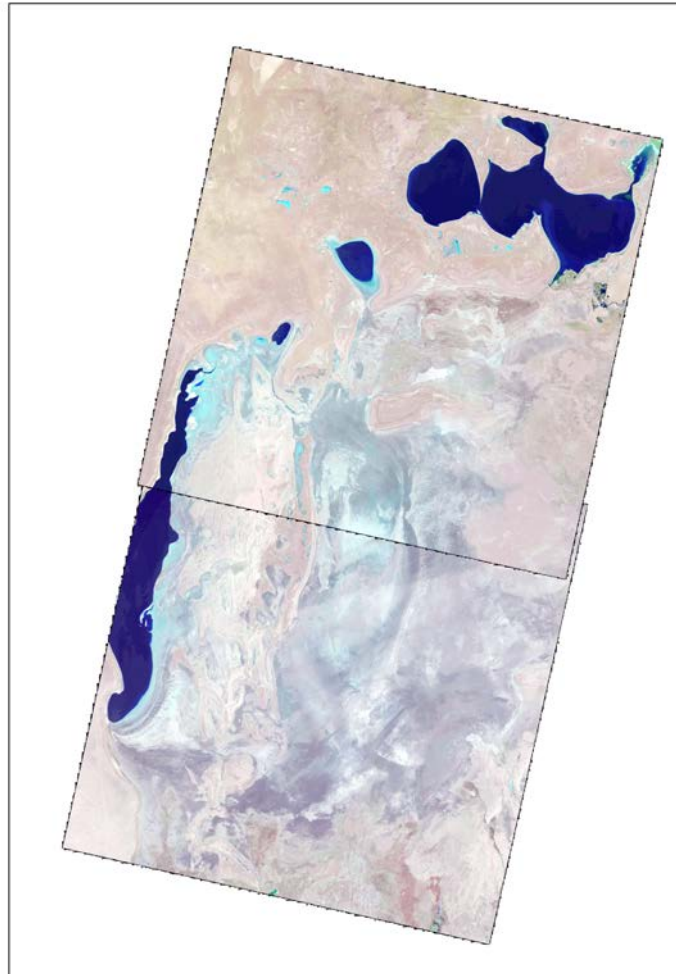


Monitoring of changes in the water surface and wetland area of the Aral Sea and the Aral Region

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 17 October 2023, the areas of wetlands and open water surface were determined



**Figure 1 Western and Eastern parts of the Aral Sea
Landsat 8-9, 17 October 2023**

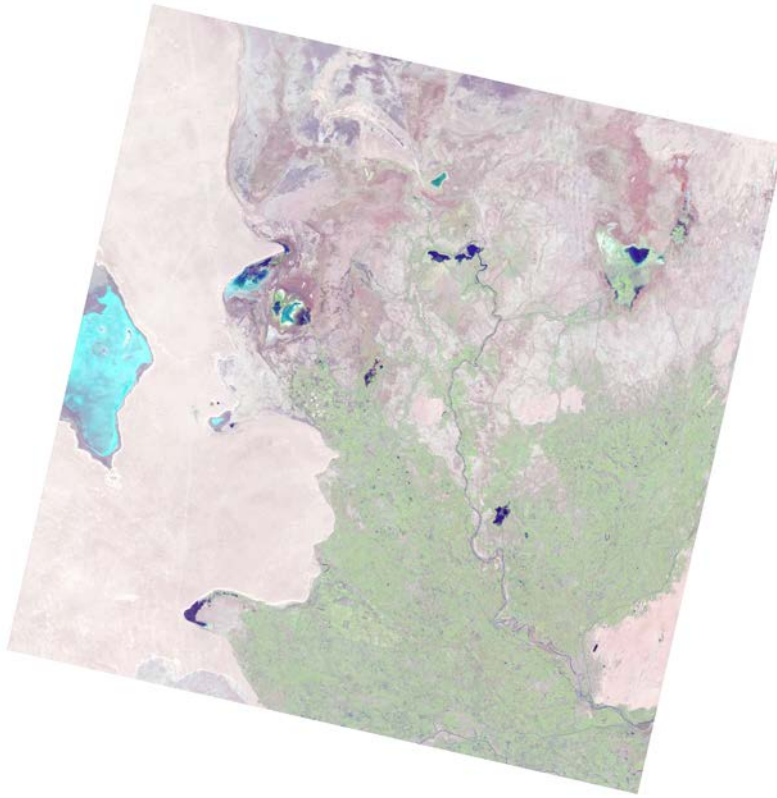


Figure 2. The Aral Region. Landsat 8 and 9. 17 October 2023

Table 1

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

	26.05.2023	27.06.2023	13.07.2023	22.08.2023	23.09.2023	17.10.2023
<i>Western part of the Aral Sea, ha</i>						
Wetland	335 540	336 388	271 323	311 505	318 556	324 587
Water surface	210 294	206 861	208 318	203 458	201 970	200 855
Dried ground*	15 516	18 101.2	81 709	46 387	40 823	35 908
<i>Eastern part of the Aral Sea, ha</i>						
Wetland	1 405 970	1 446 824	1 430 500	1 445 526	1 457 765	1 462 390
Water surface	2 588	699	406	12	26	15
Dried ground*	88 266	49 190	65 918	51 286	39 033	34 419

* bare soil, dense or rare vegetation

Table 2

Areas of wetlands in the Aral Region, ha

Водоем	26.05.2023	27.06.2023	13.07.2023	22.08.2023	23.09.2023	17.10.2023
Sudoche	21413	22414.68	23579.01	17992.35	2110.94	23576.22
Mejdureche	2249	1629.36	1320.21	293.85	210.96	352.89
Rybatche	805	974.61	1043.73	42.57	15.75	41.31
Muynak	310	220.59	188.19	93.96	79.2	185.67
Djiltyrbas dam-terminated	3606	2024.55	2024.37	874.71	1012.95	1552.5
Djiltyrbas (together with former right and left streams)	23991	13947.57	15009.66	1868.4	2443.32	5033.88
Dumalak	1184	840.69	740.7	24.3	14.85	20.7
Makpalkul	778	238.95	141.66	67.41	21.69	22.95
Mashan Karadjar	2638	1595.43	1256.4	319.23	1040.85	1169.1
Water surface southward of Muynak	823	609.48	594.45	83.43	7.11	272.52
Water surface along Kazakhdarya river channel	172	163.44	84.15	1.17	3.51	4.5
Zakirkol	21.06	3.09	2.34	0.09	0.63	1.8
Total:	57 990.06	44 662.44	45 984.87	21 661.47	6 961.76	32 234.04

Table 3

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

Водоем	26.05.2023	27.06.2023	13.07.2023	22.08.2023	23.09.2023	17.10.2023
Sudoche	9473	5393.61	3101.49	2491.38	4561.47	4981.05
Mejdureche	1827	855.54	1104.48	1478.07	1057.41	2816.46
Rybache	1871	1292.22	531	0	0.09	0
Muynak	129	37.99	16.38	6.57	6.75	11.88
Djiltyrbas dam-terminated	5300	3746.61	2890.82	2179.71	2168.73	2326.23
Djiltyrbas (together with former right and left streams)	175	14.31	10.71	7.47	433.89	382.68
Dumalak	0	0	0.54	0	0	1.53
Makpalkul	409	149.31	60.93	134.64	2.88	7.47
Mashan Karadjar	663	206.28	160.83	76.77	348.39	490.32
Water surface southward of Muynak	0	0	0	0	0	0
Water surface along Kazakhdarya river channel	0	0	0	0	0.09	0.09
Zakirkol	22.14	0	0	0	0	0
Total:	19 869.14	11 695.87	7 877.18	6 374.61	8 579.7	11 017.71

Table 4

Dried ground area* in the Aral Region, ha

Водоём	26.05.2023	27.06.2023	13.07.2023	22.08.2023	23.09.2023	17.10.2023
Sudoche	41811	44888.71	46016.5	52213.27	66024.59	44139.73
Mejdureche	33708	35299.1	35359.31	36012.08	36515.63	34614.65
Rybatche	8817	9226.17	9918.27	11450.43	11477.16	11451.69
Muynak	15725	15905.42	15959.43	16063.47	16078.05	15966.45
Djiltyrbas dam-terminated	38566.39	41701.23	42557.20	44417.97	44290.71493	43593.66493
Djiltyrbas (together with former right and left streams)	74785	84989.12	83930.63	97075.13	96073.79	93534.44
Dumalak	14866	15209.31	15308.76	16025.7	16035.15	16027.77
Makpalkul	7497	8295.74	8481.41	8481.95	8659.43	8653.58
Mashan Karadjar	23900	25399.29	25783.77	26805	25811.76	25541.58
Water surface southward of Muynak	8782	8995.52	9010.55	9521.57	9597.89	9332.48
Water surface along Kazakhdarya river channel	4579.5	4588.06	4667.35	4750.33	4747.9	4746.91
Zakirkol	2748.1	2788.21	2788.96	2791.21	2790.67	2789.5
Total:	275 784.9	297 285.8	299 782.1	325 608.1	338 102.7	310 392.4

* bare soil, dense or rare vegetation

Table 5**Inflow to Inflow to the Aral Region and Aral Sea in 2023**

Month	Inflow to Inflow to the Aral Region and Aral Sea, mln.m ³					Runoff from North Aral Sea, mln.m ³
	From Amu Darya River	from canal systems	collector-drainage runoff	Total	Plan	
Jan	92	8	40	140	774	0
Feb	32	98	45	175	167	0
Mar	85	50	122	257	185	0
Apr	38	0	214	252	180	0
May	35	0	71	106	336	0
June	71	0	91	162	391	0
July	106	0	99	205	480	0
Aug	101	0	131	232	391	0
Sep	89	0	145	234	319	0

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