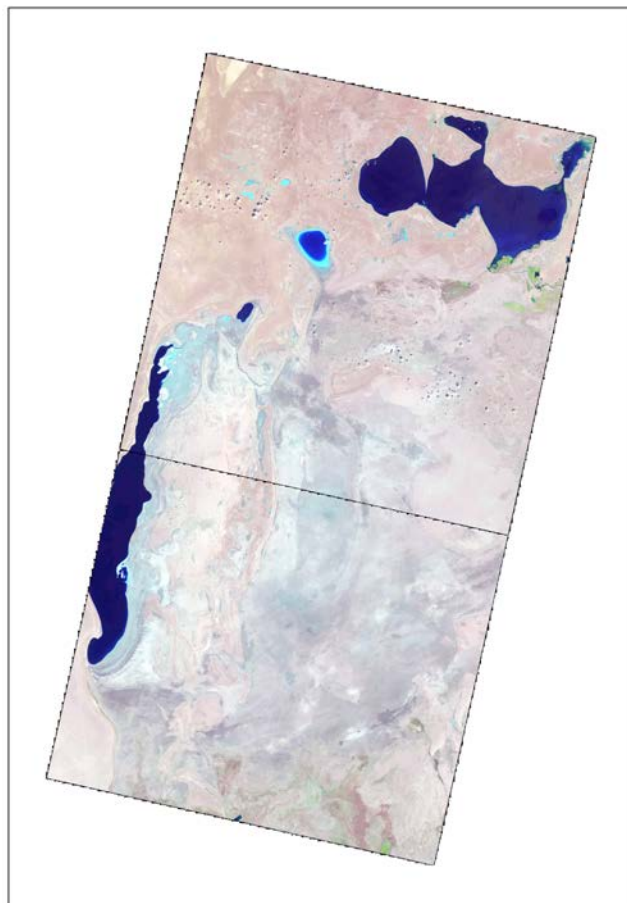


Monitoring of changes in the water surface and wetland area of the Aral Sea and the Aral Region

SIC specialists are constantly monitoring the state of the Southern Aral Sea and parts of the Greater Aral Sea by using the Landsat 8-9 OLI images. The use of the NDVI index with refined threshold values has been started, which allow recognizing three categories of surfaces: 1) open water surface, 2) wetlands, 3) land. According to the image from 24 August 2024, the areas of wetlands and open water surface were determined



**Figure 1 Southern part of the Aral Sea
Landsat 8-9, 24 August 2024**

Table 1**The area of wetlands, open water surfaces and dried ground*
in the Western and Eastern parts of the Aral Sea**

	02.11.2023	01.03.2024	18.04.2024	06.06.2024	31.07.2024	24.08.2024
<i>Western part of the Aral Sea, ha</i>						
Wetland	331 197	302 160	309 003	319 959	321 683	311806
Water surface	200 819	202 022	199 234	199 079	196 825	195410
Dried ground*	29 334	57 169	53 113	42 312	42 842	54134
<i>Eastern part of the Aral Sea, ha</i>						
Wetland	1 470 950	1 316 379	1 461 355	1 432 497	1 449 835	1434433
Water surface	32	46	15	47	22	43
Dried ground*	25 842	180 399	35 454	64 280	46 697	62348

* bare soil, dense or rare vegetation

Figure 2. The Aral Region. Landsat 8 and 9, 24 August 2024

Table 2**Areas of wetlands in the Aral Region, ha**

Water body	02.11.2023	01.03.2024	18.04.2024	06.06.2024	31.07.2024	24.08.2024
Sudoche	33806.8	13257.2	16276	7377	10470	9959
Mejdureche	2117.5	3095.3	1191	534	275	401
Rybatche	2480.9	1812.1	241	79	103	177
Muynak	2537.9	2989.1	2136	106	131	239
Djiltyrbas dam-terminated	9370.7	16892.4	16353	960	535	956
Djiltyrbas (together with former right and left streams)	17307	16697	10236	668	895	753
Dumalak	342.2	632.6	37	6	7	4
Makpalkul	488.3	559.0	385	302	30	36
Mashan Karadjar	3028.9	2595.2	1388	326	232	111
Water surface southward of Muynak	2949.2	1171.7	166	2	40	30
Water surface along Kazakhdarya river channel	93.0	76.3	11	0	0.09	0
Zakirkol	25.8	84.3	117	56	1	0
Total:	74548.6	59862.7	48537	10416	12719.09	12666

Table 3**The area of open water surface in the Aral region, ha**

Water body	02.11.2023	01.03.2024	18.04.2024	06.06.2024	31.07.2024	24.08.2024
Sudoche	9686.43	14748.03	15293	9521	4412	3830
Mejdureche	9016.56	12208.68	7391	2078	1648	1389
Rybatche	0.18	1493.82	1996	1735	1037	721
Muynak	24.39	1172.88	1382	168	19	4
Djiltyrbas dam-terminated	5373.82	15505.2	14247	5522	4637	3883
Djiltyrbas (together with former right and left streams)	483.75	1164	1771	51	30	14
Dumalak	0.09	0	0	0	0	0
Makpalkul	307.53	3261.42	3180	206	60	79
Mashan Karadjar	544.77	1519.11	1150	420	170	153
Water surface southward of Muynak	0	44.91	0	0	0.18	0
Water surface along Kazakhdarya river channel	1.17	0.09	0	0	0.18	0
Zakirkol	139.14	740.52	534	79	0	0
Total:	25577.83	51858.66	46944	19780	12013.36	10073

Table 4**Dried ground area* in the Aral Region, ha**

Water body	02.11.2023	01.03.2024	18.04.2024	06.06.2024	31.07.2024	24.08.2024
Sudoche	29203.69	44691.7	41128	55799	57815	58908
Mejdureche	26649.92	22479.95	29202	35172	35861	35994
Rybatche	9011.88	8187.03	9256	9679	10353	10595
Muynak	13601.7	12001.95	12646	15890	16014	15921
Djiltyrbas dam-terminated	32727.864 93	15074.734 93	16872.394 93	40990.394 93	42300	42633
Djiltyrbas (together with former right and left streams)	81160.25	81090	86944	98232	98026	98184
Dumalak	15707.64	15417.39	16013	16044	16043	16046
Makpalkul	7888.13	4863.5	5119	8176	8594	8569
Mashan Karadjar	23627.28	23086.65	24663	26455	26799	26937
Water surface southward of Muynak	6655.79	8388.38	9439	9603	9564.82	9575
Water surface along Kazakhdarya river channel	4657.27	4675.09	4740.5	4751.5	4751.23	4751.5
Zakirkol	2626.33	1966.45	2140.3	2656.3	2790.3	2791.3
Total:	253517.7	241922.8	258163	323448	328911.74	330905.1

* bare soil, dense or rare vegetation

Table 5**Inflow to Inflow to the Aral Region and Aral Sea in 2024, mln.m³**

Month	From Amu Darya River	from canal systems	collector-drainage runoff	Total	Plan	Runoff from North Aral Sea
January	30	34	30	94	774	0
February	22	37	26	85	167	0
March	19	0	107	126	185	0
April	37	0	219	256	180	0
May	37	0	81	118	336	0
June	82	0	87	169	391	0
July	116	0	113	229	480	0

*Source: Uzhydrometeoservice

** Source: Ministry of Water Resources of the Republic of Uzbekistan

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