habitants (water resources)	Yes (1), No (2)
Rehabilitation of khettara 1 (G-19-1)	
Installing pump 2 (G-19-2) Rehabilitation of irrigation canal 1 (G-19-3)	· · · · · · · · · · · · · · · · · · ·
22.Demandes of habitants (Aglicultual and social su	
Agriculture (storage,production, transporttion o Rehab	abilitation of roads 2 (G-20-2) Hospital 2 (G-20-6
23. Importance of khettara (G-23) (1) Unique source for both of potable water and (2) Unique source for irrigition (3) Main source for irrigation	
24. Possibility of extension of khettara	
G-24) Yes (1), No (2) If no, the reason (G-25) (G-24)	(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others

1. Khettara Number A-125 (G-1)	-	2. Name of commune Gheriss Soufla (G-2)		
3. Name of khettara My Hach (G-3)	em	4. Location of khettara X = 548888.69 Y = 115978.71	· /	
5. Number of families who 1 have khettara water right	(G-5-2) families	9. Histry of discharge 0		
6. Number of beneficialies 1	(G-6-2) families	of khettara		
7. Cycle of kehttara water right 0	(G-7-1) days			
8.Discharge of khettara (latest)	(G-8) lit/sec	(I-10)		
10. History of khettara water flow 3	(I-9)			
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The dischar	n the dry season in the past five years a has water flow, but the discharge of khettara is reduced recent five years. rge of the khettara is constant rge of the khettara is increased	d each	
11. Total area of farmland [IA-	80 ha 1)	12. Irrigated area by the khettara (IA-3)	Oha	
	appropriate (1) not appropriate (2)	14.The condition of schools 1 appropria (G-16) not appro	ate (1) opriate (2)	
	appropriate (1) not appropriate (2)	16.Facility of electricity and 2 appropriatelecomunication (G-18)	ate (1) opriate (2)	
17. Existence of Association	2 Yes (1), (G-21) No (2)	If yes, Name of G-22		
18. Situation of khettara	Length (m)	Section of khettara (averag hight(m) width		
Gallery of khettara (Gallery in	0 (E-1-1-1)		-1-5-1)	
catchment area and conduit	0 (E-1-1-2)	) 0 (E-1-4-2) 0 (E-	-1-5-2)	
Khettara as open channel	0 (E-2-1)	0 (E-2-2) 0 (E-	-2-3)	
Principal and secondary	0 (E-4-2-1) 0 (E-4-2-2)		-4-1-1) -4-1-2)	
19. Rehabilitation Rehabilitation lengt khettara	h of 0 (M-7)		0 (m) (M-8)	
20. Influence of desertification	. ,			
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification	allery in catchme Sallery of conduit Open channel khe	(I-2) Irrigation canals	(I-5) (I-7)	
21.Demandes of habitants (water resour	rces)	Yes (1), No (2)		
Rehabilitation of khettara 2 Installing pump 2 Rehabilitation of irrigation canal 2	(G-19-1) (G-19-2) Cor (G-19-3)	Protection dike against flood 2 nstruction of public wells for domestic water 2 Others 2	(G-19-4) (G-19-5) (G-19-6)	
22.Demandes of habitants (Aglicultual and social support) Yes (1), No (2)				
Agriculture (storage,production, transporttion of product , etc.)       School       2       (G-20-4)         Rehabilitation of roads       (G-20-2)       Hospital       2       (G-20-6)         Electric supply       2       (G-20-7)       Others       2       (G-20-7)				
23. Importance of khettara (1) Unique source for both of potal (2) Unique source for irrigtion (3) Main source for irrigation	(G-23) (G			
24. Possibility of extension of khettara Yes (1), No (2) If no, the re (G-24)		(1)Constrains in landscape (3)Existence of other (2)Prohibited by law (4)Others	khettaras	

		T		
	126 -1)	MP	2. Name of commune	Aghbalou N'kerdous (G-2)
3. Name of khettara	ý Dultamayous G-3)		4. Location of khettara	X = 506281.77 (G-4-1) Y = 116851.75 (G-4-2)
5. Number of families who have khettara water right	56 (G-8	5-2) <sup>families</sup>	9. Histry of discharge	0
6. Number of beneficialies	56 (G-6	6-2) families	of khettara	
7. Cycle of kehttara water right	9 (G-7	7-1) days		
8.Discharge of khettara (latest)	3 (G-8	3) lit/sec	(I-10)	
10. History of khettara water flow	v 6+7	(I-9)		
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>		(6)The khettar year in the (7)The discha	n the dry season in the past five ra has water flow, but the discha recent five years. rge of the khettara is constant rge of the khettara is increased	arge of khettara is reduced each
11. Total area of farmland	5 (IA-1)	ha	12. Irrigated area by the	khettara <u>5</u> ha (IA-3)
13. The condition of roads		priate (1) propriate (2)	14.The condition of sch	ools 2 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service		priate (1) propriate (2)	16.Facility of electricity a telecomunication	and 1 appropriate (1) (G-18) not appropriate (2)
17. Existence of Association	2 (G-2	Yes (1), 21) No (2)	If yes, Name of Association	(G-22)
18. Situation of khettara	Ì	.ength (m)	Sectior hight(m)	n of khettara (average) width (m)
Gallery of khettara (Gallery in catchment area and conduit		46 (E-1-1-1 19 (E-1-1-2	) <u>1.8</u> (E-1-4	-1) <u>0.9</u> (E-1-5-1)
Khettara as open channel		2.5 (E-2-1)	0.9 (E-2-2	·····
Principal and secondary irrigation canal	6	60 (E-4-2-1 0 (E-4-2-2		
19. Rehabilitation Rehabilitation khettara	on length of	19 ( (M-7)	m) Rehabilitation le irrigation canal	ength of principal 322 (m) (M-8)
20. Influence of desertification				
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Galler	y in catchme y of conduit channel khe	<u>3</u> (I-2) Irr	egulation pond <u>3</u> (I-5) igation canals <u>3</u> (I-7)
21.Demandes of habitants (wate	er resources )	)	Yes (1), No (2)	
Rehabilitation of khetta Installing pur Rehabilitation of irrigation car	np 2 (0	6-19-1) 6-19-2) Col 6-19-3)	Protection dil nstruction of public wells for	ke against flood (G-19-4) domestic water (G-19-5) Others (G-19-6)
22.Demandes of habitants (Aglio	cultual and so	ocial support	) Yes (1), No (2)	
Agriculture (storage,proc	luction, transp	Rehabilitatio		School         1         (G-20-4)           Sanitary system         (G-20-5)           Hospital         1         (G-20-6)           Others         (G-20-7)
(1) Unique source for bot (2) Unique source for irrig (3) Main source for irrigat	h of potable wa gtion ion	(G-23) ter and irrigati	on (4) Partial source for (5) Supplementary so (6) Neglected	
24. Possibility of extension of kł 1 (G-24) Yes (1), No (2) If	nettara no, the reason		(1)Constrains in landscape (2)Prohibited by law	(3)Existence of other khettaras (4)Others

	T	
1. Khettara Number A-127 (G-1)	MP	2. Name of commune Aghbalou N'kerdous (G-2)
3. Name of khettara Tourtii (G-3)	e	4. Location of khettara $X = 498081.77$ (G-4-1) Y = 116988.54 (G-4-2)
5. Number of families who	86 (G-5-2) families	9. Histry of discharge 1998: 8 litter/sec
nave knettara water right	/	of khettara
	86 (G-6-2) Tainines	
	12 (G-7-1) days	
8.Discharge of khettara (latest)	6 (G-8) lit/sec	(I-10)
10. History of khettara water flow	6+7 (I-9)	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The dischar	n the dry season in the past five years ra has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased
11. Total area of farmland [	<u>36</u> ha A-1)	12. Irrigated area by the khettara [17]ha (IA-3)
13. The condition of roads 2 (G-15	appropriate (1) not appropriate (2)	14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 (G-17	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication2 appropriate (1) (G-18)appropriate (1) (C-18)
17. Existence of Association	2 Yes (1), (G-21) No (2)	If yes, Name of G-22
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in	<u>64</u> (E-1-1-1)	· · · · · · · · · · · · · · · · · · ·
catchment area and conduit	<u>32</u> (E-1-1-2)	) <u>1.5</u> (E-1-4-2) <u>0.6</u> (E-1-5-2)
Khettara as open channel	775 (E-2-1)	0.15 (E-2-2) 0.3 (E-2-3)
Principal and secondary	1200 (E-4-2-1)	) 0.4 (E-4-3-1) 0.4 (E-4-1-1)
irrigation canal	0 (E-4-2-2)	) 0 (E-4-3-2) 0 (E-4-1-2)
19. Rehabilitation Rehabilitation ler khettara	ngth of 32 (I (M-7)	m) Rehabilitation length of principal 1375 (m) irrigation canal (M-8)
20. Influence of desertification		
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	3 (I-2) Irrigation canals 3 (I-7)
21.Demandes of habitants (water res	ources)	Yes (1), No (2)
Rehabilitation of khettara 1	(G-19-1)	Protection dike against flood 2 (G-19-4)
Installing pump 2 Rehabilitation of irrigation canal 2	(G-19-2) Cor (G-19-3)	nstruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultua	I and social support	
Agriculture (storage,productior	Rehabilitation	School         1         (G-20-4)           duct , etc.)         2         (G-20-1)         Sanitary system         2         (G-20-5)           n of roads         1         (G-20-2)         Hospital         1         (G-20-6)           tric supply         2         (G-20-3)         Others         2         (G-20-7)
23. Importance of khettara (1) Unique source for both of pr (2) Unique source for irrigtion (3) Main source for irrigation		
24. Possibility of extension of khettar 1 (G-24) Yes (1), No (2) If no, the	e reason 1 (	(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others

1. Khettara Number A-128 MP	2. Name of commune Aghbalou N'kerdous			
(G-1)	(G-2)			
3. Name of khettara Taldounte (G-3)	4. Location of khettara $X = 506834.09$ (G-4-1) Y = 110698.24 (G-4-2)			
5. Number of families who 34 (G-5-2) families	9. Histry of discharge 1998: 2.1 litter/sec			
6. Number of beneficialies 14 (G-6-2) families	of khettara			
7. Cycle of kehttara water right 14 (G-7-1) days				
8.Discharge of khettara (latest) 4 (G-8) lit/sec	(I-10)			
10. History of khettara water flow7(I-9)				
(2)No water in the last two-decade(6)The khetta(3)No water in the last decadeyear in the(4)No water in the past five years(7)The discha	in the dry season in the past five years ara has water flow, but the discharge of khettara is reduced each e recent five years. arge of the khettara is constant arge of the khettara is increased			
11. Total area of farmland [10] ha (IA-1)	12. Irrigated area by the khettara [10]ha (IA-3)			
13. The condition of roads 2 appropriate (1) (G-15) not appropriate (2)	14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)			
15.Sanitary service 2 appropriate (1) (G-17) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)			
17. Existence of Association 2 Yes (1), (G-21) No (2)	If yes, Name of G-22			
18. Situation of khettara Length (m)	Section of khettara (average) hight(m) width (m)			
Gallery of khettara (Gallery in catchment area and conduit240 (E-1-1-1) 162 (E-1-1-2)	) <u>1.75</u> (E-1-4-1) <u>0.6</u> (E-1-5-1)			
Khettara as open channel [112] (E-2-1)	0.8 (E-2-2) 0.6 (E-2-3)			
Principal and secondary1200 (E-4-2-2)irrigation canal0 (E-4-2-2)	, <u> </u>			
19. Rehabilitation Rehabilitation length of 0 khettara (M-7)	(m) Rehabilitation length of principal 400 (m) irrigation canal (M-8)			
20. Influence of desertification				
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertificationGallery in catching Gallery of conduit Open channel khe	3 (I-2) Irrigation canals 3 (I-7)			
21.Demandes of habitants (water resources)	Yes (1), No (2)			
Rehabilitation of khettara1(G-19-1)Protection dike against flood2(G-19-4)Installing pump2(G-19-2)Construction of public wells for domestic water1(G-19-5)Rehabilitation of irrigation canal1(G-19-3)Others2				
22.Demandes of habitants (Aglicultual and social support) Yes (1), No (2)				
Agriculture (storage,production, transporttion of product , etc.)Content (G-20-1)SchoolContent (G-20-4)Rehabilitation of roads1(G-20-2)(G-20-2)(G-20-5)Electric supply1(G-20-3)Others2(G-20-7)1(G-20-3)(G-20-7)				
23. Importance of khettara       1       (G-23)         (1) Unique source for both of potable water and irrigation       (4) Partial source for irrigation         (2) Unique source for irrigation       (5) Supplementary source for irrigation         (3) Main source for irrigation       (6) Neglected				
24. Possibility of extension of khettara           1         Yes (1), No (2)         If no, the reason         (G-25)	(1)Constrains in landscape(3)Existence of other khettaras(2)Prohibited by law(4)Others			

		_						
1. Khettara Number	A-129 (G-1)	MP		2. Name	e of commune	e Agh (G-2	ibalou N'kerdo 2)	us
	· ,					,	,	
3. Name of khettara	Imider (G-3)	Drain		4. Locat	tion of khetta	ra X= Y=		. ,
5. Number of families who have khettara water right	20	0 (G-5-2)	families	-	of discharge	e 2005	i juillet: 23 L/sec	
6. Number of beneficialies	20	0 (G-6-2)	families	of khetta	ara			
7. Cycle of kehttara water r	ght	0 (G-7-1)	days					
8.Discharge of khettara (lat	est) 2	3 (G-8)	lit/sec		(I-	10)		
10. History of khettara wate	er flow 6		(I-9)					
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	9	(6)	The khetta year in the The discha	ra has wate recent five rge of the		lischarge of tant	i khettara is reduce	∋d each
11. Total area of farmland	(IA	70 ha -1)		12. Irrig	ated area by	the khett	ara (IA-3)	0 ha
13. The condition of roads	1 (G-15)	appropriate not appropr			condition of		2 appropr (G-16) not app	iate (1) ropriate (2)
15.Sanitary service	1 (G-17)	appropriate not appropr			ility of electric nunication	city and		riate (1) propriate (2)
17. Existence of Association	n		Yes (1), No (2)	If yes, I Associa	Name of ation	(G-2	2)	
18. Situation of khettara		Leng	gth (m)		See hight		hettara (avera widt	ge) h (m)
Gallery of khettara (Gallery	/ in	20	(E-1-1-1	)	1.8 (E-			E-1-5-1)
catchment area and condu			(E-1-1-2	<i>,</i>	1.7 (E-	,	· · · · · · · · · · · · · · · · · · ·	E-1-5-2)
Khettara as open channel			(E-2-1)	,	1 (E-		0.6 (E	
Principal and secondary irrigation canal			(E-4-2-1 (E-4-2-2			-4-3-1) -4-3-2)		E-4-1-1) E-4-1-2)
19. Rehabilitation Rehab khettar	ilitation lenç		20 ( M-7)	(m)	Rehabilitatio		of principal	2100 (m) (M-8)
20. Influence of desertification	tion		,				-	
(1)Significant damage by desertific		Gallery in	catchme	ent area	3 (I-1)	Regula	tion pond	<u>3</u> (I-5)
(2)Partial damage by desertificatio (3)Negligible damage by desertific	n	Gallery of Open cha		ettara	3 (I-2) 3 (I-3)	Irrigatio	on canals	3 (I-7)
21.Demandes of habitants	(water reso				(1), No (2)			
Rehabilitation of I	chettara 1	(G-19	-1)		Protectio	n dike ada	ainst flood 2	(G-19-4)
	g pump 2	(G-19) (G-19)	-2) Co	nstruction	of public wells			(G-19-5) (G-19-6)
22.Demandes of habitants	(Aglicultual	and socia	l support	t) Yes	(1), No (2)			
School 2 (G-20-4)								
Agriculture (Storage	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		habilitatio		s 1 (G-20-	-2)	itary system 2 Hospital 2 Others 2	(G-20-5) (G-20-6) (G-20-7)
23. Importance of khettara	1	(G-2	23)					
(1) Unique source fr (2) Unique source fr (3) Main source for	or both of pot or irrigtion	•	,	(5	) Partial source ) Supplementar ) Neglected			
24. Possibility of extension	of khettara							
1 (G-24) Yes (1), No (2)	If no, the	reason			ains in landsca ited by law		xistence of othe others	r khettaras

1. Khettara Number A-130 (G-1)	MP	2. Name of commune Aghbalou N'kerdous (G-2)
3. Name of khettara [guerg	uit	4. Location of khettara $X = 505381.54$ (G-4-1) Y = 119983.55 (G-4-2)
E Number of femilies who	19 (G-5-2) families	9. Histry of discharge 1998: 4 litter/sec
-	21 (G-6-2) families	of khettara
	12 (G-7-1) days	
8.Discharge of khettara (latest)	8.5 (G-8) lit/sec	(I-10)
10. History of khettara water flow	(I-9)	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The dischar	n the dry season in the past five years ra has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased
11. Total area of farmland	6 ha A-1)	12. Irrigated area by the khettara 4ha (IA-3)
13. The condition of roads 2 (G-15	appropriate (1) not appropriate (2)	14.The condition of schools G-16 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 (G-17	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication2 appropriate (1) (G-18)appropriate (1) (C-18)
17. Existence of Association	2 Yes (1), (G-21) No (2)	If yes, Name of G-22
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit	35 (E-1-1-1) 110 (E-1-1-2)	) <u>3</u> (E-1-4-1) <u>0.5</u> (E-1-5-1)
Khettara as open channel	<u>11</u> (E-2-1)	1.3 (E-2-2) 0.4 (E-2-3)
Principal and secondary irrigation canal	6 (E-4-2-1) 800 (E-4-2-2)	
19. Rehabilitation Rehabilitation ler khettara	gth of 145 ( (M-7)	m) Rehabilitation length of principal 11 (m) irrigation canal (M-8)
20. Influence of desertification		
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	3 (I-2) Irrigation canals 3 (I-7)
21.Demandes of habitants (water res	ources)	Yes (1), No (2)
Rehabilitation of khettara 1 Installing pump 2 Rehabilitation of irrigation canal 2	(G-19-1) (G-19-2) Cor (G-19-3)	Protection dike against flood 2 (G-19-4) nstruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultua	I and social support	) Yes (1), No (2)
Agriculture (storage,production	, transporttion of proc Rehabilitation	School <u>2</u> (G-20-4) duct , etc.) <u>2</u> (G-20-1) Sanitary system <u>2</u> (G-20-5)
23. Importance of khettara 3 (1) Unique source for both of po (2) Unique source for irrigtion (3) Main source for irrigation		on (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettar 1 Yes (1), No (2) If no, the (G-24)	e reason 2	(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others

1. Khettara Number A-131 (G-1)	MP	2. Name of commune Aghbalou N'kerdous (G-2)		
3. Name of khettara Taouri (G-3)	rte	4. Location of khettara $X = 501794.5$ (G-4-1) Y = 116360.2 (G-4-2)		
E Number of femilies who	25 (G-5-2) families	9. Histry of discharge 1998: 2 litter/sec		
_	25 (G-6-2) families	of khettara		
	16 (G-7-1) days			
8.Discharge of khettara (latest)	0.5 (G-8) lit/sec	(I-10)		
10. History of khettara water flow 7	(1-9)			
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The discha	n the dry season in the past five years a has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased		
11. Total area of farmland	<u>12</u> ha A-1)	12. Irrigated area by the khettara [2]ha (IA-3)		
13. The condition of roads 2 (G-15)	appropriate (1) not appropriate (2)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)		
15.Sanitary service 2 (G-17	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication1 appropriate (1) (G-18)1 ont appropriate (2)		
17. Existence of Association	2 Yes (1), (G-21) No (2)	If yes, Name of G-22		
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)		
Gallery of khettara (Gallery in catchment area and conduit	120 (E-1-1-1) 84 (E-1-1-2)	) <u>2</u> (E-1-4-1) <u>0.6</u> (E-1-5-1)		
Khettara as open channel	85 (E-2-1)	0.55 (E-2-2) 0.3 (E-2-3)		
Principal and secondary irrigation canal	250 (E-4-2-1 0 (E-4-2-2			
19. Rehabilitation Rehabilitation ler khettara	gth of 204 ( (M-7)	m) Rehabilitation length of principal 85 (m) irrigation canal (M-8)		
20. Influence of desertification				
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	(I-2) Irrigation canals 3 (I-7)		
21.Demandes of habitants (water reso	ources)	Yes (1), No (2)		
Rehabilitation of khettara 1 Installing pump 2 Rehabilitation of irrigation canal 1	(G-19-1) (G-19-2) Cor (G-19-3)	Protection dike against flood 2 (G-19-4) nstruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)		
22.Demandes of habitants (Aglicultual and social support) Yes (1), No (2)				
Agriculture (storage,production	Rehabilitation	School         1         (G-20-4)           Juct , etc.)         2         (G-20-1)         Sanitary system         2         (G-20-5)           n of roads         1         (G-20-2)         Hospital         1         (G-20-6)           tric supply         2         (G-20-3)         Others         2         (G-20-7)		
23. Importance of khettara 3 (1) Unique source for both of po (2) Unique source for irrigtion (3) Main source for irrigation		on (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected		
24. Possibility of extension of khettar 1 Yes (1), No (2) If no, the (G-24)	e reason 2	(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others		

1. Khettara Number A-132 (G-1)	MP	2. Name of commune Aghbalou N'kerdous (G-2)		
3. Name of khettara	1	4. Location of khettara $X = 501345.55$ (G-4-1) Y = 123591.87 (G-4-2)		
E Number of femilies who	13 (G-5-2) families	9. Histry of discharge 1997: 1.5 litter/sec		
_	13 (G-6-2) families	of khettara		
	12 (G-7-1) days			
	0.1 (G-8) lit/sec	(I-10)		
10. History of khettara water flow 6	+7 (I-9)			
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The discha	n the dry season in the past five years a has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased		
11. Total area of farmland	4 ha A-1)	12. Irrigated area by the khettara [4]ha (IA-3)		
13. The condition of roads 2 (G-15	appropriate (1) not appropriate (2)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)		
15.Sanitary service 2 (G-17	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)		
17. Existence of Association	2 Yes (1), (G-21) No (2)	If yes, Name of G-22		
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)		
Gallery of khettara (Gallery in catchment area and conduit	6 (E-1-1-1) 34.5 (E-1-1-2)	) <u>3.5</u> (E-1-4-1) <u>0.3</u> (E-1-5-1)		
Khettara as open channel	<u>16.5</u> (E-2-1)	0.15 (E-2-2) 0.3 (E-2-3)		
Principal and secondary irrigation canal	160 (E-4-2-1 0 (E-4-2-2			
19. Rehabilitation Rehabilitation ler khettara	gth of 0 ( (M-7)	m) Rehabilitation length of principal 0 (m) irrigation canal (M-8)		
20. Influence of desertification				
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	3 (I-2) Irrigation canals 3 (I-7)		
21.Demandes of habitants (water reso	ources)	Yes (1), No (2)		
Rehabilitation of khettara 1 Installing pump 1 Rehabilitation of irrigation canal 1	(G-19-1) (G-19-2) Cor (G-19-3)	Protection dike against flood 2 (G-19-4) nstruction of public wells for domestic water 1 (G-19-5) Others 2 (G-19-6)		
22.Demandes of habitants (Aglicultual and social support) Yes (1), No (2)				
Agriculture (storage,production	Rehabilitation	School         2         (G-20-4)           duct , etc.)         2         (G-20-1)         Sanitary system         2         (G-20-5)           n of roads         1         (G-20-2)         Hospital         1         (G-20-6)           tric supply         1         (G-20-3)         Others         2         (G-20-7)		
23. Importance of khettara 1 (1) Unique source for both of po (2) Unique source for irrigtion (3) Main source for irrigation		on (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected		
24. Possibility of extension of khettar 1 Yes (1), No (2) If no, the (G-24)	e reason 2	(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others		

1. Khettara Number A-133 - (G-1)		2. Name of commune Ferkla Oulia (G-2)
3. Name of khettara El Ghaba (G-3)		4. Location of khettara $X = 538111.14$ (G-4-1) Y = 101414.89 (G-4-2)
5. Number of families who 200 (G-5-2	2) families	9. Histry of discharge 0
6. Number of beneficialies 250 (G-6-2	2) families	of khettara
7. Cycle of kehttara water right 15 (G-7-1	l) days	
8.Discharge of khettara (latest) 0 (G-8)	lit/sec	(I-10)
10. History of khettara water flow 1	(I-9)	
(2)No water in the last two-decade (1 (3)No water in the last decade (4)No water in the past five years (1)	6)The khettar year in the 7)The discha	n the dry season in the past five years a has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased
11. Total area of farmland [80] ha	3	12. Irrigated area by the khettara [5]ha (IA-3)
13. The condition of roads [1] appropria (G-15) not appro-		14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 1 appropria (G-17) not appro-		16.Facility of electricity and telecomunication1 appropriate (1) (G-18)appropriate (1) (1) not appropriate (2)
17. Existence of Association (G-21	Yes (1), ) No (2)	If yes, Name of G-22)
18 Situation of khettara	ngth (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in 750	) (E-1-1-1)	
catchment area and conduit600	) (E-1-1-2	) <u>1.7</u> (E-1-4-2) <u>0.5</u> (E-1-5-2)
Khettara as open channel 250	) (E-2-1)	1 (E-2-2) 0.5 (E-2-3)
	) (E-4-2-1 ) (E-4-2-2	
19. Rehabilitation Rehabilitation length of		m) Rehabilitation length of principal (m)
khettara	(M-7)	irrigation canal (M-8)
20. Influence of desertification		
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification	n catchme of conduit nannel khe	(I-2) Irrigation canals 3 (I-7)
21.Demandes of habitants (water resources)		Yes (1), No (2)
	9-1)	Protection dike against flood 2 (G-19-4)
	19-2) Cor 19-3)	nstruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual and soc	ial support	) Yes (1), No (2) School 2 (G-20-4)
Agriculture (storage,production, transport R	Rehabilitatio	duct , etc.)         2         (G-20-1)         Sanitary system         1         (G-20-5)           n of roads         2         (G-20-2)         Hospital         2         (G-20-6)           tric supply         2         (G-20-3)         Others         2         (G-20-7)
23. Importance of khettara (G	i-23)	
<ul><li>(1) Unique source for both of potable wate</li><li>(2) Unique source for irrigtion</li><li>(3) Main source for irrigation</li></ul>	r and irrigation	on (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettara		
Yes (1), No (2) If no, the reason (G-24)		(1)Constrains in landscape(3)Existence of other khettaras(2)Prohibited by law(4)Others

		-		
1. Khettara Number A-134 M (G-1)	Р	2. Name of commune Aghbalou N'kerdous (G-2)		
3. Name of khettara [Imider (G-3)		4. Location of khettara $X = 501653.02$ (G-4-1) Y = 111524.56 (G-4-2)		
5. Number of families who [12] (G-5-2	2) families	9. Histry of discharge 1987: 3 litter/sec		
6. Number of beneficialies 12 (G-6-2	2) families	of khettara		
7. Cycle of kehttara water right 12 (G-7-1	l) days			
8.Discharge of khettara (latest) 1.5 (G-8)	lit/sec	(I-10)		
10. History of khettara water flow 7	(I-9)			
(2)No water in the last two-decade (1 (3)No water in the last decade (4)No water in the past five years (1)	6)The khettar year in the 7)The dischar	in the dry season in the past five years ra has water flow, but the discharge of khettara is reduced each e recent five years. arge of the khettara is constant arge of the khettara is increased		
11. Total area of farmland [IA-1]	3	12. Irrigated area by the khettara [1.5]ha (IA-3)		
13. The condition of roads 2 appropria (G-15) not appro-		14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)		
15.Sanitary service 2 appropria (G-17) not appro		16.Facility of electricity and telecomunicationappropriate (1) not appropriate (2)		
17. Existence of Association (G-21	Yes (1), ) No (2)	If yes, Name of G-22)		
18 Situation of khettara	ngth (m)	Section of khettara (average) hight(m) width (m)		
	2 (E-1-1-1)	) <u>2</u> (E-1-4-1) <u>0.7</u> (E-1-5-1)		
	2 (E-1-1-2) ) (E-2-1)			
	-	0.15 (E-2-2) 0.2 (E-2-3) 0.35 (E-4-3-1) 0.35 (E-4-1-1)		
	) (E-4-2-1) ) (E-4-2-2)			
19. Rehabilitation Rehabilitation length of khettara	0 ( (M-7)	(m) Rehabilitation length of principal 0 (m) irrigation canal (M-8)		
20. Influence of desertification				
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification	n catchme of conduit nannel khe	3 (I-2) Irrigation canals 3 (I-7)		
21.Demandes of habitants (water resources)		Yes (1), No (2)		
	9-1)	Protection dike against flood 2 (G-19-4) nstruction of public wells for domestic water 1 (G-19-5)		
	19-2) Cor 19-3)	nstruction of public wells for domestic water 1 (G-19-5) Others 2 (G-19-6)		
22.Demandes of habitants (Aglicultual and social support) Yes (1), No (2)				
Agriculture (storage,production, transport F	Rehabilitation	School         1         (G-20-4)           duct , etc.)         2         (G-20-1)         Sanitary system         2         (G-20-5)           on of roads         1         (G-20-2)         Hospital         1         (G-20-6)           tric supply         1         (G-20-3)         Others         2         (G-20-7)		
<ul> <li>(1) Unique source for both of potable wate</li> <li>(2) Unique source for irrigition</li> <li>(3) Main source for irrigation</li> </ul>	i-23) r and irrigatio			
24. Possibility of extension of khettara 1 Yes (1), No (2) If no, the reason (G-24)		<ul><li>(1)Constrains in landscape</li><li>(2)Prohibited by law</li><li>(3)Existence of other khettaras</li><li>(4)Others</li></ul>		

1. Khettara Number A-13 (G-1		2. Name of commune Aghbalou N'kerdous (G-2)
3. Name of khettara	I N'tnayo 3)	4. Location of khettara $X = 506242.32$ (G-4-1) Y = 116743.93 (G-4-2)
5. Number of families who have khettara water right	56 (G-5-2) families	9. Histry of discharge 1998: 4 litter/sec
6. Number of beneficialies	56 (G-6-2) families	
7. Cycle of kehttara water right	9 (G-7-1) days	
8.Discharge of khettara (latest)	1.5 (G-8) lit/sec	(I-10)
10. History of khettara water flow   (I-9)		
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> <li>(5) No water in the dry season in the past five years</li> <li>(6)The khettara has water flow, but the discharge of khettara is reduced each year in the recent five years.</li> <li>(7)The discharge of the khettara is constant</li> <li>(8)The discharge of the khettara is increased</li> </ul>		
11. Total area of farmland	[IA-1] ha	12. Irrigated area by the khettara [5]ha (IA-3)
13. The condition of roads (G	appropriate (1) not appropriate (2)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 (G	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication1 appropriate (1) (G-18)1appropriate (1) not appropriate (2)
17. Existence of Association	G-21) Yes (1), (G-21) No (2)	If yes, Name of Association (G-22)
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit	246 (E-1-1-1 19 (E-1-1-2	) <u>1.8</u> (E-1-4-1) <u>0.9</u> (E-1-5-1)
Khettara as open channel	<u>22.5</u> (E-2-1)	0.9 (E-2-2) 0.5 (E-2-3)
Principal and secondary irrigation canal	660 (E-4-2-1 0 (E-4-2-2	
19. Rehabilitation Rehabilitation khettara	length of (M-7)	(m) Rehabilitation length of principal (m) irrigation canal (M-8)
20. Influence of desertification		
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	(I-2) Irrigation canals 6+7 (I-7)
21.Demandes of habitants (water resources ) Yes (1), No (2)		
Rehabilitation of khettara1(G-19-1)Protection dike against flood2(G-19-4)Installing pump2(G-19-2)Construction of public wells for domestic water1(G-19-5)Rehabilitation of irrigation canal2(G-19-3)Others2		
22.Demandes of habitants (Aglicultual and social support) Yes (1), No (2)		
Agriculture (storage,production, transporttion of product , etc.)ContentSchoolGrade </td		
23. Importance of khettara (G-23) (1) Unique source for both of potable water and irrigation (2) Unique source for irrigation (3) Main source for irrigation (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected		
24. Possibility of extension of khe Yes (1), No (2) If no (G-24)	ttara , the reason (G-25)	<ul><li>(1)Constrains in landscape</li><li>(2)Prohibited by law</li><li>(3)Existence of other khettaras</li><li>(4)Others</li></ul>
1. Khettara Number A-136 (G-1)	MP	2. Name of commune Aghbalou N'kerdous (G-2)
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3. Name of khettara Lagar (G-3)		4. Location of khettara $X = 510826.04$ (G-4-1) Y = 129846.82 (G-4-2)
5. Number of families who	20 (G-5-2) families	9. Histry of discharge 1998: 3 litter/sec
have khettara water right       6. Number of beneficialies		of khettara
	25 (G-7-1) days	
· · · ·	18 (G-8) lit/sec	
10 History of khottors water flow		(I-10)
10. History of khettara water flow [7] (1)No water from 1950s or 1970s.	(I-9)	n the dry season in the past five years
<ul> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The dischar	a has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased
11. Total area of farmland	5 ha A-1)	12. Irrigated area by the khettara [5]ha (IA-3)
13. The condition of roads 2 (G-15	appropriate (1)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 (G-17	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication1 appropriate (1) not appropriate (2)
17. Existence of Association	2 Yes (1), (G-21) No (2)	If yes, Name of G-22
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit	27 (E-1-1-1) 100 (E-1-1-2)	) <u>8</u> (E-1-4-1) <u>1</u> (E-1-5-1)
Khettara as open channel	<u>68</u> (E-2-1)	15 (E-2-2) 15 (E-2-3)
Principal and secondary irrigation canal	5 (E-4-2-1) 0 (E-4-2-2)	
19. Rehabilitation Rehabilitation len khettara	gth of 0 (M-7)	m) Rehabilitation length of principal <u>62</u> (m) irrigation canal (M-8)
20. Influence of desertification		
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	(I-2) Irrigation canals 3 (I-7)
21.Demandes of habitants (water reso	ources)	Yes (1), No (2)
Rehabilitation of khettara 1 Installing pump 2 Rehabilitation of irrigation canal 1	(G-19-1) (G-19-2) Cor (G-19-3)	Protection dike against flood 2 (G-19-4) nstruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultua	and social support	) Yes (1), No (2)
Agriculture (storage,production	, transporttion of proc Rehabilitation	School 2 (G-20-4) luct , etc.) 2 (G-20-1) Sanitary system 2 (G-20-5)
23. Importance of khettara 3 (1) Unique source for both of po (2) Unique source for irrigtion (3) Main source for irrigation		on (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettar 1 Yes (1), No (2) If no, the (G-24)	e reason 2	(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others

1. Khettara Number A-137 -	2. Name of commune Tinjdad		
(G-1)	(G-2)		
	4. Location of khettara X = 534018.48 (G-4-1)		
3. Name of khettara El Maghzane (G-3)	$\begin{array}{c} 4.1666416116116116116116116116116116116116$		
5. Number of families who have khettara water right (G-5-2) families	9. Histry of discharge		
6. Number of beneficialies 850 (G-6-2) families	of khettara		
7. Cycle of kehttara water right 12 (G-7-1) days			
8.Discharge of khettara (latest) 0 (G-8) lit/sec	(I-10)		
10. History of khettara water flow 1 (I-9)			
(2)No water in the last two-decade(6)The khetta(3)No water in the last decadeyear in the(4)No water in the past five years(7)The discha	in the dry season in the past five years ara has water flow, but the discharge of khettara is reduced each e recent five years. arge of the khettara is constant arge of the khettara is increased		
11. Total area of farmland 2 ha (IA-1)	12. Irrigated area by the khettara [2]ha (IA-3)		
13. The condition of roads (G-15) appropriate (1) not appropriate (2)	14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)		
15.Sanitary service 1 appropriate (1) (G-17) not appropriate (2)	16.Facility of electricity and telecomunication1 (G-18)appropriate (1) not appropriate (2)		
17. Existence of Association Yes (1), (G-21) No (2)	If yes, Name of G-22)		
18. Situation of khettara Length (m)	Section of khettara (average) hight(m) width (m)		
Gallery of khettara (Gallery in catchment area and conduit500 (E-1-1-1) 3500 (E-1-1-2)	I) <u>180</u> (E-1-4-1) <u>60</u> (E-1-5-1)		
Khettara as open channel 600 (E-2-1)	1 (E-2-2) 0.6 (E-2-3)		
Principal and secondary1600 (E-4-2-7)irrigation canal0 (E-4-2-2)			
19. Rehabilitation Rehabilitation length of khettara (M-7)	(m) Rehabilitation length of principal (m) irrigation canal (M-8)		
20. Influence of desertification			
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification	(I-2) Irrigation canals (I-7)		
21.Demandes of habitants (water resources )	ettara <u>3</u> (I-3) Yes (1), No (2)		
Rehabilitation of khettara       1       (G-19-1)       Protection dike against flood       2       (G-19-4)         Installing pump       1       (G-19-2)       Construction of public wells for domestic water       2       (G-19-5)         Rehabilitation of irrigation canal       1       (G-19-3)       Others       2       (G-19-6)			
22.Demandes of habitants (Aglicultual and social suppor	t) Yes (1), No (2)		
Agriculture (storage,production, transporttion of product , etc.)ConstantSchool1(G-20-4)Agriculture (storage,production, transporttion of product , etc.)ConstantConstantConstantConstantConstantRehabilitation of roadsConstantConstantConstantConstantConstantConstantElectric supplyConstant			
<ul> <li>23. Importance of khettara (G-23) <ul> <li>(1) Unique source for both of potable water and irrigation</li> <li>(2) Unique source for irrigation</li> <li>(3) Main source for irrigation</li> </ul> </li> <li>(4) Partial source for irrigation</li> <li>(5) Supplementary source for irrigation</li> <li>(6) Neglected</li> </ul>			
24. Possibility of extension of khettara Yes (1), No (2) If no, the reason (G-25) (G-24)	(1)Constrains in landscape(3)Existence of other khettaras(2)Prohibited by law(4)Others		

1. Khettara Number B-001 (G-1)	MP	2. Name of commune	Beni-Tadjit (G-2)
3. Name of khettara Agoun (G-3)	ımad	4. Location of khettara	X = 667133.44 (G-4-1) Y = 196308.42 (G-4-2)
5 Number of femilies who	12 (G-5-2) families	9. Histry of discharge	1983 octobre: 24 litter/sec
	12 (G-6-2) families	of khettara	1990 janvier: 24 litter/sec 1996 octobre: 22 litter/sec
7. Cycle of kehttara water right	25 (G-7-1) days		2000 novembre: 19 litter/sec
	24 (G-8) lit/sec	(I-10)	2002 septembre: 18 litter/sec
10. History of khettara water flow 6	(1-9)		
(1)No water from 1950s or 1970s. (2)No water in the last two-decade (3)No water in the last decade (4)No water in the past five years	(6)The khettar year in the (7)The dischar	n the dry season in the past fiv ra has water flow, but the disch recent five years. rge of the khettara is constant rge of the khettara is increased	narge of khettara is reduced each
11. Total area of farmland	<u>300</u> ha A-1)	12. Irrigated area by the	e khettara <u>120</u> ha (IA-3)
13. The condition of roads [1 (G-15	appropriate (1)	14.The condition of sch	(G-16) not appropriate (2)
15.Sanitary service 1 (G-17	appropriate (1) not appropriate (2)	16.Facility of electricity telecomunication	and 1 appropriate (1) (G-18) not appropriate (2)
17. Existence of Association	1 Yes (1), (G-21) No (2)	If yes, Name of Association	Ass Alamal de developet soc (G-22)
18. Situation of khettara	Length (m)	Sectio hight(m	on of khettara (average) ) i width (m)
Gallery of khettara (Gallery in	<u>100</u> (E-1-1-1)	) <u>1.5</u> (E-1-4	
catchment area and conduit	740 (E-1-1-2)	) <u> </u>	4-2) <u>0.8</u> (E-1-5-2)
Khettara as open channel	0 (E-2-1)	0 (E-2-2	2) 0 (E-2-3)
Principal and secondary irrigation canal	1800 (E-4-2-1 1400 (E-4-2-2		
19. Rehabilitation Rehabilitation len khettara		, 、	length of principal (m)
20. Influence of desertification	, , ,		
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	<u>3</u> (I-2) Ir	Regulation pond <u>3</u> (I-5) rrigation canals <u>3</u> (I-7)
21.Demandes of habitants (water reso	ources)	Yes (1), No (2)	
Rehabilitation of khettara 1 Installing pump 2		Protection d nstruction of public wells for	
Rehabilitation of irrigation canal	(G-19-3)		Others 2 (G-19-6)
22.Demandes of habitants (Aglicultua	l and social support	) Yes (1), No (2)	School 1 (G-20-4)
Agriculture (storage,production	Rehabilitation		Sanitary system 1 (G-20-5) Hospital 1 (G-20-6) Others 2 (G-20-7)
23. Importance of khettara 2 (1) Unique source for both of po (2) Unique source for irrigition (3) Main source for irrigation	(G-23) otable water and irrigation		r irrigation
24. Possibility of extension of khettara 1 Yes (1), No (2) If no, the (G-24)	e reason	(1)Constrains in landscape (2)Prohibited by law	(3)Existence of other khettaras (4)Others

KHETTARA DATBASE			
1. Khettara Number B-002 MP (G-1)	2. Name of commune Beni-Tadjit (G-2)		
3. Name of khettara Tamazouarou (G-3)	4. Location of khettara $X = 667423.89$ (G-4-1) Y = 196294.88 (G-4-2)		
5. Number of families who have khettara water right110 (G-5-2)families families6. Number of beneficialies110 (G-6-2)Gamilies7. Cycle of kehttara water right17 (G-7-1)Gays days8.Discharge of khettara (latest)18 (G-8)Iit/sec	9. Histry of discharge of khettara 9. Histry of discharge 1900 decembre: 22 litter/sec 1970 janvier: 21 litter/sec 1980 decembre: 20 litter/sec 2000 novembre: 19 litter/sec 2002 janvier: 19 litter/sec		
10. History of khettara water flow         6         (I-9)			
(2)No water in the last two-decade(6)The khell(3)No water in the last decadeyear in the(4)No water in the past five years(7)The disc	r in the dry season in the past five years tara has water flow, but the discharge of khettara is reduced each he recent five years. harge of the khettara is constant harge of the khettara is increased		
11. Total area of farmland 50 ha (IA-1)	12. Irrigated area by the khettara [35]ha (IA-3)		
13. The condition of roads2appropriate (1)(G-15)not appropriate (2)	14.The condition of schools 2 appropriate (1) (G-16) not appropriate (2)		
15.Sanitary service 2 appropriate (1) (G-17) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)		
17. Existence of Association (G-21) No (2)	, If yes, Name of Association (G-22)		
18. Situation of khettara Length (m)	Section of khettara (average) hight(m) width (m)		
Gallery of khettara (Gallery in catchment area and conduit130 (E-1-1 300) (E-1-1			
Khettara as open channel 0 (E-2-1			
Principal and secondary507 (E-4-2irrigation canal540 (E-4-2			
19. RehabilitationRehabilitation length of khettara0 (M-7)	(m) Rehabilitation length of principal (m) irrigation canal (M-8)		
20. Influence of desertification	nent area [3] (I-1) Regulation pond [3] (I-5)		
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification Open channel ki	it <u>3</u> (I-2) Irrigation canals <u>3</u> (I-7) nettara <u>3</u> (I-3)		
21.Demandes of habitants (water resources )	Yes (1), No (2)		
Rehabilitation of khettara 1 (G-19-1) Installing pump 2 (G-19-2) C Rehabilitation of irrigation canal 1 (G-19-3)	Protection dike against flood 1 (G-19-4) Construction of public wells for domestic water 0 (G-19-5) Others (G-19-6)		
22.Demandes of habitants (Aglicultual and social suppo	ort) Yes (1), No (2)		
	School         1         (G-20-4           roduct , etc.)         1         (G-20-1)         Sanitary system         1         (G-20-5           tion of roads         1         (G-20-2)         Hospital         1         (G-20-6           ectric supply         1         (G-20-3)         Others         1         (G-20-7		
<ul> <li>23. Importance of khettara</li> <li>(1) Unique source for both of potable water and irrig</li> <li>(2) Unique source for irrigation</li> <li>(3) Main source for irrigation</li> </ul>	ation (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected		
24. Possibility of extension of khettara	(1)Constrains in landscape (3)Existence of other khettaras		
(G-24) (G-25)	(2)Prohibited by law (4)Others		

KHETTARA DATBASE			
1. Khettara Number B-00 (G-1		2. Name of commune	Beni-Tadjit (G-2)
(G-	Sbaa La kdima 3)	4. Location of khettara	X = 668467.46 (G-4-1) Y = 205866.66 (G-4-2)
5. Number of families who have khettara water right 6. Number of beneficialies	65 (G-5-2) families 65 (G-6-2) families	9. Histry of discharge of khettara	1990 septembre: 3 litter/sec 1995 octobre: 2.50 litter/sec
7. Cycle of kehttara water right	25 (G-7-1) days		2000 novembre: 2.0 litter/sec 2003 juin: 1.25 litter/sec
8.Discharge of khettara (latest)	1.3 (G-8) lit/sec	(I-10)	
10. History of khettara water flow	5+6 (I-9)	-	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khetta year in the (7)The discha	in the dry season in the past five ra has water flow, but the disch e recent five years. arge of the khettara is constant arge of the khettara is increased	arge of khettara is reduced each
11. Total area of farmland	70 ha (IA-1)	12. Irrigated area by the	khettara <u>30</u> ha (IA-3)
13. The condition of roads (G	appropriate (1) not appropriate (2)	14.The condition of sch	(G-16) not appropriate (2)
15.Sanitary service 2 (G	appropriate (1) not appropriate (2)	16.Facility of electricity telecomunication	and 2 appropriate (1) (G-18) not appropriate (2)
17. Existence of Association	1 Yes (1), (G-21) No (2)	If yes, Name of Association	Ass Neims de develt pet l'en (G-22)
18. Situation of khettara	Length (m)	Sectio hight(m)	n of khettara (average) width (m)
Gallery of khettara (Gallery in catchment area and conduit	44 (E-1-1-1 0 (E-1-1-2		
Khettara as open channel	0 (E-2-1)	0 (E-2-2	· · · · · · · · · · · · · · · · · · ·
Principal and secondary irrigation canal	50 (E-4-2-1 0 (E-4-2-2	· · · · · · · · · · · · · · · · · · ·	
19. Rehabilitation Rehabilitation khettara	length of 0 (M-7)	(m) Rehabilitation li irrigation canal	ength of principal (m) (M-8)
20. Influence of desertification			agulation pand 2 (1.5)
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	3         (I-2)         Ir           ettara         3         (I-3)	egulation pond <u>3</u> (I-5) rigation canals <u>3</u> (I-7)
21.Demandes of habitants (water		Yes (1), No (2)	
Rehabilitation of khettara Installing pump Rehabilitation of irrigation canal	(G-19-2) Co	Protection di Instruction of public wells for	ke against flood 2 (G-19-4) domestic water 1 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicu	Itual and social suppor	t) Yes (1), No (2)	
Agriculture (storage,produc	Rehabilitatio	duct , etc.) 1 (G-20-1) on of roads 1 (G-20-2) ctric supply 1 (G-20-3)	School         1         (G-20-4)           Sanitary system         1         (G-20-5)           Hospital         1         (G-20-6)           Others         2         (G-20-7)
23. Importance of khettara (1) Unique source for both o (2) Unique source for irrigitio (3) Main source for irrigation	on	ion (4) Partial source for (5) Supplementary so (6) Neglected	irrigation burce for irrigation
24. Possibility of extension of khe 2 Yes (1), No (2) If no (G-24)	ttara ), the reason 1 (G-25)	(1)Constrains in landscape (2)Prohibited by law	(3)Existence of other khettaras (4)Others

KHETTARA DATBASE			
1. Khettara Number B-004 (G-1)	MP	2. Name of commune	Beni-Tadjit (G-2)
(G-3)	n Almo chorf	4. Location of khettara	X = <u>676418.99</u> (G-4-1) Y = <u>193193.74</u> (G-4-2)
5. Number of families who	40 (G-5-2)       families         40 (G-6-2)       families         17 (G-7-1)       days         6 (G-8)       lit/sec	9. Histry of discharge of khettara (I-10)	1984: 15 litter/sec 1990: 17 litter/sec 1994: 14 litter/sec 1998: 10 litter/sec 2000: 8 litter/sec 2003: 6 litter/sec
10. History of khettara water flow	5+6 (I-9)	(	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettal year in the (7)The discha	n the dry season in the past five ra has water flow, but the discha- recent five years. rge of the khettara is constant rge of the khettara is increased	arge of khettara is reduced each
11. Total area of farmland	100 ha (IA-1)	12. Irrigated area by the	khettara 60ha (IA-3)
13. The condition of roads [1 (G-1	appropriate (1) 5) not appropriate (2)	14.The condition of sch	(G-16) not appropriate (2)
15.Sanitary service 1 (G-1	appropriate (1) not appropriate (2)	16.Facility of electricity telecomunication	and 1 appropriate (1) (G-18) not appropriate (2)
17. Existence of Association	1 Yes (1), (G-21) No (2)	If yes, Name of Association	Asso-choffe de develop-et-l'e (G-22)
18. Situation of khettara	Length (m)	Section hight(m)	n of khettara (average) width (m)
Gallery of khettara (Gallery in catchment area and conduit	40 (E-1-1-1 252 (E-1-1-2		
Khettara as open channel	0 (E-2-1)	0 (E-2-2	
Principal and secondary irrigation canal	100 (E-4-2-1 50 (E-4-2-2		
19. Rehabilitation Rehabilitation le khettara	ength of (M-7)	m) Rehabilitation le irrigation canal	ength of principal (m) (M-8)
20. Influence of desertification			
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	3         (I-2)         Irr           ittara         3         (I-3)         (I-3)	egulation pond <u>3</u> (I-5) rigation canals <u>3</u> (I-7)
21.Demandes of habitants (water re		Yes (1), No (2)	
Rehabilitation of khettara 1 Installing pump 2 Rehabilitation of irrigation canal 1	) (G-19-2) Col	Protection di nstruction of public wells for	ke against flood 1 (G-19-4) domestic water 2 (G-19-5) Others 1 (G-19-6)
22.Demandes of habitants (Aglicultu		) Yes (1), No (2)	
Agriculture (storage,productio	on, transporttion of proc Rehabilitatio	duct , etc.) 1 (G-20-1)	School         1         (G-20-4)           Sanitary system         1         (G-20-5)           Hospital         1         (G-20-6)           Others         3         (G-20-7)
23. Importance of khettara 2 (1) Unique source for both of (2) Unique source for irrigition (3) Main source for irrigation	(G-23) (orbit of the contract	on (4) Partial source for (5) Supplementary so (6) Neglected	irrigation ource for irrigation
24. Possibility of extension of khetta 2 Yes (1), No (2) If no, t (G-24)	he reason 1	(1)Constrains in landscape (2)Prohibited by law	(3)Existence of other khettaras (4)Others
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KHETTARA DATBASE			
1. Khettara Number B-005 (G-1)	MP	2. Name of commune	Beni-Tadjit (G-2)
3. Name of khettara (G-3)	af	4. Location of khettara	X = <u>676434.99</u> (G-4-1) Y = <u>193030.78</u> (G-4-2)
6. Number of beneficialies 0 7. Cycle of kehttara water right 0		9. Histry of discharge of khettara (I-10)	1982: 20 litter/sec 1990: 17 litter/sec 1995: 14 litter/sec 2000: 12 litter/sec 2003: 10 litter/sec
10. History of khettara water flow 5	(I-9)		
(1)No water from 1950s or 1970s. (2)No water in the last two-decade (3)No water in the last decade (4)No water in the past five years	(6)The khettar year in the (7)The dischar	n the dry season in the past five ra has water flow, but the discha recent five years. rge of the khettara is constant rge of the khettara is increased	arge of khettara is reduced each
11. Total area of farmland (IA-1	40 ha 1)	12. Irrigated area by the	khettara <u>40</u> ha (IA-3)
	appropriate (1) not appropriate (2)	14.The condition of school	(G-16) not appropriate (2)
	appropriate (1) not appropriate (2)	16.Facility of electricity a telecomunication	and 2 appropriate (1) (G-18) not appropriate (2)
17. Existence of Association	1 Yes (1), (G-21) No (2)	If yes, Name of Association	Asso-choffe de develop-et-l'e (G-22)
18. Situation of khettara	Length (m)	Sectior hight(m)	n of khettara (average) width (m)
Gallery of khettara (Gallery in catchment area and conduit	<u>10</u> (E-1-1-1) 540 (E-1-1-2)		
Khettara as open channel	0 (E-2-1)	0 (E-2-2)	) 0 (E-2-3)
Principal and secondary irrigation canal	700 (E-4-2-1) 0 (E-4-2-2)		· · ·
19. Rehabilitation Rehabilitation length khettara	h of (M-7)	m) Rehabilitation le irrigation canal	ength of principal (m) (M-8)
(2)Partial damage by desertification G (2)Negligible damage by desertification G	Callery in catchme Callery of conduit Open channel khe	3         (I-2)         Irr           ittara         3         (I-3)         1	egulation pond <u>3</u> (I-5) rigation canals <u>3</u> (I-7)
21.Demandes of habitants (water resour		Yes (1), No (2)	
Rehabilitation of khettara 1 Installing pump 2 Rehabilitation of irrigation canal 1	(G-19-1) (G-19-2) Cor (G-19-3)	Protection dia nstruction of public wells for	ke against flood 1 (G-19-4) domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual and social support) Yes (1), No (2)			
Agriculture (storage,production, transporttion of product , etc.)1(G-20-1)Sanitary system1(G-20-5)Rehabilitation of roads1(G-20-2)Hospital1(G-20-6)Electric supply2(G-20-3)Others1(G-20-7)			
23. Importance of khettara (1) Unique source for both of potat (2) Unique source for irrigition (3) Main source for irrigation	(G-23) (G	on (4) Partial source for (5) Supplementary so (6) Neglected	
24. Possibility of extension of khettara 2 Yes (1), No (2) If no, the re (G-24)		(1)Constrains in landscape (2)Prohibited by law	(3)Existence of other khettaras (4)Others

·			
1. Khettara Number B-006 (G-1)	MP	2. Name of commune	Beni-Tadjit (G-2)
	ł	4. Location of khettara	X = <u>676542.16</u> (G-4-1)
3. Name of khettara El Maj (G-3)	eu		$\begin{array}{c} X = & 070342.101 (G-4-1) \\ Y = & 193180.55 (G-4-2) \end{array}$
5. Number of families who have khettara water right	40 (G-5-2) families	or rhoury or alcornargo	1985: 20 litter/sec
-	40 (G-6-2) families		1990: 16 litter/sec 2000: 12 litter/sec
7. Cycle of kehttara water right	17 (G-7-1) days		2001: 9 litter/sec 2003: 10 litter/sec
8.Discharge of khettara (latest)	6 (G-8) lit/sec	(I-10)	2000. 10 11(0)/300
10. History of khettara water flow 5	(I-9)		
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The dischar	n the dry season in the past five y a has water flow, but the dischar recent five years. rge of the khettara is constant rge of the khettara is increased	
11. Total area of farmland	<u>30</u> ha A-1)	12. Irrigated area by the k	khettara <u>25</u> ha (IA-3)
13. The condition of roads 2 (G-15	appropriate (1) not appropriate (2)	14.The condition of scho	ols 2 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 1 (G-17	appropriate (1) not appropriate (2)	16.Facility of electricity a telecomunication	nd 1 appropriate (1) (G-18) not appropriate (2)
17. Existence of Association	1 Yes (1), (G-21) No (2)		Asso-choffe de develop-et-l'e (G-22)
18. Situation of khettara	Length (m)	Section hight(m)	of khettara (average) width (m)
Gallery of khettara (Gallery in	12 (E-1-1-1)	) 1 (E-1-4-	1) 0.8 (E-1-5-1)
catchment area and conduit	300 (E-1-1-2)	) <u> </u>	2) <u>0.8</u> (E-1-5-2)
Khettara as open channel	0 (E-2-1)	0 (E-2-2)	0 (E-2-3)
Principal and secondary irrigation canal	66 (E-4-2-1) 0 (E-4-2-2)		
19. Rehabilitation Rehabilitation len khettara	gth of (M-7)	m) Rehabilitation lei irrigation canal	ngth of principal (m) (M-8)
20. Influence of desertification			
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	<u>3</u> (I-2) Irrig	gulation pond (I-5) gation canals 3 (I-7)
21.Demandes of habitants (water reso	•	Yes (1), No (2)	
Rehabilitation of khettara 1	(G-19-1)	Protection dike	e against flood 1 (G-19-4)
Installing pump 2 Rehabilitation of irrigation canal 1	(G-19-2) Cor (G-19-3)	nstruction of public wells for c	tomestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultua	I and social support	) Yes (1), No (2)	
Agriculture (storage,production	Rehabilitation		School         1         (G-20-4)           Sanitary system         1         (G-20-5)           Hospital         1         (G-20-6)           Others         2         (G-20-7)
23. Importance of khettara 2 (1) Unique source for both of po (2) Unique source for irrigtion (3) Main source for irrigation	(G-23) table water and irrigation		rrigation
24. Possibility of extension of khettar 2 Yes (1), No (2) If no, the (G-24)	e reason 1 (		(3)Existence of other khettaras (4)Others

1. Khettara Number B-007 (G-1)	MP	2. Name of commune Beni-Tadjit (G-2)
3. Name of khettara El Fou (G-3)	gania	4. Location of khettara $X = 676056.74$ (G-4-1) Y = 192537.36 (G-4-2)
5. Number of families who have khettara water right	0 (G-5-2) families	9. Histry of discharge 0
6. Number of beneficialies	0 (G-6-2) families	of khettara
7. Cycle of kehttara water right	0 (G-7-1) days	
8.Discharge of khettara (latest)	(G-8) lit/sec	(I-10)
10. History of khettara water flow 2	(I-9)	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The dischar	n the dry season in the past five years a has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased
11. Total area of farmland	25 ha A-1)	12. Irrigated area by the khettara [15]ha (IA-3)
13. The condition of roads [2 (G-15	appropriate (1) not appropriate (2)	14.The condition of schools 2 appropriate (1) (G-16) <sup>not</sup> appropriate (2)
15.Sanitary service 1 (G-17	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication1 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association	1 Yes (1), (G-21) No (2)	If yes, Name of AssociationAsso-choffe de develop-et-l'e(G-22)
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit	700 (E-1-1-1) 0 (E-1-1-2)	
Khettara as open channel	0 (E-2-1)	0 (E-2-2) 0 (E-2-3)
Principal and secondary irrigation canal	0 (E-4-2-1)	
	0 (E-4-2-2)	<u> </u>
19. Rehabilitation Rehabilitation len khettara	gth of0 ( (M-7)	m) Rehabilitation length of principal 0 (m) irrigation canal (M-8)
20. Influence of desertification		nt area 2 (I-1) Regulation pond 2 (I-5)
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	2 (I-2) Irrigation canals 2 (I-7)
21.Demandes of habitants (water reso	ources)	Yes (1), No (2)
Rehabilitation of khettara 1 Installing pump 2 Rehabilitation of irrigation canal 1	(G-19-1) (G-19-2) Cor (G-19-3)	Protection dike against flood 1 (G-19-4) nstruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual	and social support	) Yes (1), No (2)
Agriculture (storage,production	Rehabilitation	
23. Importance of khettara 6 (1) Unique source for both of po (2) Unique source for irrigiton (3) Main source for irrigation	(G-23) table water and irrigation	
24. Possibility of extension of khettara 2 Yes (1), No (2) If no, the (G-24)	reason 1	(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others

KHETTARA DATBASE			
1. Khettara Number B-008 (G-1)	MP	2. Name of commune	Beni-Tadjit (G-2)
3. Name of khettara Ait Ya (G-3)	akoub	4. Location of khettara	X = <u>685741.5</u> (G-4-1) Y = <u>202414.73</u> (G-4-2)
5. Number of families who	60 (G-5-2)       families         30 (G-6-2)       families         22 (G-7-1)       days         2.5 (G-8)       lit/sec	9. Histry of discharge of khettara (I-10)	1996 janvier: 40 litter/sec 1998 mai: 30 litter/sec 1999 augt: 10 litter/sec 2000 octobre: 12 litter/sec 2002 mars: 6 litter/sec 2003 juin: 2.5 litter/sec
<ul> <li>10. History of khettara water flow</li> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The discha	n the dry season in the past five ra has water flow, but the discha recent five years. rge of the khettara is constant rge of the khettara is increased	arge of khettara is reduced each
11. Total area of farmland (	<u>300</u> ha IA-1)	12. Irrigated area by the	khettara <u>50</u> ha (IA-3)
13. The condition of roads (G-1	,	14.The condition of sch	(G-16) not appropriate (2)
15.Sanitary service 2 (G-1	appropriate (1) not appropriate (2)	16.Facility of electricity a telecomunication	and 2 appropriate (1) (G-18) not appropriate (2)
17. Existence of Association	G-21) Yes (1), (G-21) No (2)	If yes, Name of Association	(G-22)
18. Situation of khettara Gallery of khettara (Gallery in catchment area and conduit	Length (m) 100 (E-1-1-1 1450 (E-1-1-2	hight(m) ) <u>1.5</u> (E-1-4	-1) <u>1</u> (E-1-5-1)
Khettara as open channel Principal and secondary irrigation canal	7800 (E-2-1) 4500 (E-4-2-1 0 (E-4-2-2	) <u>0.5</u> (E-2-2	) <u>1.5</u> (E-2-3) B-1) <u>0.6</u> (E-4-1-1)
19. Rehabilitation Rehabilitation le khettara	ngth of 0 ( (M-7)	m) Rehabilitation le irrigation canal	ength of principal 0 (m) (M-8)
20. Influence of desertification (1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification	Gallery in catchme Gallery of conduit Open channel khe	3         (I-2)         Irr           ttara         2         (I-3)	egulation pond <u>3</u> (I-5) rigation canals <u>3</u> (I-7)
21.Demandes of habitants (water res Rehabilitation of khettara 1 Installing pump 1 Rehabilitation of irrigation canal 1	(G-19-1)	nstruction of public wells for	ke against flood 1 (G-19-4) domestic water 1 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultua Agriculture (storage,productio	n, transporttion of proc Rehabilitatio	duct , etc.) 1 (G-20-1)	School         1         (G-20-4)           Sanitary system         1         (G-20-5)           Hospital         1         (G-20-6)           Others         2         (G-20-7)
23. Importance of khettara 2 (1) Unique source for both of p (2) Unique source for irrigtion (3) Main source for irrigation		on (4) Partial source for (5) Supplementary so (6) Neglected	irrigation urce for irrigation
24. Possibility of extension of khetta 2 (G-24) Yes (1), No (2) If no, the set of the se	ne reason 1	(1)Constrains in landscape (2)Prohibited by law	(3)Existence of other khettaras (4)Others

1. Khettara Number B-009 (G-1)		2. Name of commune	Beni-Tadjit (G-2)
		4 Lessting of the stress	<u> </u>
3. Name of khettara Ait Fd (G-3)	ouli	4. Location of khettara	X = <u>685789.41</u> (G-4-1) Y = <u>187853.19</u> (G-4-2)
5. Number of families who have khettara water right	45 (G-5-2) families	9. Histry of discharge	1980: 40 litter/sec 1990: 55 litter/sec
6. Number of beneficialies	45 (G-6-2) families	of khettara	1992: 30 litter/sec
7. Cycle of kehttara water right	12 (G-7-1) days		1995: 0 litter/sec 2000: 0 litter/sec
8.Discharge of khettara (latest)	0 (G-8) lit/sec	(I-10)	2003: 0 litter/sec
10. History of khettara water flow	+5 (I-9)		
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The dischar	n the dry season in the past five ra has water flow, but the discha recent five years. rge of the khettara is constant rge of the khettara is increased	e years arge of khettara is reduced each
11. Total area of farmland [	90 ha A-1)	12. Irrigated area by the	khettara <u>O</u> ha (IA-3)
13. The condition of roads 2 (G-15	appropriate (1) not appropriate (2)	14.The condition of school	(G-16) not appropriate (2)
15.Sanitary service 2 (G-17	appropriate (1) not appropriate (2)	16.Facility of electricity a telecomunication	and 1 appropriate (1) (G-18) not appropriate (2)
17. Existence of Association	(G-21) Yes (1), (G-21) No (2)	If yes, Name of Association	(G-22)
18. Situation of khettara	Length (m)	Sectior hight(m)	n of khettara (average) width (m)
Gallery of khettara (Gallery in catchment area and conduit	1500 (E-1-1-1) 4000 (E-1-1-2)	) <u>1.3</u> (E-1-4-	
Khettara as open channel	<u>500</u> (E-2-1)	2 (E-2-2)	·····
Principal and secondary irrigation canal	1200 (E-4-2-1) 0 (E-4-2-2)		
19. Rehabilitation Rehabilitation ler khettara	ngth of (M-7)	m) Rehabilitation le irrigation canal	ength of principal (m) (M-8)
20. Influence of desertification			
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	2 (I-2) Irr	egulation pond (I-5) igation canals (I-7)
21.Demandes of habitants (water res	ources)	Yes (1), No (2)	
Rehabilitation of khettara 1 Installing pump 1 Rehabilitation of irrigation canal	(G-19-1) (G-19-2) Cor (G-19-3)	Protection dik nstruction of public wells for	ke against flood         (G-19-4)           domestic water         1         (G-19-5)           Others         1         (G-19-6)
22.Demandes of habitants (Aglicultual and social support) Yes (1), No (2)			
Agriculture (storage,productior	Rehabilitation		School         1         (G-20-4)           Sanitary system         1         (G-20-5)           Hospital         1         (G-20-6)           Others         (G-20-7)
23. Importance of khettara (1) Unique source for both of po (2) Unique source for irrigition (3) Main source for irrigation		on (4) Partial source for (5) Supplementary sou (6) Neglected	irrigation
24. Possibility of extension of khettar Yes (1), No (2) If no, the (G-24)	e reason	(1)Constrains in landscape (2)Prohibited by law	(3)Existence of other khettaras (4)Others

1. Khettara Number B-010 (G-1)	MP		Beni-Tadjit (G-2)
3. Name of khettara Roda		4. Location of khettara	X = 688400.58 (G-4-1)
(G-3)			Y = 186519.94 (G-4-2)
5. Number of families who 12 have khettara water right	· · ·		1980: 25 litter/sec
	0 (G-6-2) families		1982: 0 litter/sec 1987: 0 litter/sec
7. Cycle of kehttara water right 1	5 (G-7-1) days		1988: 10 litter/sec 1995: 10 litter/sec
8.Discharge of khettara (latest)	0 (G-8) lit/sec	2	2000: 0 litter/sec 2003: 0 litter/sec
10. History of khettara water flow 3	(I-9)	<u> </u>	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettara year in the i (7)The dischar	n the dry season in the past five y ra has water flow, but the discharg recent five years. rge of the khettara is constant rge of the khettara is increased	
11. Total area of farmland (IA	50 ha -1)	12. Irrigated area by the k	hettara <u>50</u> ha (IA-3)
13. The condition of roads [2 (G-15)	appropriate (1) not appropriate (2)	14.The condition of school	DIS 1 appropriate (1) (G-16) <sup>not</sup> appropriate (2)
15.Sanitary service 2 (G-17)	appropriate (1) not appropriate (2)	16.Facility of electricity ar telecomunication	nd 1 appropriate (1) (G-18) not appropriate (2)
17. Existence of Association	1 Yes (1), (G-21) No (2)		Asso Tabammne de le culine G-22)
18. Situation of khettara	Length (m)	Section hight(m)	of khettara (average) width (m)
Gallery of khettara (Gallery in catchment area and conduit	100 (E-1-1-1) 1200 (E-1-1-2)	) <u>2.5</u> (E-1-4-1	l) <u>1</u> (E-1-5-1)
Khettara as open channel	(E-2-1)	) (E-2-2)	0 (E-2-3)
Principal and secondary irrigation canal	2000 (E-4-2-1) 0 (E-4-2-2)		
19. Rehabilitation Rehabilitation leng khettara	gth of (M-7)	m) Rehabilitation len irrigation canal	ngth of principal (m) (M-8)
20. Influence of desertification	· ·		
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchmer Gallery of conduit Open channel khet	<u>3</u> (I-2) Irrig	gulation pond <u>3</u> (I-5) gation canals <u>3</u> (I-7)
21.Demandes of habitants (water reso	urces)	Yes (1), No (2)	
Rehabilitation of khettara 1 Installing pump 1 Rehabilitation of irrigation canal 1	(G-19-1) (G-19-2) Con (G-19-3)	Protection dike nstruction of public wells for de	e against flood 2 (G-19-4) omestic water 1 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual	and social support)	) Yes (1), No (2)	
Agriculture (storage,production,	Rehabilitation		School         2         (G-20-4)           Sanitary system         1         (G-20-5)           Hospital         1         (G-20-6)           Others         2         (G-20-7)
23. Importance of khettara 2 (1) Unique source for both of pot (2) Unique source for irrigition (3) Main source for irrigation		on (4) Partial source for irr (5) Supplementary sour (6) Neglected	rigation ce for irrigation
24. Possibility of extension of khettara 2 Yes (1), No (2) If no, the (G-24)	reason 1 (		(3)Existence of other khettaras (4)Others

1. Khettara Number B-011 (G-1)	-	2. Name of commune	Beni-Tadjit (G-2)
· · · · · · · · · · · · · · · · · · ·		4. Location of khettara	X = <u>694011.84</u> (G-4-1)
3. Name of khettara Ait Daoud (G-3)	Y	4. Location of knettara	$X = \frac{694011.841}{(G-4-1)}$ Y = 187870.38 (G-4-2)
5. Number of families who 20 (	(G-5-2) families	9. Histry of discharge	1981: 40 litter/sec
-	(G-6-2) families	of khettara	1985: 30 litter/sec 1990 - 2003: 0 litter/sec
7. Cycle of kehttara water right 17	(G-7-1) days		
8.Discharge of khettara (latest)	(G-8) lit/sec	(I-10)	
10. History of khettara water flow 5+7	(I-9)		
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The dischar	n the dry season in the past five ra has water flow, but the disch recent five years. rge of the khettara is constant rge of the khettara is increased	arge of khettara is reduced each
11. Total area of farmland [IA-1]	20 ha	12. Irrigated area by the	e khettara 0ha (IA-3)
	propriate (1) t appropriate (2)	14.The condition of sch	(G-16) not appropriate (2)
	propriate (1) t appropriate (2)	16.Facility of electricity telecomunication	and 1 appropriate (1) (G-18) not appropriate (2)
17. Existence of Association	Yes (1), (G-21) No (2)	If yes, Name of Association	(G-22)
18. Situation of khettara	Length (m)	Sectio hight(m)	n of khettara (average) )                                 width (m)
Gallery of khettara (Gallery in catchment area and conduit	100 (E-1-1-1) 720 (E-1-1-2)		
Khettara as open channel	0 (E-2-1)	) (E-2-2	
Principal and secondary	1600 (E-4-2-1) 0 (E-4-2-2)		
19. Rehabilitation Rehabilitation length khettara	of (M-7)	m) Rehabilitation lo irrigation canal	ength of principal (m) (M-8)
20. Influence of desertification			
(2)Partial damage by desertification Ga	Illery in catchme Allery of conduit ben channel khe	<u>1</u> (I-2) Iri	rigation canals 1 (I-5)
21.Demandes of habitants (water resource	es)	Yes (1), No (2)	
Rehabilitation of khettara 1 Installing pump 1 Rehabilitation of irrigation canal 1	(G-19-1) (G-19-2) Cor (G-19-3)	Protection di nstruction of public wells for	ike against flood 1 (G-19-4) r domestic water (G-19-5) Others (G-19-6)
22.Demandes of habitants (Aglicultual an	d social support	) Yes (1), No (2)	
Agriculture (storage,production, tra	Rehabilitation		School         1         (G-20-4)           Sanitary system         1         (G-20-5)           Hospital         1         (G-20-6)           Others         (G-20-7)
23. Importance of khettara (1) Unique source for both of potable (2) Unique source for irrigation (3) Main source for irrigation	G-23) e water and irrigation	on (4) Partial source for (5) Supplementary so (6) Neglected	
24. Possibility of extension of khettara Yes (1), No (2) If no, the rea (G-24)		(1)Constrains in landscape (2)Prohibited by law	(3)Existence of other khettaras (4)Others

1. Khettara Number B-012 (G-1)	MP		Beni-Tadjit (G-2)
3. Name of khettara Sbaik (G-3)		4. Location of khettara	X = <u>689403.65</u> (G-4-1) Y = <u>187167.55</u> (G-4-2)
5. Number of families who 12 have khettara water right	20 (G-5-2) families	or rhoury or alcornargo	1982: 60 litter/sec 1990: 40 litter/sec
6. Number of beneficialies 12	20 (G-6-2) families		1995: 30 litter/sec
7. Cycle of kehttara water right	15 (G-7-1) days	2	2000: 22 litter/sec 2001: 15 litter/sec
8.Discharge of khettara (latest)	20 (G-8) lit/sec	(I-10)	2003: 20 litter/sec
10. History of khettara water flow 2	+3+4 (I-9)		
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The dischar	n the dry season in the past five y a has water flow, but the discharg recent five years. rge of the khettara is constant rge of the khettara is increased	
11. Total area of farmland	600 ha \-1)	12. Irrigated area by the k	hettara <u>300</u> ha (IA-3)
13. The condition of roads 2 (G-15	appropriate (1) not appropriate (2)	14.The condition of school	(G-16) not appropriate (2)
15.Sanitary service 1 (G-17	appropriate (1) not appropriate (2)	16.Facility of electricity ar telecomunication	nd 1 appropriate (1) (G-18) not appropriate (2)
17. Existence of Association	1 Yes (1), (G-21) No (2)		Asso Alluviel et de develop s G-22)
18. Situation of khettara	Length (m)	Section hight(m)	of khettara (average) width (m)
Gallery of khettara (Gallery in	100 (E-1-1-1)		) 1 (E-1-5-1)
catchment area and conduit	520 (E-1-1-2)		
Khettara as open channel	<u>50</u> (E-2-1)	0.4 (E-2-2)	<u>0.4</u> (E-2-3)
Principal and secondary irrigation canal	500 (E-4-2-1) 2000 (E-4-2-2)		
19. Rehabilitation Rehabilitation len khettara	gth of (M-7)	m) Rehabilitation ler irrigation canal	ngth of principal (m) (M-8)
20. Influence of desertification		0	
(1)Significant damage by desertification	Gallery in catchme	ent area 2 (I-1) Reg	gulation pond <u>3</u> (I-5)
(2)Partial damage by desertification (3)Negligible damage by desertification	Gallery of conduit Open channel khe		gation canals 1 (I-7)
21.Demandes of habitants (water reso	urces)	Yes (1), No (2)	
Rehabilitation of khettara 1	(G-19-1)	Protection dike	against flood 1 (G-19-4)
Installing pump 1 Rehabilitation of irrigation canal 1		nstruction of public wells for d	
22.Demandes of habitants (Aglicultual	and social support	) Yes (1), No (2)	
Agriculture (storage,production	transporttion of proc	duct , etc.) 1 (G-20-1)	School 2 (G-20-4)
Agriculture (Storage,production	Rehabilitation		Sanitary system 1 (G-20-5) Hospital 1 (G-20-6) Others 2 (G-20-7)
23. Importance of khettara	(G-23)		
<ul> <li>(1) Unique source for both of po</li> <li>(2) Unique source for irrigation</li> <li>(3) Main source for irrigation</li> </ul>	. ,	on (4) Partial source for ir (5) Supplementary sour (6) Neglected	
24. Possibility of extension of khettara	à		
2 Yes (1), No (2) If no, the (G-24)			(3)Existence of other khettaras (4)Others

	KHETTARA	A DATBASE	
1. Khettara Number B-013 (G-1)	MP	2. Name of commune	Beni-Tadjit (G-2)
(G-3)	y Hach	4. Location of khettara	X = <u>676515.44</u> (G-4-1) Y = <u>192483.99</u> (G-4-2)
5. Number of families who have khettara water right         6. Number of beneficialies         7. Cycle of kehttara water right         8.Discharge of khettara (latest)	20       (G-5-2)       families         20       (G-6-2)       families         17       (G-7-1)       days         18       (G-8)       lit/sec	9. Histry of discharge of khettara (I-10)	1984: 19 litter/sec 1990: 18 litter/sec 1995: 16 litter/sec 2000: 17 litter/sec 2003: 18 litter/sec
10. History of khettara water flow	5+6 (I-9)	,	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettal year in the (7)The discha	n the dry season in the past five ra has water flow, but the discha recent five years. rge of the khettara is constant rge of the khettara is increased	arge of khettara is reduced each
11. Total area of farmland [ (	45 ha IA-1)	12. Irrigated area by the	khettara 25ha (IA-3)
13. The condition of roads (G-1	appropriate (1) not appropriate (2)	14.The condition of sch	(G-16) not appropriate (2)
15.Sanitary service 1 (G-1	appropriate (1) not appropriate (2)	16.Facility of electricity a telecomunication	and 1 appropriate (1) (G-18) not appropriate (2)
17. Existence of Association	1 Yes (1), (G-21) No (2)	If yes, Name of Association	Asso-choffe de develop-et-l'e (G-22)
18. Situation of khettara	Length (m)	Section hight(m)	n of khettara (average) width (m)
Gallery of khettara (Gallery in catchment area and conduit	50 (E-1-1-1 607 (E-1-1-2	/ · · · · · · · · · · · · · · · · · · ·	
Khettara as open channel	0 (E-2-1)	0 (E-2-2	
Principal and secondary irrigation canal	453 (E-4-2-1 0 (E-4-2-2		
19. Rehabilitation Rehabilitation le khettara	ngth of (M-7)	m) Rehabilitation le irrigation canal	ength of principal (m) (M-8)
20. Influence of desertification			
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	3         (I-2)         Irr           ittara         3         (I-3)         (I-3)	egulation pond <u>3</u> (I-5) rigation canals <u>3</u> (I-7)
21.Demandes of habitants (water res		Yes (1), No (2)	
Rehabilitation of khettara 1 Installing pump 2 Rehabilitation of irrigation canal 1	(G-19-1) (G-19-2) Col (G-19-3)	Protection dil nstruction of public wells for	ke against flood 1 (G-19-4) domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultus	al and social support	) Yes (1), No (2)	
Agriculture (storage,productio	n, transporttion of proc Rehabilitatio	duct , etc.) 1 (G-20-1)	School         2         (G-20-4           Sanitary system         1         (G-20-5           Hospital         1         (G-20-6           Others         2         (G-20-7
23. Importance of khettara 2 (1) Unique source for both of p (2) Unique source for irrigition (3) Main source for irrigation	(G-23) potable water and irrigati	on (4) Partial source for (5) Supplementary so (6) Neglected	irrigation surce for irrigation
	ne reason 1	(1)Constrains in landscape	(3)Existence of other khettaras
(G-24)	(G-25)	(2)Prohibited by law	(4)Others

1. Khettara Number B-014 MP (G-1)	2. Name of commune Bouanane (G-2)
	4. Location of khettara X = 728349.49 (G-4-1)
3. Name of khettara (G-3)	$Y = \frac{7203+3.49}{158423.14} (G-4-2)$
5. Number of families who 40 (G-5-2) families have khettara water right	9. Histry of discharge
6. Number of beneficialies 40 (G-6-2) families	of khettara
7. Cycle of kehttara water right 8 (G-7-1) days	
8.Discharge of khettara (latest) 18 (G-8) lit/sec	(I-10)
10. History of khettara water flow 7 (I-9)	
(2)No water in the last two-decade(6)The khett(3)No water in the last decadeyear in the(4)No water in the past five years(7)The disch	in the dry season in the past five years ara has water flow, but the discharge of khettara is reduced each re recent five years. harge of the khettara is constant harge of the khettara is increased
11. Total area of farmland [70] ha (IA-1)	12. Irrigated area by the khettara [70]ha (IA-3)
13. The condition of roads (G-15) (G-15) (1) appropriate (1) not appropriate (2)	14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 appropriate (1) (G-17) not appropriate (2)	16.Facility of electricity and telecomunication2 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association (G-21) No (2)	If yes, Name of AssociationAssociation de development(G-22)
18. Situation of khettara Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in 416 (E-1-1-	1) 1.4 (E-1-4-1) 0.8 (E-1-5-1)
catchment area and conduit [1550] (E-1-1-	
Khettara as open channel 118 (E-2-1)	· · · · · · · · · · · · · · · · · · ·
Principal and secondary 3000 (E-4-2-	1) 0.4 (E-4-3-1) 0.4 (E-4-1-1)
irrigation canal [1000] (E-4-2-	2) 0.5 (E-4-3-2) 0.4 (E-4-1-2)
19. Rehabilitation Rehabilitation length of khettara (M-7)	(m) Rehabilitation length of principal (m) irrigation canal (M-8)
20. Influence of desertification	
(1)Significant damage by desertification Gallery in catchm	nent area 2 (I-1) Regulation pond (I-5)
(2)Partial damage by desertification (3)Negligible damage by desertification Open channel kh	
21.Demandes of habitants (water resources )	Yes (1), No (2)
Rehabilitation of khettara 1 (G-19-1)	Protection dike against flood 0 (G-19-4)
	onstruction of public wells for domestic water 0 (G-19-5) Others 0 (G-19-6)
22.Demandes of habitants (Aglicultual and social suppo	
	School         0         (G-20-4)           oduct , etc.)         1         (G-20-1)         Sanitary system         1         (G-20-5)           ion of roads         1         (G-20-2)         Hospital         1         (G-20-6)           octric supply         1         (G-20-3)         Others         0         (G-20-7)
23. Importance of khettara 6 (G-23) (1) Unique source for both of potable water and irriga (2) Unique source for irrigation (3) Main source for irrigation	tion (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettara	
2 Yes (1), No (2) If no, the reason 4 (G-24) (G-25)	(1)Constrains in landscape(3)Existence of other khettaras(2)Prohibited by law(4)Others

KH	ETTARA	DATBASE	
1. Khettara Number B-015	MP	2. Name of commune	Bouanane (G-2)
(G-1)		<u> </u>	
3. Name of khettara El Hajoui (G-3)		4. Location of khettara	X = 729949.32 (G-4-1) Y = 158380.24 (G-4-2)
5. Number of families who 40 (0	G-5-2) families	9. Histry of discharge	1996 janvier: 25 litter/sec
-	G-6-2) families	of khettara	1998 mars: 16 litter/sec 1998 juillet: 8 litter/sec
7. Cycle of kehttara water right 18 (0	G-7-1) days		1999 decembre: 14 litter/sec 2001 avrie: 7 litter/sec
8.Discharge of khettara (latest) 3.7 (0	G-8) lit/sec	(I-10)	2003 avrie: 7 litter/sec 2003 juillet: 4 litter/sec
10. History of khettara water flow 6	(I-9)		
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The dischar	n the dry season in the past five a has water flow, but the disch- recent five years. rge of the khettara is constant rge of the khettara is increased	arge of khettara is reduced each
11. Total area of farmland [IA-1]	40 ha	12. Irrigated area by the	khettara <u>40</u> ha (IA-3)
13. The condition of roads 1 app	propriate (1) appropriate (2)	14.The condition of sch	
15.Sanitary service 2 app	propriate (1) appropriate (2)	16.Facility of electricity telecomunication	( )
17. Existence of Association	Yes (1), G-21) No (2)	If yes, Name of Association	Associaiotn detfajoui (G-22)
18. Situation of khettara	Length (m)	Section hight(m)	n of khettara (average) width (m)
Gallery of khettara (Gallery in catchment area and conduit	25 (E-1-1-1) 0 (E-1-1-2)		
Khettara as open channel	110 (E-2-1)	0.4 (E-2-2	) 0.4 (E-2-3)
Principal and secondary	600 (E-4-2-1) 0 (E-4-2-2)		
19. Rehabilitation Rehabilitation length o khettara			ength of principal 0 (m) (M-8)
20. Influence of desertification	( )		
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification	lery in catchme lery of conduit en channel khe	(I-2) Iri	egulation pond <u>2</u> (I-5) rigation canals <u>2</u> (I-7)
21.Demandes of habitants (water resource	es)	Yes (1), No (2)	
Rehabilitation of khettara 1 Installing pump Rehabilitation of irrigation canal 1	(G-19-1) (G-19-2) Cor (G-19-3)	Protection di nstruction of public wells for	ke against flood (G-19-4) domestic water (G-19-5) Others (G-19-6)
22.Demandes of habitants (Aglicultual and	social support	) Yes (1), No (2)	
Agriculture (storage,production, transporttion of product , etc.)1(G-20-1)Sanitary system1(G-20-5)Rehabilitation of roads1(G-20-2)Hospital1(G-20-6)Electric supply1(G-20-3)Others(G-20-7)			
23. Importance of khettara (1) Unique source for both of potable (2) Unique source for irrigition (3) Main source for irrigation	] (G-23) water and irrigation	on (4) Partial source for (5) Supplementary so (6) Neglected	
24. Possibility of extension of khettara Yes (1), No (2) If no, the reas (G-24)		(1)Constrains in landscape (2)Prohibited by law	(3)Existence of other khettaras (4)Others

H	KHETTARA	A DATBASE	
1. Khettara Number B-016 (G-1)	MP	2. Name of commune	Chouater (G-2)
3. Name of khettara Tafejja (G-3)	aret	4. Location of khettara	$\begin{array}{c c} X = & \hline 729949.32 & (G-4-1) \\ Y = & 158380.24 & (G-4-2) \end{array}$
nave knettara water right	10 (G-5-2)       families         10 (G-6-2)       families         8 (G-7-1)       days	9. Histry of discharge of khettara	1991 janvier: 66 litter/sec 1998 mars: 0.4 litter/sec 2000 julliet: 0 litter/sec 2003 julliet: 0 litter/sec
8.Discharge of khettara (latest)	(G-8) lit/sec	(I-10)	
<ul> <li>10. History of khettara water flow</li> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(5) No water in (6)The khettar year in the (7)The discha	n the dry season in the past five ra has water flow, but the disch recent five years. rge of the khettara is constant rge of the khettara is increased	arge of khettara is reduced each
11. Total area of farmland	45 ha A-1)	12. Irrigated area by the	khettara <u>45</u> ha (IA-3)
13. The condition of roads 2 (G-15)	appropriate (1) not appropriate (2)	14.The condition of sch	iools 2 appropriate (1) (G-16) <sup>not</sup> appropriate (2)
15.Sanitary service 2 (G-17	appropriate (1) not appropriate (2)	16.Facility of electricity telecomunication	and 2 appropriate (1) (G-18) not appropriate (2)
17. Existence of Association	1 Yes (1), (G-21) No (2)	If yes, Name of Association	Ass duhaut bassin Guir (G-22)
18. Situation of khettara	Length (m)	Sectio hight(m)	n of khettara (average) width (m)
Gallery of khettara (Gallery in catchment area and conduit	289 (E-1-1-1 450 (E-1-1-2	<i>,</i>	
Khettara as open channel	780 (E-2-1)	<u>1.2</u> (E-2-2	
Principal and secondary irrigation canal	1200 (E-4-2-1 0 (E-4-2-2		
19. Rehabilitation Rehabilitation ler khettara	ngth of (M-7)	m) Rehabilitation I irrigation canal	ength of principal (m) (M-8)
20. Influence of desertification	Gallery in catchme	entarea 1 (I-1) R	egulation pond 2 (I-5)
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery of conduit Open channel khe	ttara <u>1</u> (I-2) Ir	rigation canals 2 (I-7)
21.Demandes of habitants (water res		Yes (1), No (2)	
Rehabilitation of khettara 1 Installing pump 1 Rehabilitation of irrigation canal 1	(G-19-1) (G-19-2) Cor (G-19-3)	Protection di nstruction of public wells for	ike against flood         0         (G-19-4)           domestic water         1         (G-19-5)           Others         0         (G-19-6)
22.Demandes of habitants (Aglicultua	al and social support	) Yes (1), No (2)	0
Agriculture (storage,production	n, transporttion of proc Rehabilitatio	duct , etc.) 1 (G-20-1)	School         0         (G-20-4           Sanitary system         1         (G-20-5           Hospital         1         (G-20-6           Others         1         (G-20-7
23. Importance of khettara (1) Unique source for both of pr (2) Unique source for irrigition (3) Main source for irrigation		on (4) Partial source for (5) Supplementary so (6) Neglected	irrigation burce for irrigation
24. Possibility of extension of khettar 2 Yes (1), No (2) If no, th (G-24)	e reason 2	(1)Constrains in landscape (2)Prohibited by law	(3)Existence of other khettaras (4)Others

1. Khettara Number B-017 MP (G-1)		2. Name of commune Chouater (G-2)
		· · ·
3. Name of khettara Chouater (G-3)		4. Location of khettara $X = 730672.03$ (G-4-1) Y = 139913.61 (G-4-2)
5. Number of families who 30 (G-5-2) have khettara water right		9. Histry of discharge
6. Number of beneficialies 30 (G-6-2)	families	of khettara
7. Cycle of kehttara water right 16 (G-7-1)	days	
8.Discharge of khettara (latest) 19.3 (G-8)	lit/sec	(I-10)
10. History of khettara water flow 7	(I-9)	
(2)No water in the last two-decade(6)T(3)No water in the last decade(4)No water in the past five years(7)T	The khettara year in the T The dischar	n the dry season in the past five years ra has water flow, but the discharge of khettara is reduced each recent five years. arge of the khettara is constant arge of the khettara is increased
11. Total area of farmland 30 ha (IA-1)		12. Irrigated area by the khettara [20]ha (IA-3)
13. The condition of roads 2 appropriate (G-15) not appropri		14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 appropriate (G-17) not appropr		16.Facility of electricity and telecomunication1 (G-18)appropriate (1) not appropriate (2)
	Yes (1), No (2)	If yes, Name of Ass Haut Guir Association (G-22)
18 Situation of khettara	th (m)	Section of khettara (average) hight(m) width (m)
	(E-1-1-1) (E-1-1-2)	
	(E-2-1)	<u>3.5</u> (E-2-2) <u>2.5</u> (E-2-3)
	(E-4-2-1) (E-4-2-2)	
19. Rehabilitation Rehabilitation length of khettara	л-7) (r	(m) Rehabilitation length of principal (m) irrigation canal (M-8)
20. Influence of desertification		
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification Open char	conduit	2 (I-2) Irrigation canals 1 (I-7)
21.Demandes of habitants (water resources)		Yes (1), No (2)
Rehabilitation of khettara 1 (G-19- Installing pump 0 (G-19- Rehabilitation of irrigation canal 1 (G-19-	2) Con	Protection dike against flood 1 (G-19-4) nstruction of public wells for domestic water 0 (G-19-5) Others 0 (G-19-6)
22.Demandes of habitants (Aglicultual and social		
		School 0 (G-20-4)
Agriculture (storage,production, transporttic Rel	nabilitatior	duct , etc.)         1         (G-20-1)         Sanitary system         1         (G-20-5)           on of roads         1         (G-20-2)         Hospital         (G-20-6)           ctric supply         0         (G-20-3)         Others         0         (G-20-7)
23. Importance of khettara 3 (G-2 (1) Unique source for both of potable water a (2) Unique source for irrigtion (3) Main source for irrigation	,	
24. Possibility of extension of khettara 0 Yes (1), No (2) If no, the reason (G-24) (G-24)		<ul><li>(1)Constrains in landscape</li><li>(2)Prohibited by law</li><li>(3)Existence of other khettaras</li><li>(4)Others</li></ul>

1. Khettara Number B-018 (G-1)	MP		nouater G-2)
3. Name of khettara (G-3)	niaa		(= <u>731995.18</u> (G-4-1) (G-4-2)
5. Number of families who have khettara water right	_	9. Histry of discharge 0 of khettara	
6. Number of beneficialies	45 (G-6-2) families		
7. Cycle of kehttara water right	14 (G-7-1) days		
8.Discharge of khettara (latest)	10 (G-8) lit/sec	(I-10)	
10. History of khettara water flow 7	(I-9)		
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The discha	n the dry season in the past five years a has water flow, but the discharge recent five years. rge of the khettara is constant rge of the khettara is increased	
11. Total area of farmland	100 ha A-1)	12. Irrigated area by the khe	ettara <u>50</u> ha (IA-3)
13. The condition of roads 2 (G-15)	appropriate (1) not appropriate (2)	14. The condition of schools	G-16) appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 (G-17	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication	1 appropriate (1) (G-18) not appropriate (2)
17. Existence of Association	1 Yes (1), (G-21) No (2)		s Haut Guir -22)
18. Situation of khettara	Length (m)	Section of hight(m)	khettara (average) width (m)
Gallery of khettara (Gallery in	<u>200</u> (E-1-1-1)	) <u>1</u> (E-1-4-1)	<u>0.8</u> (E-1-5-1)
catchment area and conduit	<u>600</u> (E-1-1-2)	) <u>1.2</u> (E-1-4-2)	<u>0.8</u> (E-1-5-2)
Khettara as open channel	<u>1600</u> (E-2-1)	0.4 (E-2-2)	<u>0.4</u> (E-2-3)
Principal and secondary irrigation canal	600 (E-4-2-1 500 (E-4-2-2		0.4 (E-4-1-1) 0.6 (E-4-1-2)
19. Rehabilitation Rehabilitation ler khettara	gth of (M-7)	m) Rehabilitation leng irrigation canal	th of principal (m) (M-8)
20. Influence of desertification			
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	2 (I-2) Irriga	lation pond (I-5) tion canals 1 (I-7)
21.Demandes of habitants (water reso	ources)	Yes (1), No (2)	
Rehabilitation of khettara 1 Installing pump 0 Rehabilitation of irrigation canal 1	(G-19-1) (G-19-2) Cor (G-19-3)	Protection dike a nstruction of public wells for don	
22.Demandes of habitants (Aglicultua	I and social support	) Yes (1), No (2)	
Agriculture (storage,productior	Rehabilitatio		School         0         (G-20-4)           anitary system         1         (G-20-5)           Hospital         0         (G-20-6)           Others         0         (G-20-7)
23. Importance of khettara 2 (1) Unique source for both of po (2) Unique source for irrigtion (3) Main source for irrigation		on (4) Partial source for irrig (5) Supplementary source (6) Neglected	
24. Possibility of extension of khettar 0 Yes (1), No (2) If no, the (G-24)	e reason 0		Existence of other khettaras Others

1. Khettara Number B-019 (G-1)	MP	2. Name of commune Chouater (G-2)
		4. Location of khettara X = 731436.46 (G-4-1)
3. Name of khettara (G-3)	DUI	Y = 140516.82  (G-4-2)
5. Number of families who have khettara water right	20 (G-5-2) families	9. Histry of discharge
6. Number of beneficialies	20 (G-6-2) families	of khettara
7. Cycle of kehttara water right	24 (G-7-1) days	
8.Discharge of khettara (latest) 10	0.8 (G-8) lit/sec	(I-10)
10. History of khettara water flow 7	(I-9)	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The discha	In the dry season in the past five years ra has water flow, but the discharge of khettara is reduced each recent five years. arge of the khettara is constant arge of the khettara is increased
11. Total area of farmland	60 ha A-1)	12. Irrigated area by the khettara [20]ha (IA-3)
13. The condition of roads 2 (G-15	appropriate (1)	14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 (G-17	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication1 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association	1 Yes (1), (G-21) No (2)	If yes, Name of AssociationAss Essalam El Hajoui (G-22)
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit	0 (E-1-1-1) 0 (E-1-1-2)	
Khettara as open channel	<u>1700</u> (E-2-1)	4 (E-2-2) <u>3.5</u> (E-2-3)
Principal and secondary irrigation canal	1500 (E-4-2-1 0 (E-4-2-2	
19. Rehabilitation Rehabilitation ler khettara	gth of (M-7)	(m) Rehabilitation length of principal (m) irrigation canal (M-8)
20. Influence of desertification		
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	2 (I-2) Irrigation canals 1 (I-7)
21.Demandes of habitants (water reso		Yes (1), No (2)
Rehabilitation of khettara 1	(G-19-1) (G-19-2) Cor	Protection dike against flood 1 (G-19-4 nstruction of public wells for domestic water 0 (G-19-5
Installing pump 0 Rehabilitation of irrigation canal 1	(G-19-2) (G-19-3)	Others O (G-19-5
22.Demandes of habitants (Aglicultua	I and social support	t) Yes (1), No (2)
Agriculture (storage,productior	Rehabilitation	
23. Importance of khettara 4 (1) Unique source for both of po (2) Unique source for irrigtion (3) Main source for irrigation	(G-23) otable water and irrigation	
24. Possibility of extension of khettar 2 Yes (1), No (2) If no, the (G-24)	e reason 3	<ul><li>(1)Constrains in landscape</li><li>(2)Prohibited by law</li><li>(3)Existence of other khettaras</li><li>(4)Others</li></ul>

KHETTARA DATBASE						
1. Khettara Number	B-020 MP		2. Name of commune	Talsin	t	
	(G-1)			(G-2)		
3. Name of khettara	Afia Ifatsan	Ĭ	4. Location of khettara	X =	687520.89	(G-4-1)
	(G-3)			Y =	215261.42	(G-4-2)
5. Number of families who have khettara water right	60 (G-5-2)	families	9. Histry of discharge		0 litter/sec	
6. Number of beneficialies	60 (G-6-2)	families	of khettara		6 litter/sec 9 litter/sec	
7. Cycle of kehttara water righ	t 19 (G-7-1)	days			0 litter/sec	
8.Discharge of khettara (latest	t) 0.5 (G-8)	lit/sec	(I-10)	2003: 0	.5 litter/sec	

(5) No water in the dry season in the past five years

(6)The khettara has water flow, but the discharge of khettara is reduced each

(I-9)

#### 10. History of khettara water flow 5+6

(1)No water from 1950s or 1970s.
(2)No water in the last two-decade
(3)No water in the last decade
(4)No water in the past five years

3)No water in the last decade	
4)No water in the past five years	

(G-24)

No water in the last decadeyear in the recent five years.No water in the past five years(7)The discharge of the khettara is constant(8)The discharge of the khettara is increased			
11. Total area of farmland	80 ha (IA-1)	12. Irrigated area by the khe	ettara <u>69</u> ha (IA-3)
13. The condition of roads [] (G	appropriate (1) not appropriate (2)	14.The condition of schools	G-16) appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 1 (G	appropriate (1) -17) not appropriate (2)	16.Facility of electricity and telecomunication	2 appropriate (1) (G-18) not appropriate (2)
17. Existence of Association	1 Yes (1), (G-21) No (2)		so Tifsa 22)
18. Situation of khettara	Length (m)	Section of hight(m)	khettara (average) width (m)
Gallery of khettara (Gallery in catchment area and conduit	10 (E-1-1-1 128 (E-1-1-2		<u>1.5</u> (E-1-5-1) <u>1.3</u> (E-1-5-2)
Khettara as open channel	<u>50</u> (E-2-1)	1.5 (E-2-2)	1.5 (E-2-3)
Principal and secondary irrigation canal	1000 (E-4-2-1 0 (E-4-2-2		0.6 (E-4-1-1) 0 (E-4-1-2)
19. Rehabilitation Rehabilitation khettara	length of 45 ( (M-7)	m) Rehabilitation lengt irrigation canal	h of principal 150 (m) (M-8)
<ul> <li>20. Influence of desertification</li> <li>(1)Significant damage by desertification</li> <li>(2)Partial damage by desertification</li> <li>(3)Negligible damage by desertification</li> </ul>	Gallery in catchme Gallery of conduit Open channel khe	<u>3</u> (I-2) Irrigat	lation pond (I-5) ion canals 3 (I-7)
21.Demandes of habitants (water r	•	Yes (1), No (2)	
Rehabilitation of khettara Installing pump Rehabilitation of irrigation canal	1 (G-19-2) Coi	Protection dike a nstruction of public wells for dom	
22.Demandes of habitants (Aglicul	tual and social support	) Yes (1), No (2)	Sahaal 1 (C 20 4)
Agriculture (storage,produc	Rehabilitatio		School         1         (G-20-4)           Initary system         1         (G-20-5)           Hospital         1         (G-20-6)           Others         2         (G-20-7)
23. Importance of khettara 5 (1) Unique source for both o (2) Unique source for irrigition (3) Main source for irrigation	n	on (4) Partial source for irrig (5) Supplementary source (6) Neglected	
24. Possibility of extension of khet 2 Yes (1), No (2) If no		(1)Constrains in landscape (3)	Existence of other khettaras

(G-25)

(2) Prohibited by law

(4)Others

1. Khettara Number B-021	-	2. Name of commune	Talsint (G-2)
(G-1)			
3. Name of khettara Ikardass (G-3)		4. Location of khettara	X = 682694.33 (G-4-1) Y = 217985.36 (G-4-2)
5. Number of families who 100 (G-	,	9. Histry of discharge	1980: 23 litter/sec 1985: 10 litter/sec
6. Number of beneficialies 100 (G-6	6-2) families	of khettara	1985. 10 litter/sec
7. Cycle of kehttara water right 17 (G-	7-1) days		1995 fevrier: 10 litter/sec 1995 avril: 0 litter/sec
8.Discharge of khettara (latest) 0 (G-8	8) lit/sec	(I-10)	2000: 0 litter/sec
10. History of khettara water flow 5	(I-9)		
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The dischar	n the dry season in the past five a has water flow, but the disch- recent five years. rge of the khettara is constant rge of the khettara is increased	arge of khettara is reduced each
11. Total area of farmland [35] (IA-1)	ha	12. Irrigated area by the	khettara <u>O</u> ha (IA-3)
	priate (1) propriate (2)	14.The condition of sch	ools 1 appropriate (1) (G-16) not appropriate (2)
	priate (1) propriate (2)	16.Facility of electricity telecomunication	and 1 appropriate (1) (G-18) not appropriate (2)
17. Existence of Association (G-2	Yes (1), 21) No (2)	If yes, Name of Association	(G-22)
18 Situation of kbettara	ength (m)	Section hight(m)	n of khettara (average) width (m)
Gallery of khettara (Gallery in 1 catchment area and conduit	00 (E-1-1-1) 40 (E-1-1-2)	) <u>1.7</u> (E-1-4	-1) <u>     1</u> (E-1-5-1)
Khettara as open channel	0 (E-2-1)	0 (E-2-2	······
Principal and secondary 10 irrigation canal	000 (E-4-2-1) 0 (E-4-2-2)		· · ·
19. Rehabilitation Rehabilitation length of khettara	(M-7) (I	m) Rehabilitation le irrigation canal	ength of principal (m) (M-8)
20. Influence of desertification	. ,	-	
(2)Partial damage by desertification Galler	y in catchme y of conduit channel khei	<u>3</u> (I-2) Iri	egulation pond <u>3</u> (I-5) rigation canals <u>2</u> (I-7)
21.Demandes of habitants (water resources		Yes (1), No (2)	
Installing pump 1	G-19-1) G-19-2) Cor G-19-3)	Protection di nstruction of public wells for	ke against flood 1 (G-19-4) domestic water (G-19-5) Others (G-19-6)
22.Demandes of habitants (Aglicultual and so	ocial support	) Yes (1), No (2)	
Agriculture (storage,production, transp	Rehabilitation		School         1         (G-20-4)           Sanitary system         1         (G-20-5)           Hospital         1         (G-20-6)           Others         (G-20-7)
(1) Unique source for both of potable wa (2) Unique source for irrigtion (3) Main source for irrigation	(G-23) ater and irrigation	on (4) Partial source for (5) Supplementary so (6) Neglected	
24. Possibility of extension of khettara Yes (1), No (2) If no, the reasor (G-24)		(1)Constrains in landscape (2)Prohibited by law	(3)Existence of other khettaras (4)Others

1. Khettara Number B-022 MP (G-1)	2. Name of commune Talsint (G-2)
	4. Location of khettara X = <u>686935.84</u> (G-4-1)
3. Name of khettara Ait Boubker (G-3)	Y = $213506.97$ (G-4-2)
5. Number of families who55 (G-5-2) families have khettara water right	9. Histry of discharge
6. Number of beneficialies 55 (G-6-2) families	of khettara
7. Cycle of kehttara water right 13 (G-7-1) days	
8.Discharge of khettara (latest) 9 (G-8) lit/sec	(I-10)
10. History of khettara water flow4(I-9)	
(2)No water in the last two-decade(6)The khet(3)No water in the last decadeyear in the(4)No water in the past five years(7)The discl	r in the dry season in the past five years tara has water flow, but the discharge of khettara is reduced each he recent five years. harge of the khettara is constant harge of the khettara is increased
11. Total area of farmland [20] ha (IA-1)	12. Irrigated area by the khettara [13]ha (IA-3)
13. The condition of roads 2 appropriate (1) (G-15) not appropriate (2)	14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 1 appropriate (1) (G-17) not appropriate (2)	16.Facility of electricity and telecomunication1 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association (G-21) No (2)	If yes, Name of Asso Annakhla Association (G-22)
18. Situation of khettara Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit       2 (E-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	-1) <u>1.2</u> (E-1-4-1) <u>0.6</u> (E-1-5-1)
Khettara as open channel 300 (E-2-1)	
Principal and secondary3000 (E-4-2)irrigation canal0 (E-4-2)	
	(m) Rehabilitation length of principal 55 (m) irrigation canal (M-8)
20. Influence of desertification	
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification Open channel kł	it <u>3</u> (I-2) Irrigation canals <u>3</u> (I-7)
21.Demandes of habitants (water resources)	Yes (1), No (2)
Rehabilitation of khettara 1 (G-19-1) Installing pump 2 (G-19-2) C Rehabilitation of irrigation canal 1 (G-19-3)	Protection dike against flood 1 (G-19-4) Construction of public wells for domestic water (G-19-5) Others (G-19-6)
22.Demandes of habitants (Aglicultual and social suppo	ort) Yes (1), No (2)
	School 1 (G-20-4)
	oduct , etc.)         1         (G-20-1)         Sanitary system         1         (G-20-5)           tion of roads         1         (G-20-2)         Hospital         1         (G-20-6)           ectric supply         (G-20-3)         Others         (G-20-7)
23. Importance of khettara 4 (G-23) (1) Unique source for both of potable water and irriga (2) Unique source for irrigation (3) Main source for irrigation	
24. Possibility of extension of khettara 2 Yes (1), No (2) If no, the reason (G-24) (G-24)	<ul><li>(1)Constrains in landscape (3)Existence of other khettaras</li><li>(2)Prohibited by law (4)Others</li></ul>

KHETTARA DATBASE			
1. Khettara Number B-023 (G-1)	MP	2. Name of commune	Talsint (G-2)
(G-3	amsoust )	4. Location of khettara	X = <u>639195.36</u> (G-4-1) Y = <u>229392.7</u> (G-4-2)
5. Number of families who         have khettara water right         6. Number of beneficialies         7. Cycle of kehttara water right         8.Discharge of khettara (latest)	35         (G-5-2)         families           35         (G-6-2)         families           22         (G-7-1)         days           1.5         (G-8)         lit/sec	9. Histry of discharge of khettara	1984: 10 litter/sec 1990: 12 litter/sec 1994: 10 litter/sec 1998: 5 litter/sec 2001: 2 litter/sec 2003: 1.5 litter/sec
10. History of khettara water flow	5, 6 (1-9)	(I-10)	
10. History of knettara water flow       5, 6       (I-9)         (1)No water from 1950s or 1970s.       (5) No water in the last two-decade       (6)The khettara has water flow, but the discharge of khettara is reduced each         (2)No water in the last decade       (6)The khettara has water flow, but the discharge of khettara is reduced each         (4)No water in the past five years       (7)The discharge of the khettara is increased			
11. Total area of farmland	<u>50</u> ha (IA-1)	12. Irrigated area by the	khettara <u>40</u> ha (IA-3)
13. The condition of roads [] (G-	appropriate (1) not appropriate (2)	14.The condition of sch	(G-16) not appropriate (2)
15.Sanitary service 1 (G-	appropriate (1) not appropriate (2)	16.Facility of electricity telecomunication	and 1 appropriate (1) (G-18) not appropriate (2)
17. Existence of Association	2 Yes (1), (G-21) No (2)	If yes, Name of Association	(G-22)
18. Situation of khettara	Length (m)	Sectio hight(m)	n of khettara (average) width (m)
Gallery of khettara (Gallery in catchment area and conduit Khettara as open channel	60 (E-1-1-1 100 (E-1-1-2 50 (E-2-1)	) <u>1.5</u> (E-1-4	I-1) 1 (E-1-5-1) I-2) 1 (E-1-5-2)
Principal and secondary irrigation canal	7 (E-4-2-1 0 (E-4-2-2	) <u>0.4</u> (E-4-3	B-1) 0.4 (E-4-1-1)
19. Rehabilitation Rehabilitation I khettara	ength of 20 ( (M-7)	m) Rehabilitation le irrigation canal	ength of principal 100 (m) (M-8)
20. Influence of desertification (1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification	Gallery in catchme Gallery of conduit Open channel khe	3         (I-2)         In           ttara         3         (I-3)	egulation pond <u>3</u> (I-5) rigation canals <u>3</u> (I-7)
21.Demandes of habitants (water re	,	Yes (1), No (2)	
Rehabilitation of khettara Installing pump Rehabilitation of irrigation canal	1 (G-19-2) Co	nstruction of public wells for	ke against flood 1 (G-19-4) domestic water 1 (G-19-5) Others (G-19-6)
22.Demandes of habitants (Aglicult	ual and social support	) Yes (1), No (2)	School 4 //C 20 4
Agriculture (storage,producti	Rehabilitatio		School         1         (G-20-4           Sanitary system         1         (G-20-5           Hospital         1         (G-20-6           Others         1         (G-20-7
23. Importance of khettara (1) Unique source for both of (2) Unique source for irrigtior (3) Main source for irrigation	(G-23) potable water and irrigati	on (4) Partial source for (5) Supplementary so (6) Neglected	irrigation burce for irrigation
24. Possibility of extension of khett 2 Yes (1), No (2) If no, (G-24)	the reason 2	(1)Constrains in landscape (2)Prohibited by law	(3)Existence of other khettaras (4)Others

K	<b>HETTARA</b>	DATBASE	
1. Khettara Number B-024 (G-1)	-	2. Name of commune	Boumaryem (G-2)
3. Name of khettara Almou (G-3)	Asdad	4. Location of khettara	X = 636455.27 (G-4-1) Y = 230447.41 (G-4-2)
nave knettara water right         6. Number of beneficialies       2         7. Cycle of kehttara water right       2	5       (G-5-2)       families         5       (G-6-2)       families         1       (G-7-1)       days         0       (G-8)       lit/sec	9. Histry of discharge of khettara (I-10)	1985: 10 litter/sec 1990: 12 litter/sec 1995: 5 litter/sec 1998: 1.5 litter/sec 2001: 0 litter/sec 2003: 0 litter/sec
10. History of khettara water flow       6+6       (I-9)         (1)No water from 1950s or 1970s.       (5) No water in the dry season in the past five years         (2)No water in the last two-decade       (6)The khettara has water flow, but the discharge of khettara is reduced each year in the recent five years.         (4)No water in the past five years       (7)The discharge of the khettara is increased			
11. Total area of farmland	22 ha -1)	12. Irrigated area by the	khettara <u>O</u> ha (IA-3)
13. The condition of roads [1 (G-15)	appropriate (1) not appropriate (2)	14.The condition of sch	(G-16) not appropriate (2)
15.Sanitary service 1 (G-17)	appropriate (1) not appropriate (2)	16.Facility of electricity telecomunication	and 1 appropriate (1) (G-18) not appropriate (2)
17. Existence of Association	G-21) Yes (1), (G-21) No (2)	If yes, Name of Association	(G-22)
18. Situation of khettara	Length (m)	Sectio hight(m)	n of khettara (average) width (m)
Gallery of khettara (Gallery in catchment area and conduit	40 (E-1-1-1) 200 (E-1-1-2)		
Khettara as open channel Principal and secondary irrigation canal	35 (E-2-1) 100 (E-4-2-1 0 (E-4-2-2		3-1) 0.6 (E-4-1-1)
19. Rehabilitation Rehabilitation leng khettara		• • • • • • • • • • • • • • • • • • •	ength of principal (m) (M-8)
20. Influence of desertification (1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification	Gallery in catchme Gallery of conduit Open channel khe	ent area <u>3</u> (I-1) R <u>3</u> (I-2) Ir ttara <u>3</u> (I-3)	egulation pond (I-5) rigation canals 3 (I-7)
21.Demandes of habitants (water reso Rehabilitation of khettara Installing pump Rehabilitation of irrigation canal	(G-19-1)	Yes (1), No (2) Protection di nstruction of public wells for	ke against flood 1 (G-19-4) domestic water (G-19-5) Others (G-19-6)
22.Demandes of habitants (Aglicultual Agriculture (storage,production,	transporttion of proc Rehabilitation	duct , etc.) 1 (G-20-1)	School         1         (G-20-4)           Sanitary system         1         (G-20-5)           Hospital         1         (G-20-6)           Others         (G-20-7)
23. Importance of khettara (1) Unique source for both of por (2) Unique source for irrigation (3) Main source for irrigation		on (4) Partial source for (5) Supplementary sc (6) Neglected	irrigation ource for irrigation
24. Possibility of extension of khettara Yes (1), No (2) If no, the (G-24)	reason	(1)Constrains in landscape (2)Prohibited by law	(3)Existence of other khettaras (4)Others

1. Khettara Number C-001 (G-1)	MP	2. Name of commune Ouad Naam (G-2)
3. Name of khettara Beni (G-3)	ouziem	4. Location of khettara $X = 677373.09$ (G-4-1) Y = 152790.85 (G-4-2)
5. Number of families who have khettara water right	50 (G-5-2) families	9. Histry of discharge 1953 augt: 30 litter/sec
_	50 (G-6-2) families	of khettara 1970 augt: 30 litter/sec
7. Cycle of kehttara water right	14 (G-7-1) days	
8.Discharge of khettara (latest)	9 (G-8) lit/sec	(I-10)
10. History of khettara water flow	6+8 (I-9)	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The discha	n the dry season in the past five years a has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased
11. Total area of farmland [	110 ha IA-1)	12. Irrigated area by the khettara <u>110</u> ha (IA-3)
13. The condition of roads [1 (G-1	appropriate (1) not appropriate (2)	14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 (G-1	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication1 appropriate (1) (G-18)appropriate (1) (1) not appropriate (2)
17. Existence of Association	2 Yes (1), (G-21) No (2)	If yes, Name of G-22
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit	2500 (E-1-1-1 0 (E-1-1-2	) <u>1.5</u> (E-1-4-1) <u>0.6</u> (E-1-5-1)
Khettara as open channel	1800 (E-2-1)	0.4 (E-2-2) 0.4 (E-2-3)
Principal and secondary irrigation canal	1000 (E-4-2-1 500 (E-4-2-2	
19. Rehabilitation Rehabilitation le khettara	ngth of 1800 ( (M-7)	m) Rehabilitation length of principal 700 (m) irrigation canal (M-8)
20. Influence of desertification		
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	3 (I-2) Irrigation canals 3 (I-7)
21.Demandes of habitants (water res	ources)	Yes (1), No (2)
Rehabilitation of khettara 1 Installing pump 2 Rehabilitation of irrigation canal 1	(G-19-1) (G-19-2) Con (G-19-3)	Protection dike against flood 1 (G-19-4) nstruction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultu	al and social support	
Agriculture (storage,productio	Rehabilitatio	
23. Importance of khettara 1 (1) Unique source for both of p (2) Unique source for irrigition (3) Main source for irrigation		on (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khetta 1 (G-24) (G-24)	e reason	(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others

1. Khettara Number C-002 (G-1)		2. Name of commune Ouad Naam (G-2)
	ed Ali	4. Location of khettara X = <u>676197.62</u> (G-4-1) Y = <u>152289.27</u> (G-4-2)
5. Number of families who have khettara water right	180 (G-5-2) families	9. Histry of discharge 1953 augt: 30 litter/sec
6. Number of beneficialies	180 (G-6-2) families	of khettara 1970 augt: 30 litter/sec
7. Cycle of kehttara water right	16 (G-7-1) days	
8.Discharge of khettara (latest)	14.7 (G-8) lit/sec	(I-10)
10. History of khettara water flow	6+8 (I-9)	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The discha	n the dry season in the past five years ra has water flow, but the discharge of khettara is reduced each recent five years. Irge of the khettara is constant Irge of the khettara is increased
11. Total area of farmland	180 ha (IA-1)	12. Irrigated area by the khettara [180]ha (IA-3)
13. The condition of roads 1 (G·	appropriate (1) not appropriate (2)	14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 (G·	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication1 appropriate (1) (G-18)1 or appropriate (2)
17. Existence of Association	2 Yes (1), (G-21) No (2)	If yes, Name of G-22
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit	5000 (E-1-1-1 0 (E-1-1-2	) <u>1.6</u> (E-1-4-1) <u>0.6</u> (E-1-5-1)
Khettara as open channel	4000 (E-2-1)	0.4 (E-2-2) 0.4 (E-2-3)
Principal and secondary irrigation canal	2500 (E-4-2-1 1200 (E-4-2-2	
19. Rehabilitation Rehabilitation khettara	length of 2000 ( (M-7)	(m) Rehabilitation length of principal 2200 (m) irrigation canal (M-8)
20. Influence of desertification		
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	(I-2) Irrigation canals <u>3</u> (I-7)
21.Demandes of habitants (water r	esources)	Yes (1), No (2)
Rehabilitation of khettara Installing pump Rehabilitation of irrigation canal		Protection dike against flood 1 (G-19-4) nstruction of public wells for domestic water (G-19-5) Others 1 (G-19-6)
22.Demandes of habitants (Aglicult	tual and social support	
Agriculture (storage,product	Rehabilitatio	School         2         (G-20-4)           duct , etc.)         2         (G-20-1)         Sanitary system         1         (G-20-5)           n of roads         1         (G-20-2)         Hospital         1         (G-20-6)           tric supply         2         (G-20-3)         Others         2         (G-20-7)
23. Importance of khettara (1) (1) Unique source for both or (2) Unique source for irrigition (3) Main source for irrigation	n	ion (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khet 1 (G-24) Yes (1), No (2) If no,	the reason	<ul><li>(1)Constrains in landscape (3)Existence of other khettaras</li><li>(2)Prohibited by law (4)Others</li></ul>

1. Khettara Number C-003 (G-1)	MP	2. Name of commune Ouad Naam (G-2)
3. Name of khettara Taouz (G-3)		4. Location of khettara $X = 676954.74$ (G-4-1) Y = 152687.85 (G-4-2)
5. Number of families who 2 have khettara water right	05 (G-5-2) families	9. Histry of discharge 1953 augt: 30 litter/sec
6. Number of beneficialies	0 (G-6-2) families	of khettara 1970 augt: 30 litter/sec
7. Cycle of kehttara water right	12 (G-7-1) days	
8.Discharge of khettara (latest)	17 (G-8) lit/sec	(I-10)
10. History of khettara water flow	6+8 (l-9)	
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The discha	n the dry season in the past five years a has water flow, but the discharge of khettara is reduced each recent five years. rge of the khettara is constant rge of the khettara is increased
11. Total area of farmland [	<u>130</u> ha A-1)	12. Irrigated area by the khettara [130]ha (IA-3)
13. The condition of roads 2 (G-15)	appropriate (1) not appropriate (2)	14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 (G-17	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication1 appropriate (1) (G-18)appropriate (1) (1) not appropriate (2)
17. Existence of Association	2 Yes (1), (G-21) No (2)	If yes, Name of G-22
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit	<u>3000</u> (E-1-1-1) 0 (E-1-1-2)	1.4 (E-1-4-1) 0.6 (E-1-5-1)
Khettara as open channel	2400 (E-2-1)	0.4 (E-2-2) 0.4 (E-2-3)
Principal and secondary irrigation canal	1100 (E-4-2-1 0 (E-4-2-2	
19. Rehabilitation Rehabilitation ler khettara	ngth of 700 ( (M-7)	m) Rehabilitation length of principal <u>600</u> (m) irrigation canal (M-8)
20. Influence of desertification		
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	(I-2) Irrigation canals 3 (I-7)
21.Demandes of habitants (water res	ources)	Yes (1), No (2)
Rehabilitation of khettara 1 Installing pump 1 Rehabilitation of irrigation canal 1	(G-19-1) (G-19-2) Cor (G-19-3)	Protection dike against flood 1 (G-19-4) nstruction of public wells for domestic water (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultua	l and social support	
Agriculture (storage,production	Rehabilitation	
23. Importance of khettara (1) (1) Unique source for both of pr (2) Unique source for irrigtion (3) Main source for irrigation		on (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettar 1 Yes (1), No (2) If no, th (G-24)	e reason	(1)Constrains in landscape       (3)Existence of other khettaras         (2)Prohibited by law       (4)Others

1. Khettara Number C-004 (G-1)	MP	2. Name of commune	Ouad Naam (G-2)
3. Name of khettara Lakbira		4. Location of khettara	X = 670848.79 (G-4-1) Y = 151015.46 (G-4-2)
(G-3) 5. Number of families who have khettara water right	(G-5-2) families	9. Histry of discharge	Y = 151015.46 (G-4-2) 1953 augt: 35 litter/sec
		of khettara	1970 augt: 35 litter/sec
7. Cycle of kehttara water right 26	(G-7-1) days		
8.Discharge of khettara (latest) 9	(G-8) lit/sec	(I-10)	
10. History of khettara water flow 6+8	3 (I-9)		
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The dischar	n the dry season in the past five ra has water flow, but the discha- recent five years. rge of the khettara is constant rge of the khettara is increased	arge of khettara is reduced each
11. Total area of farmland (IA-		12. Irrigated area by the	khettara 240ha (IA-3)
	appropriate (1) not appropriate (2)	14.The condition of sch	(G-16) not appropriate (2)
	appropriate (1) not appropriate (2)	16.Facility of electricity telecomunication	and 1 appropriate (1) (G-18) not appropriate (2)
17. Existence of Association	2 Yes (1), (G-21) No (2)	If yes, Name of Association	(G-22)
18. Situation of khettara	Length (m)	Section hight(m)	n of khettara (average) width (m)
Gallery of khettara (Gallery in	<u>3000</u> (E-1-1-1) 0 (E-1-1-2)	) <u>1.2</u> (E-1-4	-1) <u>1.6</u> (E-1-5-1)
Khettara as open channel	2500 (E-2-1)	0.3 (E-2-2	
Principal and secondary [ irrigation canal	<u>1200</u> (E-4-2-1) 800 (E-4-2-2)		,
19. Rehabilitation Rehabilitation lengt khettara	h of 800 (r (M-7)	m) Rehabilitation le irrigation canal	ength of principal 1200 (m) (M-8)
20. Influence of desertification			
(1)Significant damage by desertification (2)Partial damage by desertification	Sallery in catchme Sallery of conduit Open channel khet	<u>2</u> (I-2) Iri	egulation pond (I-5) rigation canals <u>3</u> (I-7)
21.Demandes of habitants (water resour	rces)	Yes (1), No (2)	
Rehabilitation of khettara 1 Installing pump 1 Rehabilitation of irrigation canal 1	(G-19-1) (G-19-2) Cor (G-19-3)	Protection di nstruction of public wells for	ke against flood         1         (G-19-4)           domestic water         2         (G-19-5)           Others         1         (G-19-6)
22.Demandes of habitants (Aglicultual a	nd social support	) Yes (1), No (2)	
Agriculture (storage,production, ti	Rehabilitation		School         2         (G-20-4)           Sanitary system         2         (G-20-5)           Hospital         1         (G-20-6)           Others         2         (G-20-7)
23. Importance of khettara 1 (1) Unique source for both of potal (2) Unique source for irrigtion (3) Main source for irrigation	(G-23) ble water and irrigation	on (4) Partial source for (5) Supplementary so (6) Neglected	irrigation purce for irrigation
24. Possibility of extension of khettara 1 (G-24) Yes (1), No (2) If no, the re		(1)Constrains in landscape (2)Prohibited by law	(3)Existence of other khettaras (4)Others

1. Khettara Number C-005 MP	2. Name of commune Ouad Naam
(G-1)	(G-2)
3. Name of khettara Lakdima (G-3)	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
5. Number of families who 300 (G-5-2) familie have khettara water right	9. Histry of discharge 1955 augl. 55 litter/sec
6. Number of beneficialies 300 (G-6-2) familie	of khettara 1970 augt: 35 litter/sec
7. Cycle of kehttara water right 26 (G-7-1) days	
8.Discharge of khettara (latest) 12 (G-8) lit/sec	(I-10)
10. History of khettara water flow 6+8 (I-9)	
(2)No water in the last two-decade(6)The khe(3)No water in the last decadeyear in(4)No water in the past five years(7)The disc	er in the dry season in the past five years ettara has water flow, but the discharge of khettara is reduced each the recent five years. charge of the khettara is constant charge of the khettara is increased
11. Total area of farmland350 ha(IA-1)	12. Irrigated area by the khettara <u>350</u> ha (IA-3)
13. The condition of roads [1] appropriate (1) (G-15) not appropriate (2)	14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 2 appropriate (1) (G-17) not appropriate (2)	16.Facility of electricity and telecomunication1 appropriate (1) (G-18)appropriate (1) (1) not appropriate (2)
17. Existence of Association 2 Yes (1 (G-21) No (2)	
18. Situation of khettara Length (m)	) Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit       3300 (E-1-1)         (E-1-1)       (E-1-1)	
Khettara as open channel 2700 (E-2-1	
Principal and secondary1300 (E-4-2irrigation canal600 (E-4-2	
19. Rehabilitation Rehabilitation length of [1200 khettara (M-7)	(m) Rehabilitation length of principal 800 (m) irrigation canal (M-8)
20. Influence of desertification	
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification Open channel k	uit <u>3</u> (I-2) Irrigation canals <u>3</u> (I-7)
21.Demandes of habitants (water resources)	Yes (1), No (2)
Rehabilitation of khettara 1 (G-19-1) Installing pump 1 (G-19-2) Rehabilitation of irrigation canal 1 (G-19-3)	Protection dike against flood 1 (G-19-4) Construction of public wells for domestic water 2 (G-19-5) Others 1 (G-19-6)
22.Demandes of habitants (Aglicultual and social supp	ort) Yes (1), No (2)
	School         2         (G-20-4)           product , etc.)         2         (G-20-1)         Sanitary system         1         (G-20-5)           ation of roads         2         (G-20-2)         Hospital         1         (G-20-6)           lectric supply         2         (G-20-3)         Others         1         (G-20-7)
23. Importance of khettara 1 (G-23) (1) Unique source for both of potable water and irrig (2) Unique source for irrigation (3) Main source for irrigation	gation (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettara           1         Yes (1), No (2)         If no, the reason         (G-25)	<ul><li>(1)Constrains in landscape (3)Existence of other khettaras</li><li>(2)Prohibited by law (4)Others</li></ul>

1. Khettara Number C-006 (G-1)	MP	2. Name of commune	Ouad Naam (G-2)
3. Name of khettara Jdida		4. Location of khettara	X = <u>669831.88</u> (G-4-1)
(G-3)			Y = 150733.01 (G-4-2)
5. Number of families who 2 have khettara water right	10 (G-5-2) families	9. Histry of discharge	1953 augt: 30 litter/sec
_	10 (G-6-2) families	of khettara	1970 augt: 30 litter/sec
7. Cycle of kehttara water right	26 (G-7-1) days		
8.Discharge of khettara (latest)	20 (G-8) lit/sec	(I-10)	
10. History of khettara water flow	6+8 (I-9)		
<ul> <li>(1)No water from 1950s or 1970s.</li> <li>(2)No water in the last two-decade</li> <li>(3)No water in the last decade</li> <li>(4)No water in the past five years</li> </ul>	(6)The khettar year in the (7)The dischar	n the dry season in the past five a has water flow, but the discha recent five years. rge of the khettara is constant rge of the khettara is increased	
11. Total area of farmland	170 ha A-1)	12. Irrigated area by the	khettara <u>170</u> ha (IA-3)
13. The condition of roads [1 (G-15	appropriate (1)	14.The condition of scho	
15.Sanitary service 2 (G-17	appropriate (1) not appropriate (2)	16.Facility of electricity a telecomunication	and 1 appropriate (1) (G-18) not appropriate (2)
17. Existence of Association	2 Yes (1), (G-21) No (2)	If yes, Name of Association	(G-22)
18. Situation of khettara	Length (m)	Section hight(m)	of khettara (average) width (m)
Gallery of khettara (Gallery in catchment area and conduit	<u>3350</u> (E-1-1-1) 0 (E-1-1-2)		
Khettara as open channel	2500 (E-2-1)	0.4 (E-2-2)	
Principal and secondary irrigation canal	1600 (E-4-2-1) 800 (E-4-2-2)		,
19. Rehabilitation Rehabilitation ler khettara	gth of 900 ( (M-7)	m) Rehabilitation le irrigation canal	ngth of principal 1000 (m) (M-8)
20. Influence of desertification			
<ul><li>(1)Significant damage by desertification</li><li>(2)Partial damage by desertification</li><li>(3)Negligible damage by desertification</li></ul>	Gallery in catchme Gallery of conduit Open channel khe	<u>2</u> (I-2) Irri	egulation pond (I-5) igation canals 3 (I-7)
21.Demandes of habitants (water res	ources)	Yes (1), No (2)	
Rehabilitation of khettara 1 Installing pump 1 Rehabilitation of irrigation canal 1	(G-19-1) (G-19-2) Cor (G-19-3)	Protection dik nstruction of public wells for o	te against flood 1 (G-19-4) domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultua	. ,	) Yes (1), No (2)	
		,	School 2 (G-20-4)
Agriculture (storage,productior	Rehabilitation	duct , etc.) 2 (G-20-1) n of roads 1 (G-20-2) tric supply 2 (G-20-3)	Sanitary system 2 (G-20-5) Hospital 1 (G-20-6) Others 2 (G-20-7)
23. Importance of khettara 1 (1) Unique source for both of pr (2) Unique source for irrigition (3) Main source for irrigation	(G-23) (df-23) (G-23) (		irrigation
24. Possibility of extension of khettar 1 (G-24) Yes (1), No (2) If no, th	e reason	(1)Constrains in landscape (2)Prohibited by law	(3)Existence of other khettaras (4)Others

1. Khettara Number C-007 MP (G-1)	2. Name of commune Ouad Naam (G-2)
	4. Location of khettara X = 666447.34 (G-4-1)
(G-3)	$Y = \frac{151590.13}{(G-4-2)}$
5. Number of families who Ave khettara water right (G-5-2) families	9. Histry of discharge 1953 augt: 40 litter/sec
6. Number of beneficialies 70 (G-6-2) fami	ilies of khettara 1970 augt: 40 litter/sec
7. Cycle of kehttara water right 24 (G-7-1) day	ys
8.Discharge of khettara (latest) 3.4 (G-8) lit/s	ec (I-10)
10. History of khettara water flow 6+8 (I-9	
(2)No water in the last two-decade(6)The kl(3)No water in the last decadeyear i(4)No water in the past five years(7)The di	ater in the dry season in the past five years hettara has water flow, but the discharge of khettara is reduced each in the recent five years. lischarge of the khettara is constant lischarge of the khettara is increased
11. Total area of farmland 50 ha (IA-1)	12. Irrigated area by the khettara [50]ha (IA-3)
13. The condition of roads [1] appropriate (1) (G-15) not appropriate (2)	(G-10)(-)
15.Sanitary service 1 appropriate (1) (G-17) not appropriate (2)	2)16.Facility of electricity and telecomunication1 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association 2 Yes (G-21) No (	
18. Situation of khettara Length (r	m) Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in 3600 (E-1	· · · · · · · · · · · · · · · · · · ·
catchment area and conduit (E-1	
Khettara as open channel 800 (E-2	-1) 0.4 (E-2-2) 0.4 (E-2-3)
Principal and secondary 800 (E-4	I-2-1) 0.4 (E-4-3-1) 0.4 (E-4-1-1)
irrigation canal 600 (E-4	
19. Rehabilitation Rehabilitation length of 220 khettara (M-7)	00 (m) Rehabilitation length of principal 400 (m) irrigation canal (M-8)
20. Influence of desertification	
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertification Open channel	duit [2] (I-2) Irrigation canals [3] (I-7)
21.Demandes of habitants (water resources )	Yes (1), No (2)
Rehabilitation of khettara 1 (G-19-1)	Protection dike against flood 2 (G-19-4)
Installing pump 1 (G-19-2) Rehabilitation of irrigation canal 1 (G-19-3)	Construction of public wells for domestic water 2 (G-19-5) Others 2 (G-19-6)
22.Demandes of habitants (Aglicultual and social sup	
	School         2         (G-20-4)           product , etc.)         2         (G-20-1)         Sanitary system         2         (G-20-5)           itation of roads         2         (G-20-2)         Hospital         1         (G-20-6)           Electric supply         2         (G-20-3)         Others         2         (G-20-7)
23. Importance of khettara 1 (G-23) (1) Unique source for both of potable water and in (2) Unique source for irrigation (3) Main source for irrigation	rigation (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected
24. Possibility of extension of khettara	
1 Yes (1), No (2) If no, the reason (G-24) (G-25)	(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others

1. Khettara Number C-008 (G-1)	MP	2. Name of commune Ouad Naam (G-2)
3. Name of khettara Lahce	n	4. Location of khettara $X = 668540.99$ (G-4-1) Y = 151570.24 (G-4-2)
	34 (G-5-2) families	9. Histry of discharge 1953 augt: 30 litter/sec
6. Number of beneficialies 400 (G-6-2) families		of khettara 1970 augt: 30 litter/sec
7. Cycle of kehttara water right	0 (G-7-1) days	
	7.4 (G-8) lit/sec	(I-10)
10. History of khettara water flow   6+8   (I-9)		
(1)No water from 1950s or 1970s.(5) No water in the dry season in the past five years(2)No water in the last two-decade(6)The khettara has water flow, but the discharge of khettara is reduced each year in the recent five years.(3)No water in the past five years(7)The discharge of the khettara is constant (8)The discharge of the khettara is increased		
11. Total area of farmland	30 ha A-1)	12. Irrigated area by the khettara [30]ha (IA-3)
13. The condition of roads [1 (G-15)	appropriate (1) not appropriate (2)	14.The condition of schools 1 appropriate (1) (G-16) not appropriate (2)
15.Sanitary service 1 (G-17	appropriate (1) not appropriate (2)	16.Facility of electricity and telecomunication1 (G-18)appropriate (1) not appropriate (2)
17. Existence of Association	2 Yes (1), (G-21) No (2)	If yes, Name of G-22
18. Situation of khettara	Length (m)	Section of khettara (average) hight(m) width (m)
Gallery of khettara (Gallery in catchment area and conduit	4700 (E-1-1-1)	) <u>1.2</u> (E-1-4-1) <u>0.6</u> (E-1-5-1)
Khettara as open channel	1500 (E-2-1)	0.4 (E-2-2) 0.4 (E-2-3)
Principal and secondary irrigation canal	800 (E-4-2-1 800 (E-4-2-2	
19. RehabilitationRehabilitation length of khettara400 (m) (M-7)Rehabilitation length of principal irrigation canal300 (m) (M-8)		
20. Influence of desertification		
(1)Significant damage by desertification (2)Partial damage by desertification (3)Negligible damage by desertificationGallery in catchment area3(I-1)Regulation pond(I-5)Gallery of conduit Open channel khettara3(I-2)Irrigation canals3(I-7)		
21.Demandes of habitants (water resources ) Yes (1), No (2)		
Rehabilitation of khettara1(G-19-1)Protection dike against flood2(G-19-4)Installing pump2(G-19-2)Construction of public wells for domestic water2(G-19-5)Rehabilitation of irrigation canal1(G-19-3)Others2(G-19-6)		
22.Demandes of habitants (Aglicultual and social support) Yes (1), No (2)		
Agriculture (storage,production, transporttion of product , etc.)SchoolCG-20-4)Agriculture (storage,production, transporttion of product , etc.)(G-20-1)Sanitary systemC(G-20-5)Rehabilitation of roads(G-20-2)Hospital(G-20-6)Electric supply(G-20-3)Others(G-20-7)		
23. Importance of khettara 1 (G-23) (1) Unique source for both of potable water and irrigation (2) Unique source for irrigation (3) Main source for irrigation (4) Partial source for irrigation (5) Supplementary source for irrigation (6) Neglected		
24. Possibility of extension of khettar 1 Yes (1), No (2) If no, the (G-24)	e reason	(1)Constrains in landscape (3)Existence of other khettaras (2)Prohibited by law (4)Others