

Supplementary Material

Table S1. Summary of water quality test

	Type of location	Na (mq)	Ca+Mg (mq/L)	SAR (meq/L)	EC (μ s/cm)
1	Qanat of Maranjab caravanserai	228.44	10.4	100.18	9280
2	Rangeland	152.30	14	57.56	6180
3	Rangeland of camels	220.83	14.8	81.18	12100
4	Agriculture (depth=120m)	357.89	36.4	83.89	17100
5	Agriculture	186.14	34.4	44.88	9290
6	Agriculture	78.26	25.2	22.05	3960
7	Agriculture	82.49	27.6	22.21	3990
8	Pistachio orchard (depth=60m)	122.68	22.8	36.34	7310
9	Pistachio orchard (depth=20m)	93.07	6.8	50.47	3910
10	Agriculture	31.73	2	31.73	1200
11	Agriculture	76.15	4	53.84	2460
12	Agriculture	160.76	39.2	36.31	8720
13	Agriculture	95.18	4	67.31	3280
14	Agriculture	46.53	1.2	60.08	1310

Table S2. Summary of soil quality test

	pH	Ec (ds/m)	CaCO ₃ %	N %	P (ppm)	K (ppm)	Clay %	Silt %	Sand %	Soil texture
1	7.42	2.76	17.92	0.06	8.39	535.75	27.6	3.28	69.12	sandy clay loam
2	7.98	4.29	17.50	0.03	11.72	420.95	11.6	1.28	87.12	loam sandy
3	7.44	2.71	16.25	0.04	11.30	459.22	7.6	1.28	91.12	sand
4	6.95	5.41	17.92	0.04	11.22	707.96	9.6	3.28	87.12	loam sandy
5	6.8	15.83	17.92	0.04	9.74	669.69	15.6	1.28	83.12	sandy loam
6	7.3	6.21	16.25	0.05	8.43	669.69	11.6	1.28	87.12	loam sandy
7	7.21	4.94	19.17	0.02	1.80	344.41	15.6	7.28	77.12	sandy loam
8	7.36	2.66	15.83	0.04	1.15	650.56	13.6	7.28	79.12	sandy loam
9	7.47	3.31	15.42	0.10	8.58	746.23	25.6	11.28	63.12	sandy clay loam
10	6.8	19.93	18.75	0.05	7.13	114.80	11.6	1.28	87.12	loam sandy
11	7.55	3.62	15.83	0.03	10.25	420.95	7.6	1.28	91.12	sand
12	7.29	2.15	17.08	0.06	8.84	727.09	9.6	1.28	89.12	loam sandy
13	8.85	11.8	18.75	0.04	6.46	133.94	9.6	1.28	89.12	loam sandy
14	8.04	4.18	17.08	0.04	9.98	688.82	7.6	1.28	91.12	sand
15	7.11	9.69	16.25	0.08	9.91	650.56	13.6	3.28	83.12	loam sandy
16	7.14	8.86	16.25	0.07	8.81	727.09	17.6	3.28	79.12	sandy loam
17	8.07	6.89	15.00	0.04	10.21	114.80	13.6	1.28	85.12	loam sandy
18	7.12	9.17	16.67	0.09	7.66	133.94	31.6	35.28	33.12	clay loam

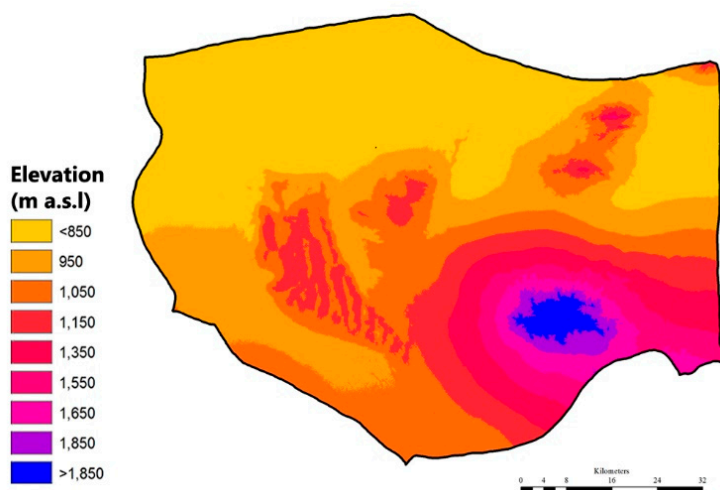


Figure S1. The topography of the county Aran-Bidgol (GIS information received from Iran national cartographic center, map by using Autocad, GIS, google earth)

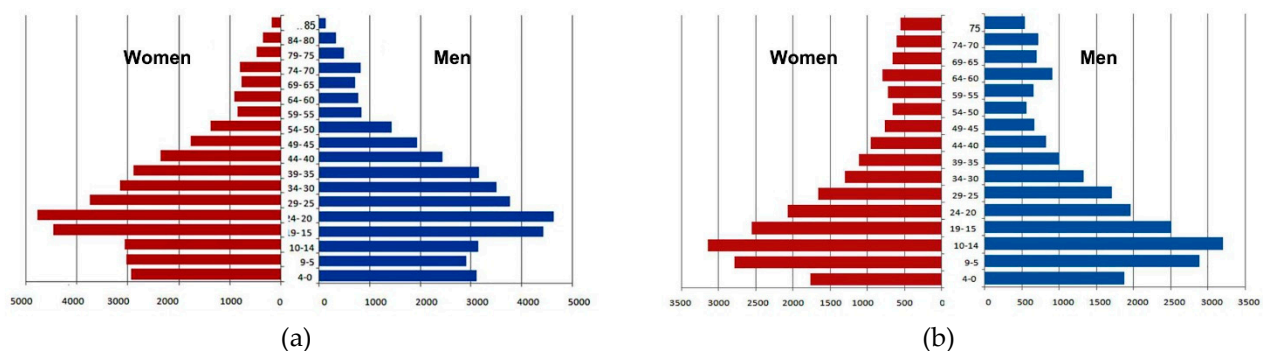


Figure S2. Age-gender-pyramid of Aran-Bidgol county: (a) urban zones; (b) rural zones (Source: Statical Center of Iran, 2006)

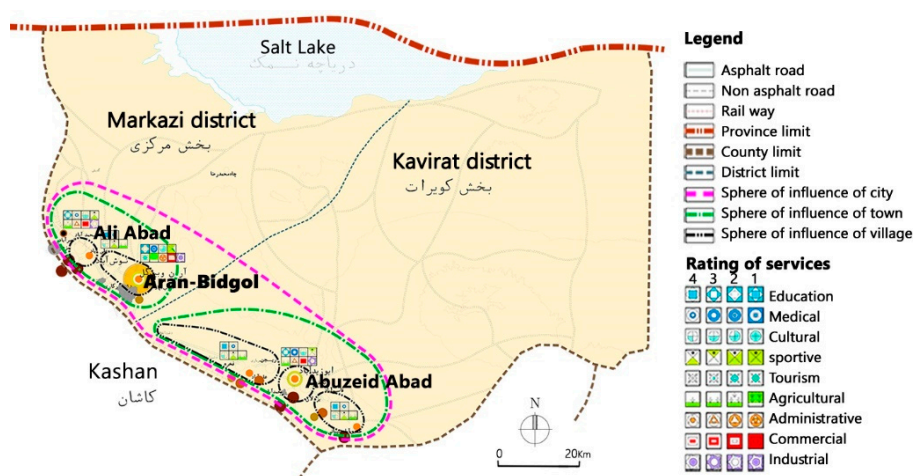


Figure S3. Service facilities' spheres of influence evaluation (Source: comprehensive planning-2013, received from the general administration of urban planning of Isfahan province, original scale 1:250000)

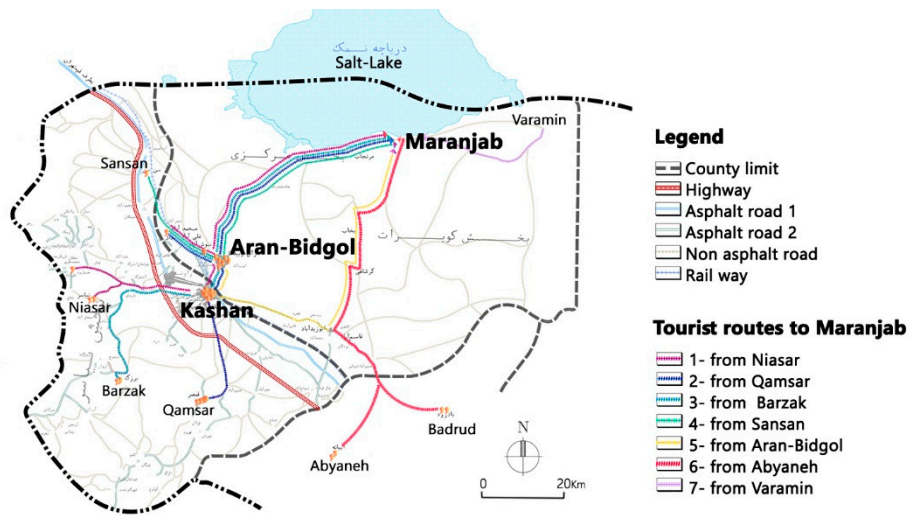


Figure S4. Proposed Tourist routes to Maranjab desert (Source: Comprehensive tourism planning, 2011. received from the municipality of Aran-Bidgol, original scale 1:600000)