

Supplement of

**Giant aufeis – unknown glaciation of the North-Eastern Eurasia
according to Landsat images 2013-2019**

Olga Makarieva et al.

Correspondence to: Olga Makarieva (o.makareva@spbu.ru)

Table S1: Aufeis resources of river basins at North-East of Russia and aufeis impact to the hydrological cycle

River basin	Gauge ID	F, km ²	H, mm	H _w , mm	H _{ss} , mm	N	S, km ²	W, thous. m ³	Z, %	H1, mm	P1, %	P2, %	P3, %
Indigirka	3488	51100	155	8.5	43	387	430	972327	0.84	16.8	10.9	198	27.3
	3489	83500	168	6.5	54	491	503.5	1134516	0.6	12.1	7.2	186	15.7
	3499	7680	189	5.5	52	52	62.3	138342	0.81	16.2	8.6	294	22
	3500	1830	122	5.5	31	12	9.6	19883	0.52	10.4	8.6	190	23.7
	3503	7630	204	11	47	67	109.9	260670	1.44	28.8	14.1	262	43.2
	3507	17600	210	4.4	84	68	55.4	127455	0.31	6.3	3	142	5.3
	3518	22300	174	3	71	91	64.3	130703	0.29	5.8	3.3	194	5.7
	3529	1830	189	4.6	68	13	14.2	30416	0.78	15.5	8.2	338	15.9
	3536	2340	133	4	67	29	33.6	84840	1.43	28.7	21.6	712	30
	3871	305000	166	7.4	51	1220	1663.2	4251536	0.55	10.9	6.6	147	15
Yana	3414	45300	112	2.52	39	79	97	213973	0.21	4.3	3.8	170	7.6
	3424	16700	94	1.55	36	15	17.4	38565	0.1	2.1	2.2	135	4
	3430	23900	143	3.32	50	64	79.6	175408	0.33	6.7	4.7	201	9.3
	3443	52800	203	4.13	85	109	59.8	121232	0.11	2.3	1.1	55	1.9
	3445	89600	192	4.86	78	326	257.4	566341	0.29	5.7	3	118	5.2
	3468	15200	127	1.18	60	20	8.7	16546	0.06	1.1	0.9	97	1.3
	3474	8290	242	6.66	83	80	71.5	159762	0.86	17.3	7.1	259	14.5
	3483	40000	123	2.3	42	140	132.9	294553	0.33	6.6	5.4	289	11.1
	3861	224000	156	4.71	58	582	505.4	1109556	0.23	4.5	2.9	96	5.4
Kolyma	1001	42600	228	9.4	92	265	138.1	280878	0.32	6.5	2.8	69	4.9
	1010	99400	242	25.9	101	1330	657.9	1378008	0.66	13.2	5.5	51	9.2
	1024	9560	215	7.7	96	56	24.3	47664	0.25	5.1	2.4	66	3.7
	1050	4980	211	3.6	79	62	30.8	63051	0.62	12.4	5.9	339	11
	1095	10300	293	17.7	127	125	74.2	154066	0.72	14.4	4.9	82	8
	1124	1820	257	9.1	128	10	2.9	5174	0.16	3.2	1.2	35	1.7
	1144	2110	339	19.7	165	21	15.1	31701	0.72	14.3	4.2	73	6.1
	1151	3490	323	21.3	142	32	18.5	38439	0.53	10.6	3.3	50	5.2
	1152	5630	290	16.6	132	44	20.6	41986	0.37	7.3	2.5	44	3.9
	1176	13600	292	14.5	149	106	38.4	73151	0.28	5.7	1.9	39	2.7
	1194	3460	276	6.5	141	26	6.7	11361	0.19	3.9	1.4	60	1.9
	1238	9970	215	10.5	115	67	29.4	58636	0.3	5.9	2.7	56	3.6
	1293	9090	302	19.5	153	102	25.2	46032	0.28	5.6	1.8	28	2.5
	1309	2920	354	11.9	191	15	8.7	16590	0.3	6	1.7	50	2.2
	1341	5880	299	17.3	153	65	31.5	66832	0.54	10.7	3.6	62	4.9
	1342	1720	293	18.8	136	30	8.2	14193	0.48	9.5	3.3	51	4.9
	1368	3710	314	29.4	128	39	17.3	33241	0.47	9.3	3	32	5.1
	1371	15700	220	12.8	96	167	93.8	197461	0.6	11.9	5.4	94	8.7
	1396	8180	234	5.7	128	10	1.4	2090	0.02	0.3	0.1	6	0.2
	1397	30000	184	3.1	96	54	14.5	26583	0.05	1	0.5	31	0.7
	1421	12000	155	1.4	93	10	3.6	6953	0.03	0.6	0.4	43	0.5
	1433	6810	197	5.3	76	72	42.7	88517	0.63	12.5	6.4	238	11.5
	1578	32000	355	28.2	151	89	71.5	155687	0.22	4.5	1.3	16	2.1
	1585	7670	206	7.6	93	26	7	12959	0.09	1.8	0.9	24	1.4
	1596	49600	171	6.8	84	119	85.2	182898	0.17	3.4	2	51	2.9
	1597	664	299	13.4	139	3	2.4	3738	0.36	7.2	2.4	54	3.6
	1606	1040	273	5.5	128	7	1.7	2858	0.16	3.3	1.2	60	1.8

	1801	361000	198	19.5	87	1322	658.4	1379043	0.18	3.6	1.8	19	2.9
	1803	526000	199	20.2	85	2021	981	2030285	0.19	3.7	1.9	18	3.1
The Chukchi Peninsula	1496	16400	278	7.5	144	74	23.6	42853	0.14	2.9	1	38	1.4
	1497	47300	297	15.8	161	312	130.9	262211	0.28	5.5	1.9	35	2.4
	1499	106000	302	19.5	129	467	182.7	360154	0.17	3.4	1.1	18	1.9
	1501	156000	258	13	116	755	398.1	838361	0.26	5.1	2	39	3.1
	1503	523	415	17.8	260	5	1.1	2046	0.22	4.3	1	24	1.2
	1504	18600	-	-	140	55	30.4	60587	0.16	3.3	-	-	1.6
	1508	11400	263	7.4	158	39	8.3	14131	0.07	1.5	0.6	20	0.6
	1590	55100	-	-	107	321	135.5	271006	0.25	4.9	-	-	4.1
	1594	26400	321	8.2	132	172	101.9	210213	0.39	7.7	2.4	94	4.1
	1605	8360	421	13.8	161	101	37.7	72503	0.45	9	2.1	65	3.9

F – basin area, H – long-term average annual runoff, Hw – winter runoff (October – April), Hs –high water runoff (May – June), N – the number of aufeis, S – corrected aufeis area, W – aufeis volume, Z – aufeis content, H1 – aufeis resources, P1, P2 and P3 – share of aufeis resources in the annual runoff, winter runoff and high water runoff respectively