

Appendix 6-18 Freight transport plan

(1)

Exclusive Freight transport plan(2005)

Station No.	0-1	1-7	7-A	7-B	9-H	9-I3	13-17	17-22	22-C	22-23	23-27	27-31	31-E	31-F	35-39	39-F	39-41	41-6	41-45	45-46	Total
Section	23	104	68	30	164	74	83	81	20	7	48	59	94	140	103	60	174	47	235	5	
Hauling Capacity	3,000	3,000	1,200	3,000	1,000	3,000	2,800	1,000	2,800	3,000	2,600	2,600	2,600	2,600	2,600	2,000	2,000	2,600	2,600	2,600	2,600
Coal Net Lon	2,200	2,200	800	2,200	750	2,200	2,100	1,050	2,100	2,200	1,900	1,900	1,900	1,900	1,900	1,500	1,500	1,900	1,900	1,900	1,900
C.S.T.V. Coal (Lon/Week)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C.S.T.V. S-N	0	3,773	15,004	3,206	8,488	4,311	7,013	7,003	0	6,199	34	32	0	999	8,201	5,348	2,354	237	289	0	0
No. of Tr in/week	0	2	18	4	14	5	6	13	0	12	61	61	49	12	5	4	2	0	0	0	0
Tr. Cap./week	0	2	18	4	14	5	6	13	0	12	61	61	49	12	5	4	2	0	0	0	0
Tr. Cap./C.S.T.V.	0	4,320	16,200	9,000	10,500	11,300	12,600	13,650	0	27,120	119,560	119,560	96,040	23,520	9,800	6,000	3,920	0	0	0	0
Tr. Cap./km	0	4,520	16,200	9,000	10,500	11,300	12,600	13,650	0	27,120	119,560	119,560	96,040	23,520	9,800	6,000	3,920	0	0	0	0
Tr. Cap./day	0	152.4	582.4	1.0	1.2	1.5	1.8	1.9	0	4.4	3528.4	3752.0	23.5	1.2	1.1	1.7	0.0	0.0	0.0	0.0	0.0
Train-km	1.2	1.1	2.3	0.5	1.4	1.1	1.1	1.1	0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Train-km/day	59	218	34	328	106	142	301	301	0	24	480	590	752	480	147	69	71	0	0	0	0
Train Formation	32	26	32	11	30	30	30	30	0	32	28	28	28	28	28	22	28	0	0	0	0
Car - km	1,902	5,658	1,091	3,608	3,383	4,269	4,513	4,513	0	768	26,100	32,450	41,360	13,470	4,170	1,509	1,984	0	0	0	0
Modified km	-317	-221	46	-1,347	-210	-315	-572	-572	0	-4	-3,378	-4,098	-4,705	-38	-672	-160	-793	0	0	0	0
Note: Double Loco. S:Single Loco.	4:1	4:1	4:1	4:1	4:1	4:1	4:1	4:1	4:1	4:1	4:1	4:1	4:1	4:1	4:1	4:1	4:1	4:1	4:1	4:1	4:1
C.S.T.V. Copper etc. (Lon/Week)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No. of Tr in/week	0	11,022	11,022	0	11,022	8,833	2,430	2,430	0	2,430	2,430	2,430	2,430	2,430	2,430	2,430	2,430	2,430	2,430	2,430	2,430
Tr. Cap./week	0	11,022	11,022	0	11,022	8,833	2,430	2,430	0	2,430	2,430	2,430	2,430	2,430	2,430	2,430	2,430	2,430	2,430	2,430	2,430
Tr. Cap./C.S.T.V.	0	11,022	11,022	0	11,022	8,833	2,430	2,430	0	2,430	2,430	2,430	2,430	2,430	2,430	2,430	2,430	2,430	2,430	2,430	2,430
Train-km	32	149	32	26	32	32	32	32	0	32	28	28	28	28	28	22	28	0	0	0	0
Car - km	1,051	4,154	1,371	6,185	1,353	1,423	694	694	0	112	768	944	2,240	1,648	754	22	28	0	0	0	0
Modified km	-26	-118	-34	-112	-631	-600	-600	-600	0	-60	-292	-359	-851	-626	-139	-	-	0	0	0	0
C.S.T.V. Fuel (Lon/Week)	0	10,382	10,382	0	10,382	7,852	7,852	7,852	0	7,852	7,852	7,852	7,852	7,852	7,852	7,852	7,852	7,852	7,852	7,852	7,852
Hauling Capacity	3,000	3,000	1,200	3,000	1,000	3,000	2,800	2,800	0	2,800	2,600	2,600	2,600	2,600	2,600	2,000	2,000	2,600	2,600	2,600	2,600
Fuel Net Lon	2,100	2,100	840	2,100	700	2,100	1,960	1,960	0	1,960	1,820	1,820	1,820	1,820	1,820	1,400	1,400	1,820	1,820	1,820	1,820
No. of Tr in/week	6	5	3	5	3	4	4	4	0	4	2	2	2	2	2	2	2	2	2	2	2
Tr. Cap./week	6	5	3	5	3	4	4	4	0	4	2	2	2	2	2	2	2	2	2	2	2
Tr. Cap./C.S.T.V.	12,600	10,500	3,600	10,500	3,600	8,400	7,840	7,840	0	7,840	7,840	7,840	7,840	7,840	7,840	6,000	6,000	7,840	7,840	7,840	7,840
Tr. Cap./km	12,600	10,500	3,600	10,500	3,600	8,400	7,840	7,840	0	7,840	7,840	7,840	7,840	7,840	7,840	6,000	6,000	7,840	7,840	7,840	7,840
Modified km	-143	-143	-143	-143	-143	-143	-143	-143	0	-143	-143	-143	-143	-143	-143	-143	-143	-143	-143	-143	-143
Total	12ton	82ton	12ton	12ton	12ton	12ton	12ton	12ton	12ton	12ton	12ton	12ton	12ton	12ton	12ton	12ton	12ton	12ton	12ton	12ton	12ton
Total	12ton	82ton	12ton	12ton	12ton	12ton	12ton	12ton	12ton	12ton	12ton	12ton	12ton	12ton	12ton	12ton	12ton	12ton	12ton	12ton	12ton
Total	12ton	82ton	12ton	12ton	12ton	12ton	12ton	12ton	12ton	12ton	12ton	12ton	12ton	12ton	12ton	12ton	12ton	12ton	12ton	12ton	12ton

(4)

General Freight transport plan (2010)

Station No.	0-1	1-7	7-A	7-B	9-H	9-I	13-17	17-22	22-C	22-23	23-27	27-31	31-E	31-35	35-39	39-F	39-41	41-G	41-45	45-46	Total
Hauling Capacity (km)	23	104	68	30	164	74	83	81	20	7	48	59	94	140	103	80	124	47	235	5	
Hauling Capacity (ton)	3,000	3,000	1,200	3,000	1,000	3,000	2,800	2,800	3,000	3,000	2,600	2,600	2,600	2,600	2,600	2,000	2,000	2,600	2,600	2,000	
General F. Net. ton	1,720	1,720	700	1,720	380	1,720	1,620	1,620	1,720	1,720	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	
C.S.T.V. General (km/yr.)	0	3,251	1,76	13,932	2,392	13,873	13,947	14,296	4,277	17,562	4,322	3,703	151	3,752	2,541	6,161	2,689	166	2,599	0	
C.S.T.V. General (ton/yr.)	0	883	937	1,141	1,864	2,339	2,508	2,623	4,919	6,632	3,000	3,042	999	1,986	1,814	191	3,737	368	6	0	
C.S.T.V. Export (km/yr.)	0	1,369	0	3,071	0	3,282	3,653	3,741	0	4,760	7,224	7,224	0	7,500	7,662	0	7,662	0	7,741	0	
C.S.T.V. Export (ton/yr.)	0	1,426	86	1,426	1,851	1,235	1,124	1,124	0	943	726	726	267	703	703	618	13	9	7	0	
C.S.T.V. Import (km/yr.)	16,716	15,868	6	14,577	9,837	5,377	5,339	5,321	0	3,389	300	298	53	234	120	831	20	34	7	0	
C.S.T.V. Import (ton/yr.)	0	130	0	130	887	888	1,701	1,701	0	3,240	3,282	3,285	0	3,285	3,285	0	3,287	0	3,304	3,371	
C.S.T.V. Transit (km/yr.)	2,537	2,537	0	2,537	0	2,537	2,537	2,537	0	2,537	2,537	2,537	0	2,537	2,537	0	2,537	0	2,537	2,537	
C.S.T.V. Transit (ton/yr.)	37	37	0	37	0	37	37	37	0	37	37	37	0	37	37	0	37	0	37	37	
C.S.T.V. Others (km/yr.)	0	375	0	375	0	375	375	375	0	375	375	375	0	375	375	0	375	0	375	375	
C.S.T.V. Others (ton/yr.)	130	130	0	130	0	130	130	130	0	130	130	130	0	130	130	0	130	0	130	130	
C.S.T.V. Total (km/yr.)	19,253	23,025	182	34,391	12,229	25,068	25,486	25,895	4,277	28,248	14,383	13,762	204	14,063	13,961	6,079	13,952	502	13,482	10,521	
C.S.T.V. Total (ton/yr.)	2,181	2,964	1,024	3,507	2,049	4,898	4,555	5,575	4,919	10,852	7,045	7,072	1,265	6,010	5,932	6,371	7,110	377	3,384	3,444	
No. of Train/week	12	14	2	21	22	15	16	16	3	17	10	10	1	10	10	6	9	0	9	8	
Tra. Cap./week	20,640	24,080	1,400	36,120	12,760	25,800	25,920	25,920	5,160	29,240	15,000	15,000	1,500	15,000	15,000	6,900	13,500	0	13,500	12,000	
Tra. Cap./C.S.T.V.	1.1	1.0	1.4	10.3	6.2	5.3	5.7	4.6	1.0	2.7	2.1	2.1	1.2	2.5	2.5	10.8	1.9	0.1	4.0	3.5	

S:1
S:2

Train-ka	km/day	70	416	39	189	1,031	317	379	370	17	34	137	169	27	400	294	103	319	0	604	11	4,327
Train Formation	km/day	55	55	22	55	19	55	52	52	48	48	48	48	48	48	48	37	48	-	48	48	
Car - km	km/day	4,337	22,880	1,710	9,300	19,586	17,443	19,730	19,259	823	1,632	6,583	8,091	1,289	19,200	14,126	3,866	15,306	0	29,006	549	215,250
Modified km	km/day	-245	-844	-197	-399	-670	-417	-281	-15	-37	-53	-228	-562	-170	-1,009	-823	-102	-141	-	-32	-	-6,225
Car - km total	km/day	4,092	22,036	1,513	9,501	18,917	17,026	19,449	19,240	786	1,579	6,355	7,529	1,120	18,191	13,303	3,704	15,164	0	28,974	549	209,025

(C.S.T.V. - Transport Cap./752* km * 2 * (1-0.4))

General Freight transport plan (2020)

Station	0-1	1-7	7-A	7-B	9-H	9-I	13-17	17-22	22-C	22-23	23-27	27-31	31-E	31-F	35-38	39-F	39-I	41-G	41-H	45-46	Total
Hauling Capacity	3,000	3,000	3,000	3,000	3,000	3,000	2,800	2,800	3,000	3,000	2,600	2,600	2,600	2,600	2,600	2,000	2,000	2,600	2,600	2,600	2,600
General Net. ton	1,720	1,720	700	1,720	600	1,720	1,624	1,624	1,720	1,720	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
C.S.T.V. General	0	4,047	270	1,283	5,880	17,271	17,367	17,799	5,325	21,865	5,381	5,611	1,388	4,721	3,164	7,670	3,471	207	3,236	8	0
C.S.T.V. (ton/week)	0	1,100	1,187	2,383	5,022	3,411	3,120	3,266	6,124	8,257	3,735	3,787	1,243	2,472	2,333	24	4,652	458	8	0	0
C.S.T.V. Export	0	1,641	0	4,000	0	4,411	4,915	5,038	0	6,938	9,769	9,769	0	10,683	10,000	0	10,000	0	10,393	104,15	0
C.S.T.V. Import	2,882	2,560	116	1,916	249	1,659	1,911	1,511	0	1,767	976	953	361	944	973	831	18	12	2	0	0
C.S.T.V. Transit	18,284	17,356	6	15,974	10,760	5,881	5,870	5,820	0	3,707	328	328	58	256	142	91	35	37	8	0	0
C.S.T.V. Others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C.S.T.V. Total	20,821	25,781	226	35,823	10,837	30,760	30,656	31,184	5,325	34,507	17,955	17,182	246	17,597	16,831	8,279	16,888	244	16,466	13,195	0
No. of Train/week	2,918	3,037	1,283	4,478	5,271	6,077	5,639	7,102	6,124	13,105	8,138	8,370	1,605	7,046	6,905	855	8,349	471	3,706	3,770	0
Trans. Cap./week	22,360	25,800	1,400	41,280	16,800	30,960	30,780	32,400	6,880	39,560	18,000	18,000	1,500	18,000	18,000	8,120	18,000	-	16,500	13,500	0
Tr. Cap./C.S.T.V.	1.1	1.0	6.2	1.0	1.0	1.0	1.0	1.0	1.3	1.1	1.0	1.0	6.1	1.0	1.1	1.0	1.1	-	1.0	1.0	0
by Coal train	7.7	7.0	1.1	9.2	3.2	5.1	5.5	4.6	1.1	3.0	2.2	2.2	0.9	2.6	2.6	9.5	2.2	-	4.5	3.6	0
Train-km	85	446	206	656	381	451	463	23	46	165	202	271	480	353	353	120	425	0	439	131	2,779
Train Formation	55	55	22	55	19	55	52	52	55	48	48	48	48	48	48	37	48	0	48	48	0
Car - km	4,659	24,514	5,984	24,928	20,931	23,430	24,069	1,257	2,208	7,899	9,770	1,289	23,040	16,951	4,440	20,407	0	35,451	617	263,239	0
Modified km	-272	-15	-61	-336	-46	-430	-79	-758	-116	-272	-17	-371	-76	-434	-879	-73	-1,251	0	-73	-12	-5,241
Car - km Total	4,426	24,499	5,323	24,974	20,442	23,350	23,311	1,141	1,936	7,883	9,139	1,365	22,606	16,072	4,513	19,156	0	35,379	605	257,897	0
(5) ton: by Exclusive train (5) ton: by Exclusive train																					

Train-km, Car-km and Locomotive-km (1996~2020) (7)

SECTION	(No. of Train/week · one way)										(km/double way/year)									
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
1996	Exclusive (Loco)	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
	Copper etc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Fuel	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	General goods	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	C. Total	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
2005	Exclusive (Loco)	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Copper etc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Fuel	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	General goods	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
	C. Total	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
2010	Exclusive (Loco)	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
	Copper etc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Fuel	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	General goods	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
	C. Total	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
2020	Exclusive (Loco)	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
	Copper etc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Fuel	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	General goods	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
	C. Total	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24

Note: Not included freight engine running km.

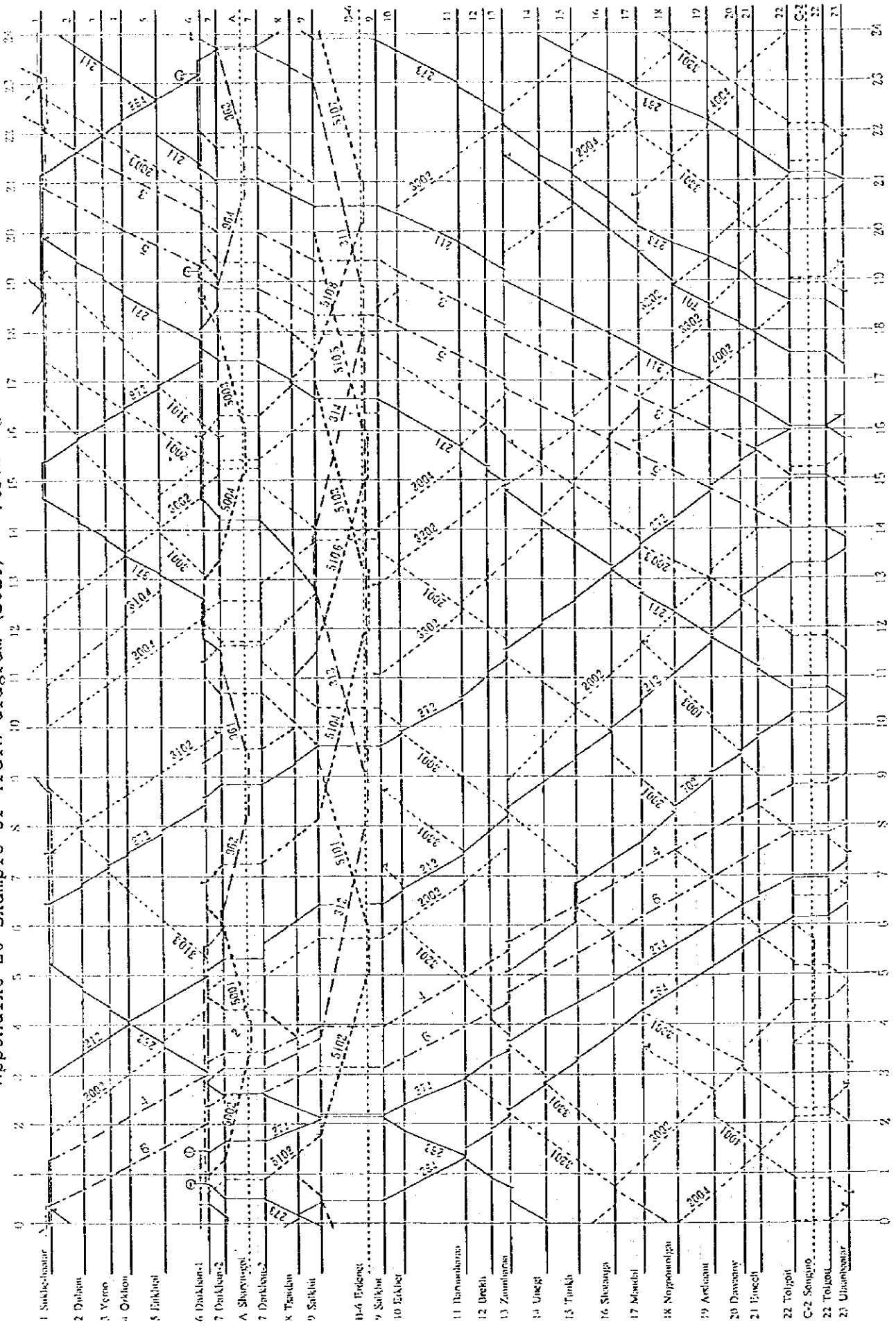
Appendix 6-19 Transport plan (Number of train by section)

Station Number Section km	(Up and Down total)																	
	1	6	7	A 7	9	B 9	13	17	23	27	31	E 31	35	39	F 39	41	G 41	45
2005	99	5	68	30	164	74	83	108	48	48	94	148	103	60	124	47	235	
PC(No./week)	48	97	28	69	28	55	55	69	36	36	6	30	26	6	26	28	26	
(No./ day)	6.9	13.9	4	9.9	4	7.9	7.9	9.9	5.1	5.1	0.9	4.3	3.7	0.9	3.7	4	3.7	5.7
FC(No./week)	48	48	36	62	94	48	52	66	146	144	100	46	30	22	20	-	16	
(No./ day)	6.9	6.9	5+2	9+6	13+2	6.9	7.4	9.4	10+4	10+4	8	6.6	4.3	3.1	2.9	-	2.3	
Total (No./ day)	13.8	20.8	8	19.9	10	14.8	15.3	19.3	19.1	19.1	8.9	10.9	8	4	6.6	4	6	
2010	55	97	28	69	28	55	55	69	36	36	6	30	26	14	26	28	26	
PC(No./week)	7.9	13.9	4	9.9	4	7.9	7.9	9.9	5.1	5.1	0.9	4.3	3.7	2	3.7	4	3.7	
(No./ day)	56	56	40	72	102	56	60	76	192	174	120	56	34	26	22	-	18	
FC(No./week)	8.0	8.0	5	10+6	14+2	8	8.6	10.9	13+4	13+4	10	8	4.9	3.7	3.1	-	2.6	
(No./ day)	15.9	21.9	8	21.9	12	15.9	16.5	20.8	21.1	21.1	10.9	12.3	8.6	5.7	6.8	4	6.3	
Total (No./ day)	62	104	28	76	28	62	76	76	36	36	6	30	26	14	26	28	26	
2020	8.9	14.9	4	10.9	4	8.9	10.9	10.9	5.1	5.1	0.9	4.3	3.7	2	3.7	4	3.7	
PC(No./week)	62	62	42	82	116	66	70	98	192	192	132	64	40	26	28	-	22	
(No./ day)	8.9	8.9	5	11+4	15	9.4	10	14	13+4	13+4	10	9.1	5.7	3.7	4	-	3.1	
FC(No./week)	17.8	23.8	8	22.9	12	18.3	20.9	24.9	21.1	21.1	10.9	13.4	9.4	5.7	7.7	4	6.8	
(No./ day)	1-6	6-7	7-A	7-9	9-B	9-13	-17	-23	-27	-31	-E	-35	-39	-F	-41	--G	--45	
Between station	19	88	6	27	12	16	21	22	18	17	10	11	14	7	9	9	7	
Track	28	117	8	38	17	22	30	32	28	27	16	16	21	8	12	11	11	
Capacity																		

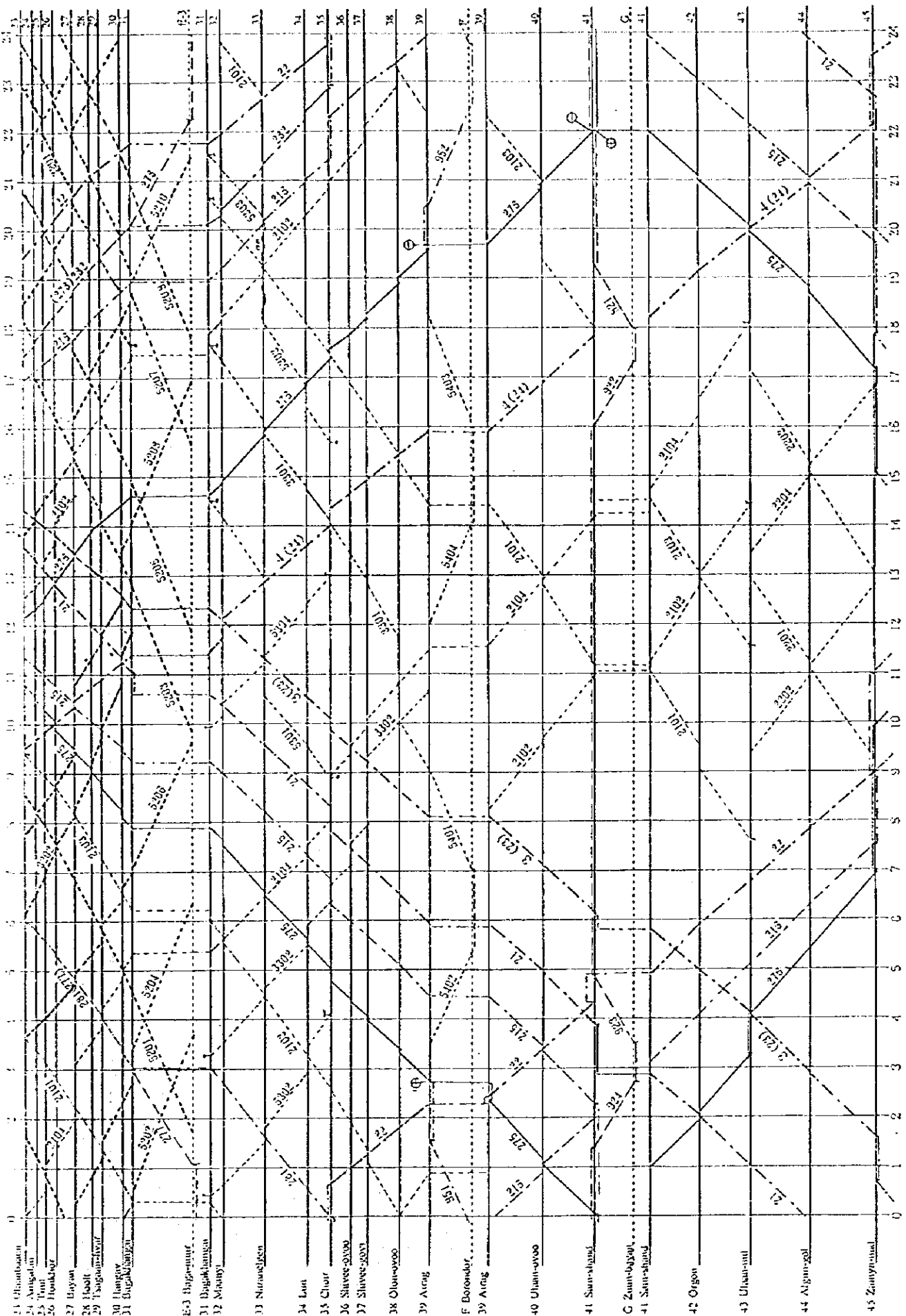
Note : **■** : Indicate double locomotives hauling.

Appendix 6-20 Example of Train diagram (2020)

North Region



(2020) South Region



(2020) Locomotive Utilization Chart : North Region

No. 1

No. of Loco	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Remarks
1		Sukhe-ba.		6							Ulaan-ba.							5						Sukhe-ba.	1	
		Sukhe-ba.		6							Ulaan-ba.															2
														Ulaan-ba.				3						Sukhe-ba.	4	
												Ulaan-ba.							5					Sukhe-ba.	6	
		Sukhe-ba.		4								Ulaan-ba.														7
2		Sukhe-ba.					212							Ulaan-ba.											211	Daily
3		211	Sukhe-ba.								272									Ulaan-ba.				263		Daily
4		263			Sukhe-ba.						(Naushki)								Sukhe-ba.					264		Daily
5		264						Ulaan-ba.								271								Sukhe-ba.		Daily
6		O.H.-1		274							Ulaan-ba.								Ulaan-ba.					273		Daily
7		273	O.H.-1			312				Erdenet			313						O.H.-1							Daily
8		311	O.	-1						O.	-1					314				Erdenet				311		Daily
9					O.H.-1		962			Sha.gol		961		O.H.-1	971	S.8.972			O.H.-1		964		S.gol	963	O.H.-1	Daily
10					Zuunharaa					702					Ulaan-ba.									701	Zuunharaa	Daily
11		Sukhe-ba.								2002										Ulaan-ba.						
12					Ulaan-ba.						2001													Sukhe-ba.		
13										Sukhe-ba.															2004	
14		2004			Ulaan-ba.						Ulaan-ba.														2003	S.8.
15		Ulaan-ba.									3001													Sukhe-ba.	(Naushki)	
16					(Naushki)						Sukhe-ba.														3002	

Note : — : Passenger Train, — — : Freight Train, = = : Freight Train (Double Loco. hauled)

(2020)

North Region

No. 2

No. of Loco	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Remarks	
17			3002				Ulaan-ba.											Ulaan-ba.		3301							
18			3301							Salkhit						3302							Ulaan-ba.				
19							Sukhe-ba.		3102				D.H.-2					3101				Sukhe-ba.					
20																				Ulaan-ba.			3201				
21			3201								Salkhit							3202					Ulaan-ba.				
22		U.B.	4001				Mandal								Mandal			4002				Ulaan-ba.					
23		4004					Ulaan-ba.				4003			Mandal								Mandal			4004		
24		D.H.-1	5102				Erdenet		5101				D.H.-1	5004		Sha.g.	5003			D.H.-1							Double- Loco.
25		(6)					(8-6)						(6)			(A)				(6)							
26		D.H.1	5002		S.G.		D.H.1		5104				Erdenet			5103				D.H.-1							Double- Loco.
27		(6)			(A)		(6)						(8-6)							(6)							
28								D.H.1					5106			Erdenet				5105					D.H.1		Double- Loco.
29								(6)								(8-6)									(6)		
30			5107				D.H.1									D.H.1						Erdenet		5107		Double- Loco.	
31							(6)									(6)						(8-6)					
M62 x2							D.H.1		3103		Sukhe-ba.			3104				D.H.1									
							(6)											(6)									
Total																											
			2M62:				31 Loco.																				
			M62:				2 Loco.																				

Note: —: Passenger Train, - -: Freight Train, = =: Freight Train (Double Loco. hauled)

(2020) Locomotive Utilization Chart : South Region

No. 3

No. of Loco	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Remarks	
1							Ulaan-ba.							4								Z.U.			7	
																						(45)			1	
																						Zaayn-ud	21		2, 5	
																						(45)			1	
							21								Ulaan-ba.											3, 6
2							Ulaan-ba.																		4	
	Z.U.					23								Ulaan-ba.											7	
	(45)																									
																										1
							22			Zaayn-ud																2
									(45)																3: Stand-by	
3	Z.U.					3								Ulaan-ba.	Ulaan-ba.										4	
	(45)																									
							22		Zaayn-ud																	5
									(45)																	6: Stand-by
	Ba. nu.	277					Ulaan-ba.								Ulaan-ba.							278	Ba. nu.		7	
	(E-3)																						(E-3)		7	
	Ba. nu.	277					Ulaan-ba.								Ulaan-ba.								282	Choir		1
	(E-3)																						(35)		1	
	231					Ulaan-ba.																			2	
														Ulaan-ba.											3	
	Ba. nu.	277				Ulaan-ba.								Ulaan-ba.												4
	(E-3)																									4
		281				Ulaan-ba.																				5
														Ulaan-ba.												6
																										6
4															Ulaan-ba.											2
			216				Zaayn-ud								Zaayn-ud											3
							(45)								(45)											
			215							Ulaan-ba.	Ulaan-ba.															
														Ulaan-ba.												5

Note : — : Passenger Train, - - : Freight Train, = = : Freight Train (Double Loco. hauled)

Chapter 7

APPENDIX

- APPENDIX 7-1 Animals Listed as "Very Rare" in Mongolian law on Hunting
- APPENDIX 7-2 Animals Listed as "Rare" in Gov.Res.152 Annex 1
- APPENDIX 7-3 Very Rare Plants Listed in the Mongolian Law on Natural Plants
- APPENDIX 7-4 Rare Plants Listed in Gov.Res.153
- APPENDIX 7-5 Plants Listed in Mongolian Red Data Book
- APPENDIX 7-6 Animals Listed in Mongolian Red Book
- APPENDIX 7-7 Animals in Mongolia Listed in CITES Appendices I and II
- APPENDIX 7-8 Threatened in Mongolia reported by IUCN (1994)
- APPENDIX 7-9 Mongolian Protected Areas
- APPENDIX 7-10 Proposed Protected Areas
- APPENDIX 7-11 Established and Proposed Protected Areas

Appendix 7-1 Animals Listed as "Very Rare" in Mongolian law on Hunting

Class	Scientific Name		English Name
Mammalia	<i>Equus</i>	<i>przewalskii</i>	Przewalskii Horse
	<i>Camelus</i>	<i>bactrianus ferus</i>	Wild Camel
	<i>Ursus</i>	<i>arctos</i>	Gobi Bear
	<i>Alces</i>	<i>alces cameloides</i>	Moose
	<i>Rangifer</i>	<i>tarandus valentinae</i>	Reindeer
	<i>Moschus</i>	<i>moschiferus</i>	Musk Deer
	<i>Castor</i>	<i>fiber</i>	Beaver
	<i>Lutra</i>	<i>lutra</i>	Eurasian Otter
	<i>Uncia</i>	<i>uncia</i>	Snow Leopard
	<i>Cuon</i>	<i>alpinus</i>	Asiatic Wild Dog
	<i>Saiga</i>	<i>tatarica</i>	Saiga Antelope
Aves	<i>Chlamydotis</i>	<i>undulata</i>	Houbara Bustard
	<i>Cygunus</i>	<i>cygunus</i>	Whooper Swan
	<i>Phasianus</i>	<i>colchicus</i>	Ring-necked Pheasant
	<i>Grus</i>	<i>vipio</i>	Whitenaped Crane
	<i>Grus</i>	<i>monacha</i>	Hooded Crane
	<i>Grus</i>	<i>leucogeranus</i>	Siberian Crane
Pisces	<i>Acipenser</i>	<i>schrenki</i>	Amur Sturgeon
	<i>Acipenser</i>	<i>baeri</i>	Siberian Sturgeon

Appendix 7-2 Animals listed as "Rare" in Gov. Res. 152 Annex1

Class	Scientific Name		English Name
Mammalia	<i>Ovis</i>	<i>ammon</i>	Argali
	<i>Capra</i>	<i>sibirica</i>	Siberian Ibex
	<i>Equus</i>	<i>hemionus</i>	Asiatic Wild Ass
	<i>Gazella</i>	<i>subgutturosa</i>	Goitered Gazelle
	<i>Cervus</i>	<i>elaphus</i>	Red Deer
	<i>Alces</i>	<i>alces pfizenmayeri</i>	Elk
	<i>Sus</i>	<i>scrofa</i>	Wild Boar
	<i>Lynx</i>	<i>lynx</i>	Eurasian Lynx
	<i>Martes</i>	<i>foina</i>	Beech Marten
	<i>Felis</i>	<i>lybica</i>	European Wild Cat
	<i>Vormela</i>	<i>peregusna</i>	Margled Polecat
	<i>Citellus</i>	<i>alashanicus</i>	Groundsquirrel
Aves	<i>Tetraogallus</i>	<i>altaicus</i>	Altai Snowcock
	<i>Anser</i>	<i>albifrons</i>	Pied Goose
	<i>Anser</i>	<i>indicus</i>	Barheaded Goose
	<i>Anser</i>	<i>cygnoides</i>	Swan Goose
	<i>Cygnus</i>	<i>olor</i>	Mute Swan
	<i>Cygnus</i>	<i>bewickii</i>	Bewick's Swan
	<i>Anas</i>	<i>formosa</i>	Baikal Teal
	<i>Aythya</i>	<i>baeri</i>	Bear's Pochard
	<i>Aix</i>	<i>galericulata</i>	Mandarin Duck
	<i>Oxyura</i>	<i>leucocephala</i>	White-headed Duck
	<i>Botaurus</i>	<i>stellaris</i>	Eurasian Bittern
	<i>Egretta</i>	<i>albus</i>	Great White Egret
	<i>Platalea</i>	<i>leucorodia</i>	Eurasian Spoonbill
	<i>Ciconia</i>	<i>boycciana</i>	Oriental White Stork
	<i>Ciconia</i>	<i>nigra</i>	Black Stork
	<i>Otis</i>	<i>tarda</i>	Great Bustard
	<i>Limnodromus</i>	<i>semipalmatus</i>	Asiatic Dowitcher
	<i>Himantopus</i>	<i>himantopus</i>	Black-winged Stilt
	<i>Streptopelia</i>	<i>turtur</i>	European Turtle Dove
	<i>Falco</i>	<i>vespertinus</i>	Red-footed Falcon
	<i>Falco</i>	<i>amurensis</i>	Amur Falcon
<i>Pelecanus</i>	<i>crispus</i>	Dalmatian Pelican	
Pisces	<i>Ctenopharyngodon</i>	<i>idella</i>	Grass Carp
	<i>Hypophthalmichthys</i>	<i>molitrix</i>	Silver Carp
	<i>Tinca</i>	<i>Tinca</i>	Tench

Appendix 7-3 (1/3) Very Rare Plants Listed in the Mongolian Law on Natural Plants

English name	Scientific Name	Family
Iljin's arnica	<i>Arnica iljinii</i>	Compositae
Siberian zygodenus	<i>Zygodenus sibiricus</i>	Liliaceae
Fragrant Biebersteinia	<i>Biebersteinia odora</i>	Geraniaceae
Feather-seed dictamnus	<i>Dictamnus dasycarpus</i>	Rutaceae
Red tofildia	<i>Tofildia coccinea</i>	Liliaceae
Single flowered tulip	<i>Tulipa uniflora</i>	Liliaceae
Desert cintanche	<i>Cintanche deserticola</i>	Liliaceae
Creeping juniper	<i>Juniperus sabina</i>	Cupressaceae
Aphyllous anabasis	<i>Anabasis aphylla</i>	Chenopodiaceae
Lanose anabasis	<i>Anabasis eripoda</i>	Chenopodiaceae
Saikhan valerian	<i>Valeriana saichanensis</i>	Valerianaceae
Saussurea	<i>Saussurea involucrata</i>	Compositae
Tibetan lancea	<i>Lancea tibetica</i>	Scrophulariaceae
White flowered dasiphora	<i>Dasiphora lactiflora</i>	Rosaceae
White water-lily	<i>Nymphaea candida</i>	Nymphaeaceae
Brittle budara	<i>Iljinia regelii</i>	Chenopodiaceae
Mongolian chesney	<i>Chesneya mongolica</i>	Leguminosae
Mongolian arrow-wood	<i>Viburnum mongolicum</i>	Caprifoliaceae
Sargent's white rod	<i>Viburnum sargentii</i>	Caprifoliaceae
Golden limonium	<i>Limonium aureum</i>	Plumbaginaceae
Yellow arnebia	<i>Arnebia guttata</i>	Boraginaceae
Manjurian elder	<i>Sambucus manshurica</i>	Caprifoliaceae
Tseden's vetch	<i>Vicia tsydenii</i>	Leguminosae
Rhubarb	<i>Rheum uninerve</i>	Polygonaceae
Sedgerush	<i>Acorus calamus</i>	Araceae
Longleafed androsace	<i>Androsace longifolia</i>	Primulaceae
Macrophyllous gentian	<i>Gentiana macrophylla</i>	Gentianaceae
Swelt gentian	<i>Gentiana pulmonaria</i>	Gentianaceae
Smaller cat's tail	<i>Typha minima</i>	Typhaceae
Mauritanian mallow	<i>Malva mauritiana</i>	Malvaceae
Syanian trollflower	<i>Trollius sajanense</i>	Ranunculaceae
Moorcroft's eleagnus	<i>Elaeagnus moorcroftii</i>	Elaeagnaceae
Siberian fir	<i>Abies sibirica</i>	Pinaceae
Glaucous leatherflower	<i>Clematis glauca</i>	Ranunculaceae
Wide beadruby	<i>Maianthemum dilatatum</i>	Liliaceae
Small-flowered bitter-cress	<i>Cardamine parviflora</i>	Cruciferae
Banzgrach's swertia	<i>Swertia banzaragczii</i>	Gentianaceae
Horsetailed ephedra	<i>Ephedra equistina</i>	Ephedraceae
Fedchencko ephedra	<i>Ephedra fedtschenkoae</i>	Ephedraceae
Dahurian solidago	<i>Solidago dahurica</i>	Compositae
Central Asian asterthemny	<i>Asterothamnus centrali-asiaticus</i>	Compositae
Yellow sophora	<i>Sophora flavescens</i>	Leguminosae
Plume stonecrop	<i>Sedum pallescens</i>	Crassulaceae
Sand strawflower	<i>Helichrysum arenarium</i>	Compositae
Mongolian ammopiptanthus	<i>Ammopiptanthus mongolicus</i>	Leguminosae
Solomon's Seal	<i>Polygonatum humile</i>	Liliaceae
Desert sage	<i>Salvia deserta</i>	Labiatae
Rose rhodiola	<i>Rhodiola rosea</i>	Crassuraceae
Paludal Scheuchzeria	<i>Scheuchzeria palustris</i>	Scheuchzeriaceae
Brachycerous Violet	<i>Viola brachycheira</i>	Violaceae
Two-leafed greater butterfly	<i>Plantanthera bifolia</i>	Orchidaceae

Appendix 7-3 (2/3) Very Rare Plants in the Mongolian Law on Natural Plants

English name	Scientific Name		Family
	<i>Anemarrhena</i>	<i>asphodeloides</i>	Liliaceae
Przewalskii's Gymnocarpos	<i>Gymnocarpos</i>	<i>przewalskii</i>	Caryophyllaceae
Bilberry	<i>Vaccinium</i>	<i>myrtilus</i>	Ericaceae
Wide dryopteris	<i>Dryopteris</i>	<i>dilatata</i>	Aspidiaceae
Aphyllous epipogium	<i>Epipogium</i>	<i>aphyllum</i>	Orchidaceae
Acicular oxytrope	<i>Oxytropis</i>	<i>acanthacea</i>	Leguminosae
Fragile-leaved oxytrope	<i>Oxytropis</i>	<i>fragilifolia</i>	Leguminosae
Grubov's oxytrope	<i>Oxytropis</i>	<i>grubovii</i>	Leguminosae
Common pegania	<i>Peganum</i>	<i>harmala</i>	Zygophyllaceae
Grand lady's-slipper	<i>Cypripedium</i>	<i>macranthum</i>	Orchidaceae
Yellow lady's-slipper	<i>Cypripedium</i>	<i>calceolus</i>	Orchidaceae
Small candock	<i>Nuphar</i>	<i>pumilum</i>	Nymphaeaceae
Monophyllous gueldenstaedtia	<i>Gueldenstaedtia</i>	<i>monophylla</i>	Leguminosae
Crisped lily	<i>Lilium</i>	<i>martagon</i>	Liliaceae
Candlestick lily	<i>Lilium</i>	<i>pensylvanicum</i>	Liliaceae
Kokand Rose	<i>Rosa</i>	<i>kokanica</i>	Rosaceae
Friable Rose	<i>Rosa</i>	<i>laxa</i>	Rosaceae
Macrandrous onion	<i>Allium</i>	<i>macrostemon</i>	Liliaceae
Wild garlic onion	<i>Allium</i>	<i>obliquum</i>	Liliaceae
Alpian sanguisorbia	<i>Sanguisorba</i>	<i>alpina</i>	Rosaceae
Floating arrow head	<i>Sagittaria</i>	<i>natans</i>	Alismataceae
Yellow marsh saxifrage	<i>Saxifraga</i>	<i>hirculus</i>	Saxifragaceae
Naked miterwort	<i>Mitella</i>	<i>nuda</i>	Saxifragaceae
Emarginate chrysanthemia	<i>Chrysanthemum</i>	<i>sinuatum</i>	Compositae
Gobi brachanthemia	<i>Brachanthemum</i>	<i>gobicum</i>	Compositae
Mongolian brachanthemia	<i>Brachanthemum</i>	<i>mongolorum</i>	Compositae
The Mountain phlomy	<i>Phlomis</i>	<i>oreophila</i>	Labiatae
Platyphyllous rice	<i>Zizania</i>	<i>latifolia</i>	Gramineae
Clovy calypso	<i>Calypso</i>	<i>bulbosa</i>	Orchidaceae
Siberian vince toxic	<i>Vincetoxicum</i>	<i>sibiricum</i>	Asclepiadaceae
Golden rhododendron	<i>Rhododendron</i>	<i>aureum</i>	Ericaceae
Adam's rhododendron	<i>Rhododendron</i>	<i>adamsii</i>	Ericaceae
Dahurian rhododendron	<i>Rhododendron</i>	<i>dahuricum</i>	Ericaceae
Ledebour rhododendron	<i>Rhododendron</i>	<i>ledebourii</i>	Ericaceae
Microphyllous rhododendron	<i>Rhododendron</i>	<i>pravifolium</i>	Ericaceae
Sorbiphyllous sorbaria	<i>Sorbaria</i>	<i>sorbifolia</i>	Rosaceae
Ganbold's columbian	<i>Aquilegia</i>	<i>ganboldii</i>	Ranunculaceae
Potanin's incarvillea	<i>Incarvillea</i>	<i>potaninii</i>	Bignoniaceae
Swamp cottonwood	<i>Populus</i>	<i>diversifolia</i>	Salicaceae
Round-leaved sundew	<i>Drosera</i>	<i>rotundifolia</i>	Droseraceae
English sundew	<i>Drosera</i>	<i>anglica</i>	Droseraceae
	<i>Ferula</i>	<i>ferulaeodes</i>	Umbelliferae
Gobi pea shrub	<i>Caragana</i>	<i>gobica</i>	Leguminosae
Brachypodous pea shrub	<i>Caragana</i>	<i>brachypoda</i>	Leguminosae
Tibetan pea shrub	<i>Caragana</i>	<i>tibetica</i>	Leguminosae
Algea	<i>Nematostoc</i>	<i>flagelliforme</i>	
White-leaved olgaea	<i>Olgaea</i>	<i>leucophylla</i>	Compositae
Mongolian potinia	<i>Potinia</i>	<i>mongolica</i>	Rosaceae
Beautiful knapweed	<i>Centaurea</i>	<i>pulchella</i>	Compositae
	<i>Rhaponticum</i>	<i>carthamoides</i>	
Keiski's lily-of-the-valley	<i>Convallaria</i>	<i>keiskei</i>	Liliaceae

Appendix 7-3 (3/3) Very Rare Plants Listed in the Mongolian Law on Nature Plants

English name	Scientific Name		Family
	<i>Codonopsis</i>	<i>clematidea</i>	<i>Campanulaceae</i>
	<i>Halimodendron</i>	<i>halodendron</i>	<i>Leguminosae</i>
Kuznetsov's monkshood	<i>Aconitum</i>	<i>kusnezoffi</i>	<i>Ranunculaceae</i>
Potantin's zygophyllia	<i>Zygophyllum</i>	<i>potaninii</i>	<i>Zygophyllaceae</i>
Altai lousewort	<i>Pedicularis</i>	<i>altaica</i>	<i>Scrophulariaceae</i>
Wormwood-leaved lousewort	<i>Pedicularis</i>	<i>abrotanifolia</i>	<i>Scrophulariaceae</i>
Mongolian adonis	<i>Adonis</i>	<i>mongolica</i>	<i>Cruciferae</i>
White-flowered physochlaina	<i>Physochlaina</i>	<i>albiflora</i>	<i>Solanaceae</i>
Bog cranberry	<i>Oxycoccus</i>	<i>microcarpus</i>	<i>Ericaceae</i>
Galeated orchis	<i>Orchis</i>	<i>militaris</i>	<i>Orchidaceae</i>
Fuchs' orchis	<i>Orchis</i>	<i>fuchsii</i>	<i>Orchidaceae</i>
Cucullated neottianthe	<i>Neottianthe</i>	<i>cucullata</i>	<i>Salicaceae</i>
Kamchatka neottia	<i>Neottia</i>	<i>camtschatea</i>	<i>Orchidaceae</i>
White-flowered peony	<i>Paeonia</i>	<i>lactiflora</i>	<i>Paeoniaceae</i>
Whorled paris	<i>Paris</i>	<i>verticillata</i>	<i>Liliaceae</i>
Barunkhurain licorice	<i>Glycyrrhiza</i>	<i>squamulosa</i>	<i>Leguminosae</i>
Mongolian jurinea	<i>Jurinea</i>	<i>mongolica</i>	<i>Compositae</i>
Heensi gagea	<i>Gagea</i>	<i>heensis</i>	<i>Liliaceae</i>
Mongolian tugarinovy	<i>Tugarinovia</i>	<i>mongolica</i>	<i>Compositae</i>
Quarred sagebrush	<i>Artemisia</i>	<i>lithophilia</i>	<i>Compositae</i>
Finefilamented wormwood	<i>Artemisia</i>	<i>tomentella</i>	<i>Compositae</i>
Yellow wormwood	<i>Artemisia</i>	<i>xanthochroa</i>	<i>Compositae</i>
Lichene	<i>Aspicilia</i>	<i>esculenta</i>	
Friticose tick trefail	<i>Hedysarum</i>	<i>fruticosum</i>	<i>Leguminosae</i>
Tsengel's tick trefail	<i>Hedysarum</i>	<i>sanilense</i>	<i>Leguminosae</i>
Sword-leaved botrychium	<i>Botrychium</i>	<i>lanceolatum</i>	<i>Botrychiaceae</i>
Trifid coralroot	<i>Corrallorhiza</i>	<i>trifida</i>	<i>Orchidaceae</i>
Clavoted club-moss	<i>Lycopodium</i>	<i>clabatum</i>	<i>Lycopodium</i>
Alpine club-moss	<i>Lycopodium</i>	<i>alpinum</i>	<i>Lycopodium</i>
Micropyllous buckthorn	<i>Rhamnus</i>	<i>parvifolia</i>	<i>Rhamnaceae</i>
Ussurian buckthorn	<i>Rhamnus</i>	<i>ussuriensia</i>	<i>Rhamnaceae</i>

Scientific Name	Family
<i>Acanthophyllum pungens</i>	Caryophyllaceae
<i>Achillea acuminata</i>	Compositae
<i>Achillea ledebourii</i>	Compositae
<i>Achnatherum inebrians</i>	Gramineae
<i>Achyrophorus maculatus</i>	Compositae
<i>Aconitum anthoroideum</i>	Ranunculaceae
<i>Aconitum komarovii</i>	Ranunculaceae
<i>Adenophora changaica</i>	Campanulaceae
<i>Adonis sibirica</i>	Ranunculaceae
<i>Agrostemma githago</i>	Caryophyllaceae
<i>Alchemilla changaica</i>	Rosaceae
<i>Alchemilla cyrtopleura</i>	Rosaceae
<i>Alchemilla krylovii</i>	Rosaceae
<i>Alchemilla hebescens</i>	Rosaceae
<i>Alchemilla pavlovii</i>	Rosaceae
<i>Allium altaicum</i>	Liliaceae
<i>Allium gajanthum</i>	Liliaceae
<i>Allium gajanthum</i>	Liliaceae
<i>Allium maximoviczii</i>	Liliaceae
<i>Amygdalus mongolica</i>	Saxifragaceae
<i>Anabasis elatior</i>	Chenopodiaceae
<i>Arundinella hirta</i>	Gramineae
<i>Asparagus oligoclonus</i>	Liliaceae
<i>Asperula humifusa</i>	Rubiaceae
<i>Asperula saxicola</i>	Rubiaceae
<i>Aster sanczarii</i>	Compositae
<i>Asterothamnus molluscus</i>	Compositae
<i>Astragalus altaicus</i>	Leguminosae
<i>Astragalus baitagensis</i>	Leguminosae
<i>Astragalus changaicus</i>	Leguminosae
<i>Astragalus granitovii</i>	Leguminosae
<i>Astragalus gregorii</i>	Leguminosae
<i>Astragalus kurtzschumensis</i>	Leguminosae
<i>Astragalus physocarpus</i>	Leguminosae
<i>Astragalus scabrisetiformis</i>	Leguminosae
<i>Astragalus squarrosulus</i>	Leguminosae
<i>Astragalus vulpinus</i>	Leguminosae
<i>Atragene ochotensis</i>	Ranunculaceae
<i>Atraphaxis danicus</i>	Polygonaceae
<i>Atraphaxis dshinensis</i>	Polygonaceae
<i>Atraphaxis spinosa</i>	Polygonaceae
<i>Atraphaxis compacta</i>	Polygonaceae
<i>Aulackospermum anomalum</i>	Umbelliferae
<i>Batrachium kauffmannii</i>	Ranunculaceae
<i>Batrachium mongolicum</i>	Ranunculaceae
<i>Brachanthemum mongolicum</i>	Compositae
<i>Braya siliquosa</i>	Cruciferae
<i>Bunias cochlearioides</i>	Cruciferae
<i>Bunium capillifolium</i>	
<i>Butomus junceus</i>	Butomaceae
<i>Calamagrostis inexpansa</i>	Gramineae
<i>Calamagrostis turczaninovi</i>	Gramineae
<i>Calligonum gobicum</i>	Polygonaceae
<i>Calligonum junceum</i>	Polygonaceae
<i>Callitriche hermaphroditica</i>	Callitrichaceae
<i>Calutzkya macrocapra</i>	
<i>Calystegia hederacea</i>	Convolvulaceae
<i>Calystegia subvolubilis</i>	Convolvulaceae
<i>Camelina microcarpa</i>	Cruciferae
<i>Caragana spinosa</i>	Leguminosae
<i>Cardamine leucantha</i>	Cruciferae
<i>Cardamine macrophylla</i>	Cruciferae
<i>Cardamine trifida</i>	Cruciferae

Scientific Name	Family
<i>Carduus nutans</i>	Compositae
<i>Carex alba</i>	Cyperaceae
<i>Carex laliacea</i>	Cyperaceae
<i>Carex leporina</i>	Cyperaceae
<i>Carex parva</i>	Cyperaceae
<i>Carex selengensis</i>	Cyperaceae
<i>Carpoceras ceratocarpum</i>	Cruciferae
<i>Cenolophium denudatum</i>	Umbelliferae
<i>Centaurea adpressa</i>	Compositae
<i>Centaurea calva</i>	Compositae
<i>Centaureum pulchellum</i>	Genetianaceae
<i>Cetrania potaninii</i>	
<i>Chelidonium majus</i>	Paraveraceae
<i>Chenopodium chenopodioides</i>	Chenopodiaceae
<i>Chenopodium iljinii</i>	Chenopodiaceae
<i>Chorispora bungeana</i>	Cruciferae
<i>Chrysanthemum chaichingolicum</i>	Compositae
<i>Chrysosplenium nudicaule</i>	Compositae
<i>Cichorium intybus</i>	Compositae
<i>Cimicifuga dahurica</i>	Ranunculaceae
<i>Cirsium pendulum</i>	Compositae
<i>Clematis aethusifolia</i>	Ranunculaceae
<i>Cleome gobica</i>	Capparaceae
<i>Climacoptera subcrassa</i>	Chenopodiaceae
<i>Cortusa brotheri</i>	Primulaceae
<i>Cousinia affinis</i>	Compositae
<i>Crepis czuensis</i>	Compositae
<i>Crypsis schoenoides</i>	Gramineae
<i>Cynomorium soongaricum</i>	Cynomoriaceae
<i>Dianthus hoeltzeri</i>	Caryophyllaceae
<i>Dianthus soongoricus</i>	Caryophyllaceae
<i>Diarthron limifolium</i>	Thymelaeaceae
<i>Draba altaica</i>	Cruciferae
<i>Draba multiceps</i>	Cruciferae
<i>Draba sibirica</i>	Cruciferae
<i>Echinops nanus</i>	Compositae
<i>Elymus excelsus</i>	Gramineae
<i>Elymus fedtschenkoi</i>	Gramineae
<i>Elymus pamilicus</i>	Gramineae
<i>Elymus praecaespitosus</i>	Gramineae
<i>Epilobium davuricum</i>	Onagraceae
<i>Epilobium hirsutum</i>	Onagraceae
<i>Equisetum ramosissimum</i>	Equisetaceae
<i>Equisetum variegatum</i>	Equisetaceae
<i>Eragrostis cilianensis</i>	Gramineae
<i>Eremogonia androsaeca</i>	Caryophyllaceae
<i>Eremogonia juncea</i>	Caryophyllaceae
<i>Eremopyrum distans</i>	Gramineae
<i>Eryngium planum</i>	Umbelliferae
<i>Euphorbia alpina</i>	
<i>Festuca komatovii</i>	Gramineae
<i>Festuca litvinovii</i>	Gramineae
<i>Festuca venusta</i>	Gramineae
<i>Frankenia pulverulenta</i>	Frankeniaceae
<i>Galatella macrosciadia</i>	Compositae
<i>Gentiana algida</i>	Gentianaceae
<i>Gentiana riparia</i>	Gentianaceae
<i>Gnaphalium supinum</i>	Compositae
<i>Goldbachia ikonnikovii</i>	Cruciferae
<i>Goldbachia laevigata</i>	Cruciferae
<i>Goniolimon callicomum</i>	Plumbaginaceae
<i>Gypsophila cephalotes</i>	Caryophyllaceae
<i>Halocnemum strobilaceum</i>	Chenopodiaceae

Scientific Name	Family
<i>Hedysarum dahuricum</i>	Leguminosae
<i>Herniaria glabra</i>	Caryophyllaceae
<i>Hieracium echioides</i>	Compositae
<i>Hordeum bogdanii</i>	Gramineae
<i>Hypericum gebleri</i>	Hypericaceae
<i>Iris halophila</i>	Iridaceae
<i>Isatis tinctoria</i>	Cruciferae
<i>Juncellus pannonicus</i>	
<i>Juncus articulatus</i>	Juncaceae
<i>Juniperus dahurica</i>	Cupressaceae
<i>Juniperus pseudosadina</i>	Cupressaceae
<i>Jurinea chaetocarpa</i>	Compositae
<i>Kalidium caspicum</i>	Chenopodiaceae
<i>Kobresia robusta</i>	Cyperaceae
<i>Krylovia eremophila</i>	Compositae
<i>Lactuca undulata</i>	Compositae
<i>Lagochilus bungei</i>	Labiatae
<i>Lathyrus quinquevius</i>	Leguminosae
<i>Leonurus panzerioides</i>	Labiatae
<i>Ligularia soongarica</i>	Compositae
<i>Lilium buschianum</i>	Liliaceae
<i>Lilium potaninii</i>	Liliaceae
<i>Limonium gobicum</i>	Plumbaginaceae
<i>Limonium grubovii</i>	Plumbaginaceae
<i>Linaria hepatica</i>	Scrophulariaceae
<i>Linum palleescens</i>	Linaceae
<i>Linum usitatissimum</i>	Linaceae
<i>Lophanthus krylovii</i>	Labiatae
<i>Lycium potsinii</i>	Solanaceae
<i>Lycopodium annotinum</i>	Lycopodiaceae
<i>Lysiella nevskii</i>	Orchidaceae
<i>Matricaria recutita</i>	Compositae
<i>Megacarpaea megarocarpa</i>	Cruciferae
<i>Melandrium mongolicum</i>	Caryophyllaceae
<i>Melilotus albus</i>	Leguminosae
<i>Melilotus wolgicus</i>	Leguminosae
<i>Meniocus iinifolius</i>	Cruciferae
<i>Melica nutans</i>	Gramineae
<i>Microstigma junatovii</i>	Cruciferae
<i>Middeneorfia borysthentica</i>	Lythraceae
<i>Minuartia arctica</i>	Caryophyllaceae
<i>Minuartia regeliana</i>	Caryophyllaceae
<i>Minuartia stricta</i>	Caryophyllaceae
<i>Moehringia umbrosa</i>	Caryophyllaceae
<i>Moneses uniflora</i>	Pyrolaceae
<i>Najas marina</i>	Najadaceae
<i>Nepeta densiflora</i>	Labiatae
<i>Nepeta pannonica</i>	Labiatae
<i>Nuphar lutea</i>	Nymphaeaceae
<i>Nymphaea tetragona</i>	Nymphaeaceae
<i>Oxalis acetosella</i>	Oxalidaceae
<i>Oenanthe javanica</i>	Umbelliferae
<i>Olgaea lomonosovii</i>	Compositae
<i>Onosma transrhynense</i>	Boraginaceae
<i>Oxytropis diantha</i>	Leguminosae
<i>Oxytropis falcata</i>	Leguminosae
<i>Oxytropis gorbunovii</i>	Leguminosae
<i>Oxytropis komarovii</i>	Leguminosae
<i>Oxytropis krylovii</i>	Leguminosae
<i>Oxytropis ladyginii</i>	Leguminosae
<i>Oxytropis mongolica</i>	Leguminosae
<i>Oxytropis saposhnikovii</i>	Leguminosae
<i>Oxytropis sordida</i>	Leguminosae

Scientific Name	Family
<i>Oxytropis sutaica</i>	Leguminosae
<i>Oxytropis tenuis</i>	Leguminosae
<i>Paeonia anomala</i>	Paeniaceae
<i>Papaver saichanense</i>	Papaveraceae
<i>Papaver changaica</i>	Papaveraceae
<i>Pedicularis dasystachys</i>	Scrophulariaceae
<i>Pedicularis fissa</i>	Scrophulariaceae
<i>Pedicularis proboscidea</i>	Scrophulariaceae
<i>Petrosimonia litwinowii</i>	Chenopodiaceae
<i>Petrosimonia sibirica</i>	Chenopodiaceae
<i>Peucedanum terebinthaceum</i>	Umbelliferae
<i>Phleum alpinum</i>	Gramineae
<i>Phlomis pratensis</i>	Labiatae
<i>Phragmites communis</i>	Gramineae
<i>Pinguicula alpina</i>	Lentibulariaceae
<i>Pinus sibirica</i>	Pinaceae
<i>Piptatherum songaricum</i>	Gramineae
<i>Plantago komarovii</i>	Plantaginaceae
<i>Poa kenteica</i>	Gramineae
<i>Poa reverdattoi</i>	Gramineae
<i>Poa supina</i>	Gramineae
<i>Poacynum hendersonii</i>	
<i>Polygonum dumetorum</i>	Polygonaceae
<i>Potamogeton lucens</i>	Potamogetonaceae
<i>Potamogeton natans</i>	Potamogetonaceae
<i>Potamogeton obtusifolius</i>	Potamogetonaceae
<i>Potamogeton praelongus</i>	Potamogetonaceae
<i>Potentilla arenosa</i>	Rosaceae
<i>Potentilla chrysantha</i>	Rosaceae
<i>Potentilla ikonnikovii</i>	Rosaceae
<i>Potentilla imbricata</i>	Rosaceae
<i>Potentilla norvegica</i>	Rosaceae
<i>Potentilla regeliana</i>	Rosaceae
<i>Puccinellia przewalskii</i>	Gramineae
<i>Pugionium pterocarpum</i>	Cruciferae
<i>Pulicaria prostrata</i>	Compositae
<i>Pyrethrum alatavicum</i>	Compositae
<i>Pyrethrum changaicum</i>	Compositae
<i>Pyrethrum pulchrum</i>	Compositae
<i>Rhizoplaca baranovii</i>	
<i>Rhodiola algida</i>	Crassulaceae
<i>Ribes fragrans</i>	Saxifragaceae
<i>Ribes graveolens</i>	Saxifragaceae
<i>Ribes heterotrichum</i>	Saxifragaceae
<i>Ribes hispidulum</i>	Saxifragaceae
<i>Rochelia leiocarpa</i>	Boraginaceae
<i>Rosa albertii</i>	Rosaceae
<i>Rosa beggeriana</i>	Rosaceae
<i>Rosa platyacantha</i>	Rosaceae
<i>Rumex pseudonatronatus</i>	Polygonaceae
<i>Salsola foliosa</i>	Chenopodiaceae
<i>Salsola rosacea</i>	Chenopodiaceae
<i>Saussurea catharinae</i>	Compositae
<i>Saussurea foliosa</i>	Compositae
<i>Saussurea glacialis</i>	Compositae
<i>Saussurea drogostaiskii</i>	Compositae
<i>Saussurea klementzii</i>	Compositae
<i>Saussurea latifolia</i>	Compositae
<i>Saussurea acuminata</i>	Compositae
<i>Schismus arabicus</i>	Gramineae
<i>Schizachne callosa</i>	Gramineae
<i>Scolochloa festucacea</i>	Gramineae
<i>Scirpus radicans</i>	Cyperaceae

Appendix 7-4 (3/3) Rare Plants Listed in Gov. Res. 153

Scientific Name	Family
<i>Scorzonera grubobii</i>	Compositae
<i>Scorzonera parviflora</i>	Compositae
<i>Scutellaria paulsenii</i>	Labiatae
<i>Scutellaria supina</i>	Labiatae
<i>Scutellaria viscidula</i>	Labiatae
<i>Securinega suffruticosa</i>	Euphorbiaceae
<i>Senecio argunensis</i>	Compositae
<i>Senecio flammeus</i>	Compositae
<i>Setaria glauca</i>	Gramineae
<i>Silene mongolica</i>	Caryophyllaceae
<i>Sisymbrium loeseli</i>	Cruciferae
<i>Sisymbrium subspinescens</i>	Cruciferae
<i>Smelovskia bifurcata</i>	Cruciferae
<i>Solanum depilatum</i>	Solanaceae
<i>Sophora alopecuroides</i>	Leguminosae
<i>Sparganium glomeratum</i>	Sparganiaceae
<i>Stellaria dichotoma</i>	Caryophyllaceae
<i>Stellaria media</i>	Caryophyllaceae
<i>Stellaria pulvinata</i>	Caryophyllaceae
<i>Stellaria radiana</i>	Caryophyllaceae
<i>Stenocoelium athamantoides</i>	Umbelliferae
<i>Stipa conoanginea</i>	Gramineae
<i>Stipa rubens</i>	Gramineae
<i>Strigosella africana</i>	Cruciferae
<i>Suaeda linifolia</i>	Chenopodiaceae
<i>Synurus deltoides</i>	Compositae
<i>Tamarix hispida</i>	Tamaricaceae
<i>Tanacetum tanacetoides</i>	Compositae
<i>Taraxacum armerifolium</i>	Compositae
<i>Taraxacum glabrum</i>	Compositae
<i>Taraxacum armerifolium</i>	Compositae
<i>Tetracme quadricornis</i>	Cruciferae
<i>Thermopsis grubovii</i>	Leguminosae
<i>Thermopsis hirsutissima</i>	Leguminosae
<i>Thermopsis longicarpa</i>	Leguminosae
<i>Thermopsis mongolica</i>	Leguminosae
<i>Thymus komarovii</i>	Labiatae
<i>Thymus mongolicus</i>	Labiatae
<i>Thymus pavlovii</i>	Labiatae
<i>Thymus roseus</i>	Labiatae
<i>Tillaea aquatica</i>	Crassulaceae
<i>Torularia grubovii</i>	Cruciferae
<i>Tretocarya pratensis</i>	Boraginaceae
<i>Trifolium repens</i>	Leguminosae
<i>Trollius altaicus</i>	Ranunculaceae
<i>Trollius lilacinus</i>	Ranunculaceae
<i>Valeriana capitata</i>	Valerianaceae
<i>Valeriana officinalis</i>	Valerianaceae
<i>Veronica perpusilla</i>	Scrophulariaceae
<i>Veronica porphyriana</i>	Scrophulariaceae
<i>Vicia geminiflora</i>	Leguminosae
<i>Vicia japonica</i>	Leguminosae
<i>Vicia semenovii</i>	Leguminosae
<i>Vincetoxicum lanceolatum</i>	Asclepiadaceae
<i>Viola acuminata</i>	Violaceae
<i>Viola brachysepala</i>	Violaceae
<i>Viola collina</i>	Violaceae
<i>Viola patrinii</i>	Violaceae
<i>Woodsia alpina</i>	Polypodiaceae
<i>Ziziphora clinopodioides</i>	Labiatae
<i>Zygophyllum gobicum</i>	Zygophyllaceae
<i>Zygophyllum kaschgaricum</i>	Zygophyllaceae
<i>Zygophyllum latifolium</i>	Zygophyllaceae

Scientific Name	Family
<i>Zygophyllum micronatum</i>	Zygophyllaceae
<i>Zygophyllum neglectum</i>	Zygophyllaceae
<i>Zygophyllum sianum</i>	Zygophyllaceae

Scientific Name	Family
(Lichenes)	
<i>Asahinea schklander</i>	
<i>Rhizoplaca baranovii</i>	
<i>Cladonia kanewckii</i>	
<i>Lobaria retigera</i>	
<i>Usnea longissima</i>	
<i>Cetraria komarovii</i>	
<i>Cetraria potaninii</i>	
<i>Cetraria alvarensis</i>	
<i>Cetraria steppae</i>	
<i>Squamaria pamirica</i>	
<i>Aspicilia changaica</i>	
(Algae)	
<i>Batrachospermum moniliforme</i>	
<i>Dunaliella viridis</i>	
<i>Cadophora kozlovii</i>	
<i>Oocystis mongolica</i>	
(Moss)	
<i>Aongstroemia julacea</i>	
<i>Oreas martiana</i>	
<i>Pterygoneurum kozlovii</i>	
<i>trematogon brevicollis</i>	
(Fungi)	
<i>Lepista caespitosa</i>	
<i>Inonotus obliquus</i>	
<i>Leccinum aurantiacum</i>	
<i>Leucopaxillus giganteus</i>	
<i>Endoptychum agaricoides</i>	

Appendix 7-5 (1/4) Plants Listed in Mongolian Red Data Book

	Scientific Name	Red data book
Vascular plants	<i>Abies sibirica</i>	1987A 1996
	<i>Acorus calamus</i>	1987A 1996
	<i>Adonis mongolica</i>	1987A 1996
	<i>Adonis sibirica</i>	1987C 1996
	<i>Allium altaicum</i>	1987B 1996
	<i>Allium condensatum</i>	1987B
	<i>Allium galanthum</i>	1987B
	<i>Allium macrostemon</i>	1987A 1996
	<i>Allium obliquum</i>	1987B 1996
	<i>Ammopiptanthus mongolicus</i>	1987C 1996
	<i>Amygdalus mongolica</i>	1987C 1996
	<i>Anemarrhena asphodeloides</i>	1987C 1996
	<i>Androsace longifolia</i>	1987A 1996
	<i>Artemisia lithophila</i>	1996
	<i>Astragalus dshinensis</i>	1996
	<i>Botrychium lanceolatum</i>	1996
	<i>Brachanthemum gobicum</i>	1987C 1996
	<i>Brachanthemum mongolorum</i>	1987A 1996
	<i>Calypso bulbosa</i>	1987C 1996
	<i>Caragana gobica</i>	1996
	<i>Caragana branchypoda</i>	1996
	<i>Caragana spinosa</i>	1987B
	<i>Carex parva</i>	1996
	<i>Carex selengensis</i>	1996
	<i>Caryopteris mongolica</i>	1987C 1996
	<i>Chrysanthemum sinuatum</i>	1996
	<i>Cistanche deserticola</i>	1996
	<i>Convallaria keiskei</i>	1996
	<i>Corrallorhiza trifida</i>	1987C 1996
	<i>Cynomorium soongaricum</i>	1987B 1996
	<i>Cypripedium macranthum</i>	1987C 1996
	<i>Cypripedium calceolus</i>	1987C 1996
	<i>Dictamnus dasycarpus</i>	1987C 1996
	<i>Drosera rotundifolia</i>	1996
	<i>Drosera anglica</i>	1996
	<i>Elaeagnus moorcroftii</i>	1987A 1996
	<i>Ephedra equisetina</i>	1987C 1996
	<i>Ephedra glauca</i>	1987C
	<i>Epipogon aphyllum</i>	1987C 1996
	<i>Euonymus maackii</i>	1987C
<i>Ferula ferulaeodes</i>	1996	
<i>Festuca komarovii</i>	1996	
<i>Gentiana algida</i>	1987B 1996	

A: Endangered, B: Threatened, C: Rare

Appendix 7-5 (2/4) Plants Listed in Mongolian Red Data Book

	Scientific Name	Red data book
Vascular plants	<i>Goodyera repens</i>	1987C
	<i>Gueldenstaedtia monophylla</i>	1987C 1996
	<i>Gymnadenia conopsea</i>	1987C
	<i>Gymnocarpos przewalskii</i>	1987A 1996
	<i>Haloxylon ammondendron</i>	1987B
	<i>Halimodendron halodendron</i>	1987B 1996
	<i>Hedysarum sanilense</i>	1996
	<i>Hemerocallis lilio-asphodelus</i>	1987B
	<i>Hippophae rhamnoides</i>	1987B
	<i>Hypericum attenuatum</i>	1987C
	<i>Iljinia regelii</i>	1987C 1996
	<i>Incarvillea potaninii</i>	1987C 1996
	<i>Iris dichotoma</i>	1987C
	<i>Juniperus dahurica</i>	1987A
	<i>Juniperus pseudosabina</i>	1996
	<i>Juniperus sabina</i>	1996
	<i>Jurinea mongolica</i>	1996
	<i>Kobresia robusta</i>	1996
	<i>Krylovia eremophila</i>	1996
	<i>Larix dahurica</i>	1987C
	<i>Larix gmelinii</i>	1996
	<i>Lancea tibetica</i>	1987A 1996
	<i>Lilium dahuricum</i>	1987B 1996
	<i>Lycopodium clavatum</i>	1996
	<i>Lycopodium alpinum</i>	1996
	<i>Melica nutans</i>	1996
	<i>Mitella nuda</i>	1996
	<i>Neottianthe cucullata</i>	1987C 1996
	<i>Neottia camtshatea</i>	1987C 1996
	<i>Nymphaea candida</i>	1987C 1996
	<i>Nymphaea tertragona</i>	1996
	<i>Nuphar pumilum</i>	1987C 1996
	<i>Olgaea leucophylla</i>	1996
	<i>Olgaea lomonosowii</i>	1996
<i>Orchis militaris</i>	1996	
<i>Orchis fuchsii</i>	1987C 1996	
<i>Oxycoccus microcarpus</i>	1987C	
<i>Oxytropis acanthacea</i>	1996	
<i>Oxytropis fragilifolia</i>	1996	
<i>Oxytropis grubovii</i>	1996	
<i>Oxytropis mongolica</i>	1996	
<i>Paeonia albiflora</i>	1987C	
<i>Paeonia pictum</i>	1987C	

A: Endangered, B: Threatened, C: Rare A 7 - 10

Appendix 7-5 (3/4) Plants Listed in Mongolian Red Data Book

	Scientific Name		Red data book	
Vascular plant	<i>Paeonia</i>	<i>anomala</i>	1987B	1996
	<i>Paeonia</i>	<i>lactiflora</i>		1996
	<i>Peganum</i>	<i>harmala</i>	1987C	1996
	<i>Phragmites</i>	<i>communis</i>	1987B	1996
	<i>Physochlaina</i>	<i>albiflora</i>		1996
	<i>Pinus</i>	<i>pumila</i>		1996
	<i>Plantanthera</i>	<i>bifolia</i>	1987C	1996
	<i>Poacynum</i>	<i>pictum</i>	1987C	
	<i>Populus</i>	<i>diversifolia</i>	1987A	1996
	<i>Populus</i>	<i>pilosa</i>	1987C	
	<i>Potaninia</i>	<i>mongolica</i>	1987C	1996
	<i>Pugionium</i>	<i>pterocarpum</i>	1987C	
	<i>Pyrethrum</i>	<i>changaicum</i>	1987C	
	<i>Rhamnus</i>	<i>ussuriensis</i>	1987C	
	<i>Rhaponticum</i>	<i>carthamnoides</i>	1987A	1996
	<i>Rhodiola</i>	<i>quadrifida</i>	1987B	
	<i>Rhodiola</i>	<i>rosea</i>	1987B	1996
	<i>Rhododendron</i>	<i>aureum</i>	1987C	1996
	<i>Rhododendron</i>	<i>adamsii</i>		1996
	<i>Rhododendron</i>	<i>dahuricum</i>		1996
	<i>Rhododendron</i>	<i>ledebourii</i>		1996
	<i>Rhododendron</i>	<i>parvifolium</i>		1996
	<i>Saxifraga</i>	<i>hirculus</i>	1987B	1996
	<i>Sambucus</i>	<i>manshurica</i>		1996
	<i>Saussurea</i>	<i>dorogostaiskii</i>	1987A	1996
	<i>Saussurea</i>	<i>involuta</i>	1987A	1996
	<i>Sedum</i>	<i>pallescens</i>		1996
	<i>Sophora</i>	<i>alopecuroides</i>	1987B	
	<i>Sophora</i>	<i>flavescens</i>	1987A	1996
	<i>Sorbaria</i>	<i>sorbifolia</i>	1987C	1996
	<i>Stellaria</i>	<i>dichotoma</i>		1996
	<i>Stipa</i>	<i>pennata</i>	1987A	
	<i>Synurus</i>	<i>deltoides</i>	1987C	
	<i>Tamarix</i>	L	1987B	
<i>Tugarinovia</i>	<i>mongolica</i>		1996	
<i>Tulipa</i>	<i>uniflora</i>	1987B	1996	
<i>Vaccinium</i>	<i>myrtillus</i>	1987A	1996	
<i>Valeriana</i>	<i>officinalis</i>	1987B	1996	
<i>Viburnum</i>	<i>mongolicum</i>	1987C	1996	
<i>Viburnum</i>	<i>sargentii</i>	1987C	1996	
<i>Vicia</i>	<i>tsydenii</i>		1996	
<i>Zygadenus</i>	<i>sibiricus</i>	1987C	1996	

A: Endangered, B: Threatened, C: Rare

Appendix 7-5 (4/4) Plants Listed in Mongolian Red Data Book

	Scientific Name	Red data book
Lichens	<i>Asahinea scholander</i>	1996
	<i>Aspicilia esculenta</i>	1996
	<i>Aspicilia changaica</i>	1996
	<i>Cetraria komarovii</i>	1996
	<i>Cetraria potaninii</i>	1996
	<i>Cetraria steppae</i>	1996
	<i>Cetraria alvarensis</i>	1996
	<i>Cladonia kanewskii</i>	1996
	<i>Rhizoplaca baranovii</i>	1996
	<i>Squamarina pamirica</i>	1996
	<i>Usnea longissima</i>	1996
	<i>Lobaria retigera</i>	1996
Algae	<i>Batrachospermum moniliforme</i>	1996
	<i>Cadophora kozlovii</i>	1996
	<i>Dunallella viridis</i>	1996
	<i>Nematonostoc flagelliforme</i>	1996
	<i>Oocystis mongolica</i>	1996
	<i>Tolypothrix mongolica</i>	1996
Moss	<i>Aongstroemia julacea</i>	1996
	<i>Pterygoneurum kozlovii</i>	1996
	<i>Trematogon brevicollus</i>	1996
	<i>Oreas martiana</i>	1996
Fungi	<i>Endoptychum agaricoides</i>	1996
	<i>Lepista caespitosa</i>	1996
	<i>Tricholoma mongolicum</i>	1996
	<i>Leucopaxillus giganteus</i>	1996
	<i>Inonotus obliquus</i>	1996
	<i>Leccinum aurantiacum</i>	1996

A: Endangered, B: Threatened, C: Rare

Appendix 7-6 (1/2) Animals Listed in Mongolian Red Data Book

	Scientific Name		Red data book	
Mammals	<i>Erinaceus</i>	<i>dauricus</i>		1996
	<i>Talpa</i>	<i>altaica</i>		1996
	<i>Vespertilio</i>	<i>superans</i>		1996
	<i>Citellus</i>	<i>alaschanicus</i>		1996
	<i>Castor</i>	<i>fiber birulai</i>	1987C	1996
	<i>Dryomys</i>	<i>nitedula</i>	1987C	1996
	<i>Meriones</i>	<i>tamariscinus</i>		1996
	<i>Cardiocranius</i>	<i>paradoxus</i>	1987C	1996
	<i>Salpingotus</i>	<i>kozlovi</i>	1987C	1996
	<i>Salpingotus</i>	<i>crassicauda</i>	1987C	1996
	<i>Euchoreutes</i>	<i>naso</i>	1987C	1996
	<i>Felis</i>	<i>lybica</i>	1987C	1996
	<i>Uncia</i>	<i>uncia</i>	1987C	1996
	<i>Ursus</i>	<i>gobiensis(pruinusus)</i>	1987A	1996
	<i>Cuon</i>	<i>alpinus</i>	1987A	1996
	<i>Vormela</i>	<i>peregusna</i>	1987C	1996
	<i>Lutra</i>	<i>lutra</i>	1987A	1996
	<i>Equus</i>	<i>przewalskii</i>	1987A	1996
	<i>Equus</i>	<i>hemionus hemionus</i>	1987C	1996
	<i>Camelus</i>	<i>bactrianus ferus</i>	1987A	1996
	<i>Sus</i>	<i>scrofa</i>	1987C	1996
	<i>Rangifer</i>	<i>tarandus valentinae</i>	1987C	1996
	<i>Alces</i>	<i>alces pfizenmayeri</i>	1987C	1996
	<i>Alces</i>	<i>alces cameloides</i>	1987C	1996
	<i>Saiga</i>	<i>tatarica</i>	1987A	1996
	<i>Saiga</i>	<i>tatarica mongolica</i>	1987A	1996
	<i>Moschus</i>	<i>moschiferus</i>		1996
<i>Ovis</i>	<i>ammon</i>	1987C	1996	
<i>Gazella</i>	<i>subgutturosa</i>	1987C		
Birds	<i>Larus</i>	<i>ichthyyaetus</i>		1996
	<i>Pandion</i>	<i>haliaetus</i>	1987C	1996
	<i>Haliaeetus</i>	<i>albicilla</i>	1987C	1996
	<i>Gyps</i>	<i>himalayensis</i>	1987C	1996
	<i>Phasianus</i>	<i>colchicus</i>	1987C	1996
	<i>Tetragalus</i>	<i>altaicus</i>		1996
	<i>Grus</i>	<i>vipio</i>	1987A	1996
	<i>Grus</i>	<i>monacha</i>	1987A	1996
	<i>Grus</i>	<i>leucogeranus</i>	1987A	1996
	<i>Chlamydotis</i>	<i>undulata</i>	1987A	1996
	<i>Otis</i>	<i>tarda tinnaeus</i>	1987C	1996
	<i>Saxicola</i>	<i>insignis</i>		1996
	<i>Remiz</i>	<i>pendlinus</i>		1996
	<i>Paradoxornix</i>	<i>heudei</i>	1987A	1996

A: Endangered, B: Threatened, C: Rare

Appendix 7-6 (2/2) Animals Listed in Mongolian Red Data Book

	Scientific Name		Red data book	
Birds	<i>Podoces</i>	<i>hendersoni</i>		1996
	<i>Egretta</i>	<i>alba</i>		1996
	<i>Aythya</i>	<i>baeri</i>		1996
	<i>Aix</i>	<i>galericulata</i>		1996
	<i>Anas</i>	<i>formosa</i>		1996
	<i>Anser</i>	<i>indicus</i>	1987C	1996
	<i>Anser</i>	<i>cygnoides</i>	1987C	1996
	<i>Oxyura</i>	<i>leucocephala</i>		1996
	<i>Limnodromus</i>	<i>semipalmatus</i>		1996
	<i>Larus</i>	<i>relictus</i>	1987A	1996
	<i>Pelecanus</i>	<i>crispus</i>	1987C	1996
	<i>Ciconia</i>	<i>nigra</i>	1987C	1996
	<i>Ciconia</i>	<i>boyciana</i>		1996
	<i>Platalea</i>	<i>leucorodia</i>	1987C	1996
	<i>Cygnus</i>	<i>cygnus</i>	1987C	1996
	<i>Cygnus</i>	<i>olor</i>	1987C	1996
		<i>Numenius</i>	<i>minutus</i>	1987C
Reptiles	<i>Cyrtopidion</i>	<i>elongatus</i>	1987	1996
	<i>Phrynocephalus</i>	<i>helioscopus</i>		1996
	<i>Eremias</i>	<i>arguta patanini</i>	1987	1996
	<i>Eryx</i>	<i>tartaricus</i>	1987	1996
	<i>Coluber</i>	<i>spinalis</i>	1987	1996
Amphibians	<i>Salamandrella</i>	<i>keyserlingii</i>	1987	1996
	<i>Bufo</i>	<i>danatensis</i>		1996
	<i>Hyla</i>	<i>japonica</i>		1996
	<i>Rana</i>	<i>chensiensis</i>	1987	1996
Fish	<i>Acipenser</i>	<i>baeri baicalensis</i>	1987	1996
	<i>Acipenser</i>	<i>schrenski</i>		1996
	<i>Tinca</i>	<i>tinca</i>		1996
	<i>Mesocottus</i>	<i>haitej</i>		1996
	<i>Coregonus</i>	<i>autumalis migratorius</i>		1996
	<i>Lampetra</i>	<i>japonica</i>	1987	1996
	<i>Campovroides</i>	<i>dauricus</i>		1996
	<i>Leander</i>	<i>modestus</i>		1996
	<i>Dahurinaia</i>	<i>dahurica</i>		1996
	<i>Cristaria</i>	<i>plicata</i>		1996
	<i>Anodonta</i>	<i>sedakovi</i>		1996
	<i>Middendorffinaia</i>	<i>mongolica</i>		1996
	<i>Hucho</i>	<i>taimen</i>		1996

A: Endangered, B: Threatened, C: Rare

Appendix 7-7 Animals in Mongolia Listed in CITES Appendices I and II

Class	Scientific Name	English Name	Status	
Reptilia	<i>Eryx tataricus</i>	Tatar Sand Boa	II	
Aves	<i>Pelecanus crispus</i>	Dalmation Pelican	I	
	<i>Platalea leucorodia</i>	Eurasian Spoonbill	II	
	<i>Ciconia boyciana</i>	Oriental White Stork	I	
	<i>Ciconia nigra</i>	Black Stork	II	
	<i>Pernis ptilorhynchus</i>	Eurasian Honey Buzzard	II	
	<i>Milvus migrans</i>	Black Kite	II	
	<i>Circus cyaneus</i>	Northern Harrier	II	
	<i>Circus melanoleucos</i>	Pied Harrier	II	
	<i>Accipiter gentilis</i>	Northern Goshawk	II	
	<i>Accipiter gularis</i>	Japanese Sparrow Hawk	II	
	<i>Accipiter nisus</i>	Eurasian Sparrow Hawk	II	
	<i>Asio otus</i>	Long-eared Owl	II	
	<i>Asio flammeus</i>	Short-eared Owl	II	
	<i>Aegolius funereus</i>	Boreal Owl	II	
	<i>Buteo lagopus</i>	Rough-legged Buzzard	II	
	<i>Buteo rufinus</i>	Long-legged Buzzard	II	
	<i>Buteo hemilasius</i>	Upland Buzzard	II	
	<i>Aquila clanga</i>	Greater Spotted Eagle	II	
	<i>Aquila chrysaetos</i>	Golden Eagle	II	
	<i>Aquila heliaca</i>	Imperial Eagle	I	
	<i>Circaetus gallicus</i>	Short-toed Eagle	II	
	<i>Hieraaetus pennatus</i>	Booted Eagle	II	
	<i>Falco naumanni</i>	Lesser Kestrel	II	
	<i>Falco tinnunculus</i>	Eurasian Kestrel	II	
	<i>Falco columbarius</i>	Merlin Hawk	II	
	<i>Falco amurensis</i>	Amur Falcon	II	
	<i>Falco vespertinus</i>	Red-footed Falcon	II	
	<i>Falco subbuteo</i>	Eurasian Hobby	II	
	<i>Falco cherrug</i>	Saker Falcon	II	
	<i>Falco pelegrinoides</i>	Barbary Falcon	II	
	<i>Grus japonensis</i>	Red-crowned Crane	I	
	<i>Grus leucogeranus</i>	Siberian Crane	I	
	<i>Otis tarda</i>	Great Bustard	II	
	<i>Larus relictus</i>	Relict Gull	I	
	<i>Bubo bubo</i>	Eagle Owl	II	
	<i>Surnia ulula</i>	Northern Hawk Owl	II	
	<i>Glaucidium passerinum</i>	Eurasian Pygmy Owl	II	
	<i>Athene noctua</i>	Little Owl	II	
	<i>Strix uralensis</i>	Ural Owl	II	
	<i>Strix nebulosa</i>	Great Gray Owl	II	
	Mammalia	<i>Cuon alpinus</i>	Asiatic Wild Dog	II
		<i>Lutra lutra</i>	Eurasian Otter	I
		<i>Lynx lynx</i>	Eurasian Lynx	II
<i>Felis manul</i>		Manul (Pallas' Cat)	II	
<i>Felis libica</i>		European Wild Cat	II	
<i>Uncia uncia</i>		Snow Leopard	I	
<i>Ursus arctos pruinosus</i>		Gobi Bear	I	
<i>Canis lupus</i>		Gray Wolf	II	
<i>Equus hemionus</i>		Asiatic Wild Ass	I	
<i>Equus przewalskii</i>		Przewalski's Wild Horse	I	
<i>Moschus moschiferus</i>		Musk Deer	II	
<i>Saiga tatarica</i>		Saiga Antelope	II	
<i>Ovis ammon</i>		Argali	II	

CITES: Convention International Trade in Endangered Species of Wild Fauna and Flora

Appendix 7-8 Threatened animals in Mongolia reported by IUCN (1994)

Class	Order	Family	Scientific Name	English name	status	
Mammalia	Carnivora	Canidae	<i>Cuon alpinus</i>	Asiatic Wild Dog*	V	
		Felidae	<i>Unica</i>	Snow Leopard	E	
	Artiodactyla	Ursidae	<i>Ursus thibetanus</i>	Asiatic Black Bear	V	
		Camelidae	<i>Camelus bactrianus (ferus)</i>	Wild Baxtrian Camel	V	
	Carnivora	Mustelidae	<i>Lutra lutra</i>	European Otter	V	
		Equidae	<i>Equus przewalskii</i>	Przewalski's Horse	Ex?	
	Perissodactyla	Equidae	<i>Equus hemionus hemionus</i>	North Mongolian Kulan	Ex?	
			<i>Equus hemionus lutes</i>	Gobi Kulan	I	
		Bovidae	<i>Ovis amon amon</i>	Altai Argali	I	
			<i>Ovis amon darwini</i>	Mongolian Argali	E	
		Rodentia	Saiga	<i>tatarica mongolica</i>	Mongolian Saiga	E
			Castor	<i>fiber birulai</i>	Mongolian Beaver	E
		Lagomorpha	Ochotonidae	<i>Ochotona alpina ssp.</i>	Pika	V
			<i>Ochotona alpina hamica</i>	Altai Pika	E	
Aves		Pelecaniformes	Pelecanidae	<i>pelecanus</i>	Dalmatian Pelican	V
			Ciconiidae	<i>boyicina</i>	Oriental Stork*	E
		Anseriformes	Anas	<i>formosa</i>	Baikal Teal*	V
			<i>Aythya baeri</i>	Baer's Pochard*	V	
		Falconiformes	Oxyura	<i>leucocephala</i>	White-headed Duck*	V
			Aquila	<i>heliaca</i>	Imperial Eagle*	R
	Falconiformes	Haliaeetus	<i>albicilla</i>	White-tailed Eagle	V	
		Haliaeetus	<i>leucorhynchus</i>	Pallas's Sea-Eagle	R	
	Gruiiformes	Falco	<i>naumanni</i>	Lesser Kestrel	R	
		Grus	<i>japonensis</i>	Red-crowned Crane	V	
	Otididae	Grus	<i>leucogeranus</i>	Siberian Crane	V	
		<i>Grus vipio</i>	White-naped Crane	V		
	Charadriiformes	Chlamydotis	<i>undulata</i>	Houbara Bustard	V	
		Otis	<i>tarda</i>	Great Bustard	R	
Passeriform	Limnodromus	<i>semipalmatus</i>	Asian Dowitcher	R		
	Larus	<i>relictus</i>	Relict Gull	R		
Lepidoptera	Turdidae	<i>Saxicola insignis</i>	White-throated Bushchat	K		
	Papilionidae	<i>Parnassius apollo</i>	Apollo	R		
Insecta	Lycaenidae	<i>Lycaena dispar</i>	Large Copper	R		
		<i>Maculinea teleius</i>	Scarce Large Blue	E		
Lasiocampidae	Satyridae	<i>Coenonympha oedippus</i>	False Ringlet	E		
	Saturniidae	<i>Phylodesma ilicifolia</i>	Small Lappet Moth	V		
		<i>Hyles hippophaes</i>		V		

* 1994 IUCN Red List of Threatened Animal doesn't mention Mongolia as a distribution country.

Ex: Extinct, E: Endangered, V: Vulnerable, R: Rare, I: Indeterminate, K: Insufficiently known

Appendix 7-9 (1/2) Mongolian Protected Areas

Strictly Protected Area				Special feature
Name	Code	Area (ha)	Established	
Great Gobi A and B (Two sites)	2 and 11	5,311,700	1976	Preserves representative example of Gobi desert Important habitat area for globally rare and endangered species World Biosphere Reserve Last site of Przewalski's horse recorded in the wild
Khokh Serkh	10	65,900	1977	Protection of mountain argali and ibex Snow leopard, Altai snowcock, stone marten are also present
Bogt Khan Uul	1	41,600	1778	Mongolia's, and one of the world's, oldest protected areas Manxhir Hiid Monastery, hiking trails, diverse flora and fauna
Khasagt Khairkhan	5	27,400	1965	Protection of argali, ibex the conservation of forest-steppe landscape of Mongolia Altai Range
Khan Khentii	14	1,227,100	1992	Birthplace of Chingis khaan One of last large wilderness areas in Mongolia Almost entirely uninhabited
Nomrog	16	311,200	1992	Headwaters of major river systems flowing to Pacific and Arctic oceans
Dornod Mongol	17	570,400	1992	Manchurian flora and fauna found here in addition to Central Asian species Example of last large undisturbed steppe ecosystem in the world
Mongol Dagurian	18 and 32	103,000	1992	Important habitat for Mongolian gazelle Part of international reserve created by Mongolia, Russia and China to protect rare birds, particularly cranes
Otgon Tenger	19	95,500	1992	Conservation of high mountain ecosystem
Uvs Nuur Basin (Four sites)	20,29,30,31	771,600	1993	One of ten study areas in the world selected by International Geosphere-Biosphere Program for global change research. Large saline lake, fringed by high mountain ranges, northernmost extension of the Central Asian desert.
Subtotal		8,525,400		

(From Biodiversity Conservation Action Plan for Mongolia (1996))

Appendix 7-9 (2/2) Mongolian Protected Areas

National Conservation Parks				
Name	Code	Area (ha)	Established	Special feature
Khovsgol Nuur	21	838,100	1992	Second largest fresh water lake in Central Asia by volume Extremely clear water, spectacular alpine scenery
Khorgo Tsagaan Nuur Terkh	6	73,000	1965	Conservation of spectacular mountain scenery and endangered flora and fauna
Gobi Gurvansaikhan Uul	23	2,300,000	1993	Dramatic rock formation, sand dunes, colorful canyons, numerous rare plant species
Gorkhi Terejii	22	286,400	1993	Beautiful landscape, excellent hiking, fishing and other recreational opportunities
Subtotal		3,497,500		
Nature Reserves				
Name	Code	Area (ha)	Established	Special feature
Nagalkhan Uul	3	3,000	1957	Protection of southernmost forest-steppe
Batkhan Uul	7	21,800	1957	Conservation of ancient historic and cultural monument
Lhachinvandad Uul	13	58,800	1965	Protection of elk habitat in mountain steppe
Bulgan Gol	4	7,200	1965	Protection of beaver and its habitat
Khustain Nuruu	24	90,000	1993	Biodiversity conservation, reintroduction of Tahki (Przewalski's horse) to the wild
Ugtan Uul	25	30,000	1993	Includes two holy mountains, Ugtam and Khaikhan, and ruins of an important Buddhist monastery
Sharga-Mankhan (Two sites)	8 and 26	316,900	1993	Conservation of habitat for Mongolian subspecies of saiga antelope
Subtotal		527,700		
Natural and Historical Monuments				
Name	Code	Area (ha)	Established	Special feature
Bulgan Uul	9	1,800	1965	Conservation of flora, fauna, and scenery of steppe and forest steppe
Uran-Togoo Tulga Uul	12	14,600	1965	Protection of landscapes around extinct volcano
Eej Khaikhan	15	22,500	1992	Protection of spectacular isolated mountain massif, mountain desert landscape, flora, fauna
Khuisiin Naiman Nuur	27	11,500	1992	Conservation of lake ecosystems
Ganga Nuur	28	28,800	1993	Features volcanoes, caves and Gobi lake
Subtotal		79,200		
Total of All Protected Areas		12,629,800		

Appendix 7-10 (1/3) Proposed Protected Areas

Proposed Strictly Protected Area	
Place Name	Map code Ecological zone and special features
Baga Gobi	107, 108 Desert, semi-desert, semi-desert, steppe of southeastern region of Mongolia
Gurvan Bogd or Ikh Baga Bogd	93 Semi-desert steppe, arid steppe, mountain steppe in the Gobi-Altai region
Khordol Sardag	34 Mountain taiga and rugged mountain near Khovsgol
Burengiin Nuruu	47 Forest-steppe in Orkhon Selenge basin
Proposed National Conservation Park	
Place Name	Map code Ecological zone and special features
Altai Tavan Bogd	38 Snow and glacier-covered three peaks of Mongol-Altai, mountain valley, mountain, steppe.
Zuun-Khangai	65 Forest-steppe, mountain steppe, mountain valley of Khangai region
Khar-Uul, Khayrgas Nuur	43 Great-lakes Basin, semi-desert steppe; semi-desert
Onon-Balj	48 Forest-steppe of Onon-Ulz region
Proposed Nature Reserve	
Place Name	Map code Ecological zone and special features
Shishkhed-Tengis Baran Gol Basin	33 Mountain taiga with rare animals such as reindeer, beech marten and moose.
Bushtag Uul	46 Forest-steppe and mountain forest with elk, Siberian roe deer, beech marten snow leopard, Eurasian lynx
Untaa Yamaat	62 Glaciers with high mountains, mountain valleys, and animals such as wild sheep and wild goat
Burkhan Buudai	83 Mountain steppe with wild sheep, wild goat, snow leopard, Eurasian lynx.
Tsagaan Temeet	66 Arid steppe, herds of white-tailed gazelle.
Alag Khairkhan	80 Mountain steppe with wild sheep, wild goat, snow leopard, and Eurasian lynx.
Khar Yamaat	60 Unique landscape formation and mountain arid steppe with wild goat, wild sheep and Eurasian lynx.
Ikh Argalant	105 Semi-desert steppe with wild goat, wild sheep, and Eurasian lynx.
Zoolon Uul	115 Semi-desert with interesting landscape and wild sheep and wild goat
Khogno Khaan	64 Forest-steppe with beautiful scenery, elk and roe deer.
Salbariin Tal	56 Arid steppe with the herds of white-tailed gazelle
Tujiin Nars	39 Pine forest along river valley
Olgoi Nuur	73 Area of outstanding natural beauty along river banks to the south of Khangai.
Mienengiin Tal	57 Arid steppe with main distribution of white tailed gazelle
Zagiin Us	95 Distribution area of saxaul in the eastern part Mongolia.
Baitag Bogd	78 Mountains of Gobi-Tyanshang with wild sheep; wild goat; and Eurasian lynx.
Borzongiin Gobi	108 Wild ass, black-tailed gazelle, unique Gobi ecosystem.

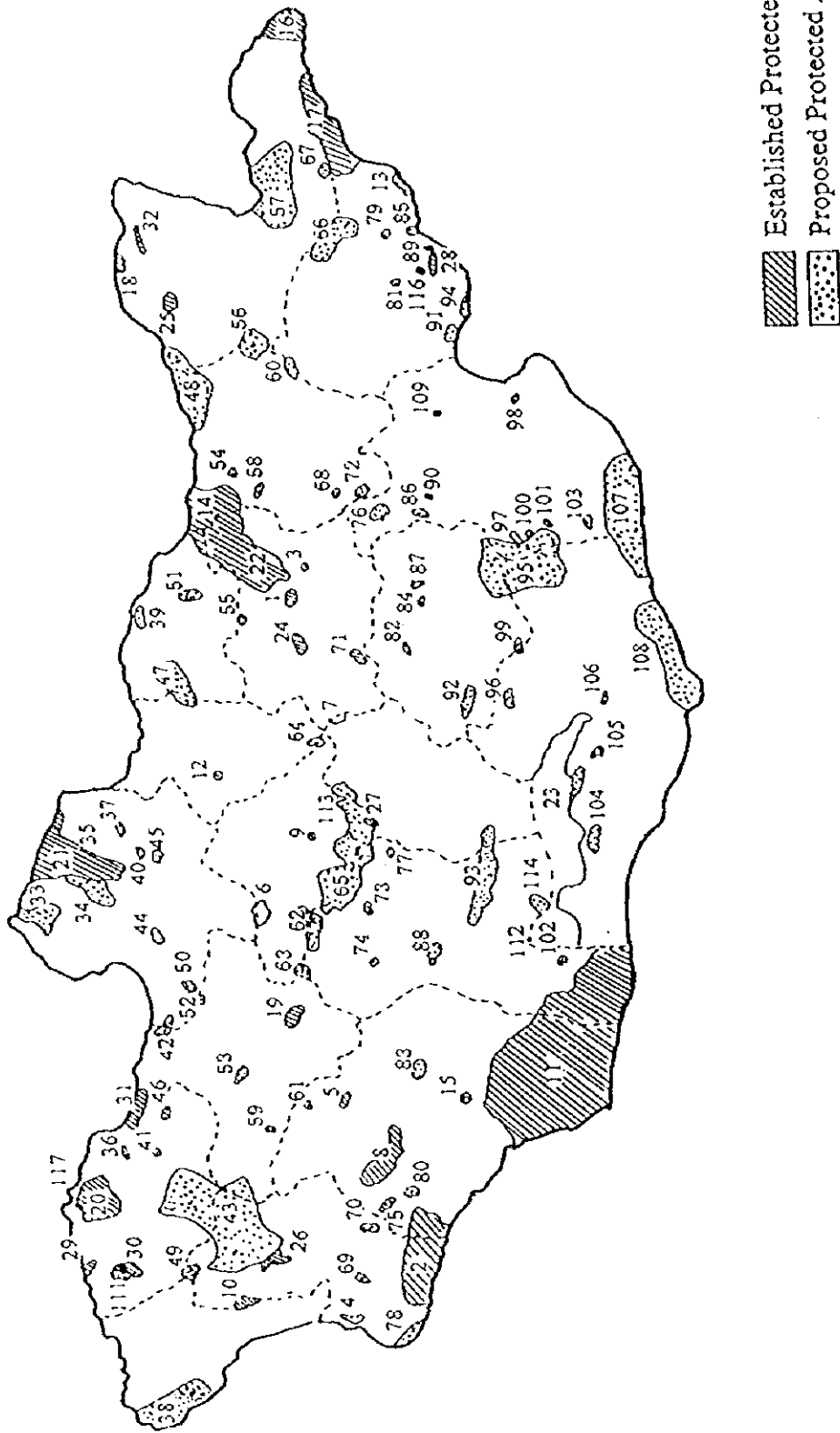
Appendix 7-10 (2/3) Proposed Protected Areas

Proposed Nature Reserve	
Place Name	Map code Ecological zone and special features
Arkhan Bural-Badariin Nuruu	37 Forest, forest-steppe, elk, roe deer
Ikh Tunei, Emged, Uvgud	45 Mountains with forest and taiga, elk, moose and roe deer.
Sharjiin adag-Jar Khyaruunii Belchir	44 Mountains with taiga and river, valleys, elk, and roe deer
Bokhloo-Chagtain Nuruu	51 Forest, forest-steppe, elk and roe deer.
Ikh Gazriin Chuluu	84 Granite mountain with unique landscape formation, wild sheep, wild goat.
Bayan Tokhom Gobi	91 Semi-desert with white white-tailed gazelle
Asgatiin Tsagaan Tolgoi	81 Arid steppe with special natural structures.
Tovkhon Khaan Uul	113 Outstanding natural beauty, elk and roe deer.
Senjiin Dukh Uul	75 High mountains, argali and ibex
Delger Khangai Uul	92 Mountain in steppe with unique feature, argali habitat.
Terkhen Tsagaan Uul	40 Outstanding natural beauty, unique landscape formation and biodiversity.
Bulgan Khangai Uul	41 Outstanding natural beauty, unique landscape formation and biodiversity.
Nogoon Nuur-Guna Yamaat	50 Outstanding natural beauty, habitat for many animals
Binderya Khan Uul	54 Outstanding natural beauty with unique landscape formation.
Myangan Ugalzat	70 Main habitat for argali
Khalhan Bulnai	35 Outstanding natural beauty, mineral water and spring.
Ikh Nartiin Khad	86 Unique landscape formation, wild sheep and wild goat.
Tesiin Gol	42 Rare animals such as beaver and otter
Boon Tsagaan	88 Outstanding natural beauty, water fowl
Nomgon	106 Mountain habitat for argali and ibex
Altan-Khokhii	49 Wild sheep, wild goat, outstanding natural beauty.
Lag Nuur	67 Arid steppe, white tailed gazelle
Zotoi Khan	79 Semidesert, herds of gazelle
Proposed Natural and Historical Monuments	
Place Name	Map code Ecological zone and special features
Mongoz Tsakhir	117 Limestone mountain with uniquely shaped spruce trees
Ikh Khairkhan	59 Mountain with several famous caves of Mongolia
Ereen Nuur Mongol Els	61 Pure water lake in the sand.
Uenchiin Khavtsal	69 Deep cliff in the southern part of Mongol Altai Range
Bust Nuur	52 Beautiful fresh water lake in the northern part of Khangai Nuruu
Ulaagchnii Khar Nuur	53 Combination of forest-steppe, sand and fresh water lake in the western part of Khangai Nuruu.
Khokh Nuur	63 Fresh water originating from glaciers in Khangai Nuruu.

Appendix 7-10 (3/3) Proposed Protected Areas

Place Name	Map code	Ecological zone and special features
Khangal Nuur	58	Fresh water lake originated by tectonics in the south part of Khentii.
Galut Khavtsal	73	Deep cliff in the middle part of Galuut Gol
Arag Chuluu	87	Granite cliff in the arid steppe zone.
Ashig Khorgo Chuluu	97	Granite cliff with unique landscape formation in desert steppe zone.
Algui Ulaan Tsav	96	Fossil lake deposit with animal fossils.
Tsagaan Suvarga	99	Fossilized lakebed with many colors
Shiliin Bogd	85	Extinct volcano in the middle of the steppe.
Khuren Khanii Nuruu	104	Mountain with special unique landscape features.
Budariiin Chuluu	94	Granite mountain with unique landscape features.
Suikhent	101	Petrified forest.
Altan owoo	116	Worshipped extinct volcano
Ergeliin Zoo	103	Fossil lake deposit with ancient animal fossils.
Baishint	89	Lake deposit with ancient animal fossils.
Burdhii Els	98	Sand dune in the middle of semi-desert.
Bogd Uul 18	100	Granite cliff mountain with unique features.
Tsagaan Del Agui	90	Long cave originated by natural force.
Tsonj Chuluu	109	Igneous rock mountain with unique landscape features
Noyen Uul	55	Special mountain with ancient historical and cultural monuments.
Novon Bogd	110	Legendary extinct volcano.
Darkhan Uul	72	Granite mountain with cliffs, wild sheep and wild goat.
Choiriin Bogd	76	Granite mountain with cliffs.
Bayan Nuur	36	Lake of fresh water originated by tectonics in the middle of sandy desert.
Gurvan horoo	111	Site of the second highest waterfall in Mongolia.
Kherien, Toono Uul	68	Mountain with unique landscape formation.
Sum Khokh Burd	82	Special oasis in desert steppe zone.
Shargajjuut	77	Site of the hottest spring water in Mongolia.
Nogoon Tsav	102	Multicolored deposit of lakes with ancient animal fossils.
Gurvan Bambuu	112	Special features cut by drainages in the desert zone.
Bogd Uul	74	Granite cliff mountain in desert steppe zone.
Zorgol Khaikhan	71	Granite cliff mountain in arid steppe.

(From Biodiversity Conservation Action Plan for Mongolia (1996))



Appendix 7-11 Established and Proposed Protected Areas