

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 27 August 2025, the areas of wetlands and open water surface were determined.

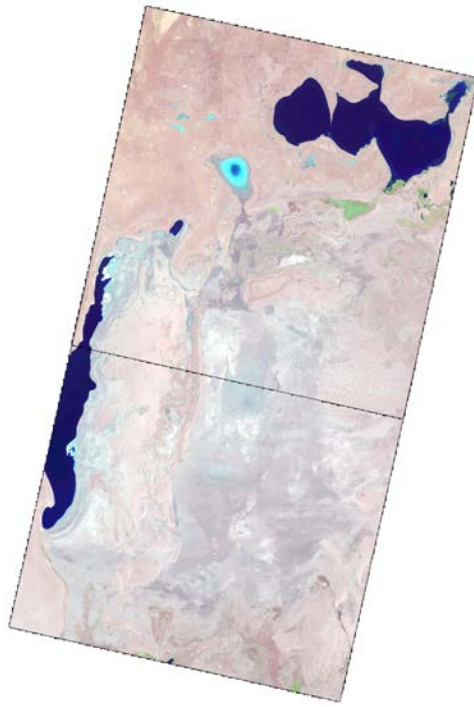


Figure 1. The Aral Region. Landsat 8 and 9, 27 August 2025

Table 1

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

	28.03.2025	29.04.2025	31.05.2025	16.06.2025	10.07.2025	27.08.2025
Western part of the Aral Sea, ha						
Wetland	326552	327496	328980	308277	Облачно	328207
Water surface	193014	193474	192685	191657		189092
Dried ground*	41784	40380	39685	61416		44021
Eastern part of the Aral Sea, ha						
Wetland	1454077	1466098	Облачно	Облачно	Облачно	1456135
Water surface	29	43				11
Dried ground*	42712	30683				40678

* bare soil, dense or rare vegetation

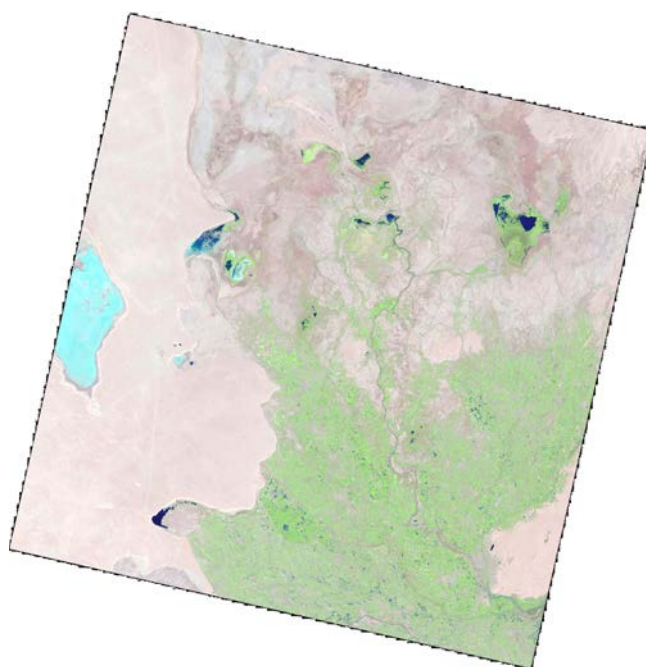


Figure 2. The Aral Region. Landsat 8 and 9, 27 August 2025

Таблица 2

Wetland areas of the Southern Aral Sea region, ha

Water body	12.03.2025	31.05.2025	16.06.2025	10.07.2025	27.08.2025
Sudoche	32711	6551	12420	10129	13684
Mejdureche	1907	519	398	318	243
Rybachе	946	323	254	318	277
Muynak	2550	199	172	120	146
Djilyrbas dam-terminated	7351	2218	1700	781	588
Djilyrbas (together with former right and left streams)	20787	1037	2053	931	2074
Dumalak	140	0	0	0	0
Makpalkul	527	338	201	49	25
Mashan Karadjar	3091	420	528	379	319
Water surface southward of Muynak	1273	11	3.06	36	199
Water surface southward of Kazakhdarya	74	0	0	0	0
Zakirkol	90	22	77	16	1
Total:	71447	11638	17806.06	13077	17556

Table 3

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

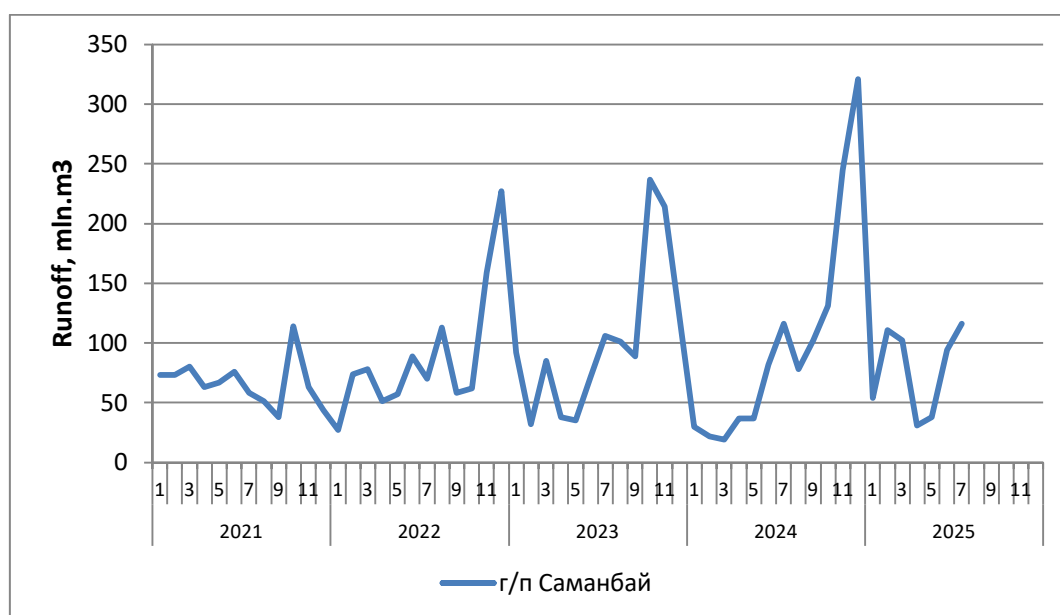
Water body	12.03.2025	31.05.2025	16.06.2025	10.07.2025	27.08.2025
Sudoche	18004	9854	8057	6915	4146
Mejdureche	13931	1813	1683	1573	957
Rybach	2688	1586	1366	952	733
Muynak	2745	339	167	139	50
Djilyrbas dam-terminated	18764	6822	5662	5217	4527
Djilyrbas (together with former right and left streams)	3161	44	0	17	14
Dumalak	0.18	0	0	0	0
Makpalkul	3725	267	170	68	70
Mashan Karadjar	2425	560	609	548	204
Water surface southward of Muynak	171	2	0.09	0	0
Water surface southward of Kazakhdarya	0.8	0	0	0	0
Zakirkol	581	131	6	0	0
Total:	66195.78	21418	17720	15429	10701

Table 4

Dried ground area* in the Aral Region, ha

Water body	12.03.2025	31.05.2025	16.06.2025	10.07.2025	27.08.2025
Sudoche	21982	56292	52220	55653	54867
Mejdureche	21946	35452	35703	35893	36584
Rybach	7859	9584	9873	10223	10483
Muynak	10869	15626	15825	15905	15968
Djilyrbas dam-terminated	21357.39	38432.39	40110.39	41474.39	42357.39
Djilyrbas (together with former right and left streams)	75003	97870	96898	98003	96863
Dumalak	15909.8		16050	16050	16050
Makpalkul	4432	8079	8313	8567	8589
Mashan Karadjar	21685	26221	26064	26274	26678
Water surface southward of Muynak	8161	9592	9601.85	9569	9406
Water surface southward of Kazakhdarya	4679.9	4751.5	4751.5	4751.5	4751.5
Zakirkol	2120.3	2638.3	2708.3	2775.3	2790.3
Total:	216001.4	299786.6	318118	325138	325387

* bare soil, dense or rare vegetation

**Fig.3 Dynamics of the Amu Darya River runoff at the Samanbay gauging station**

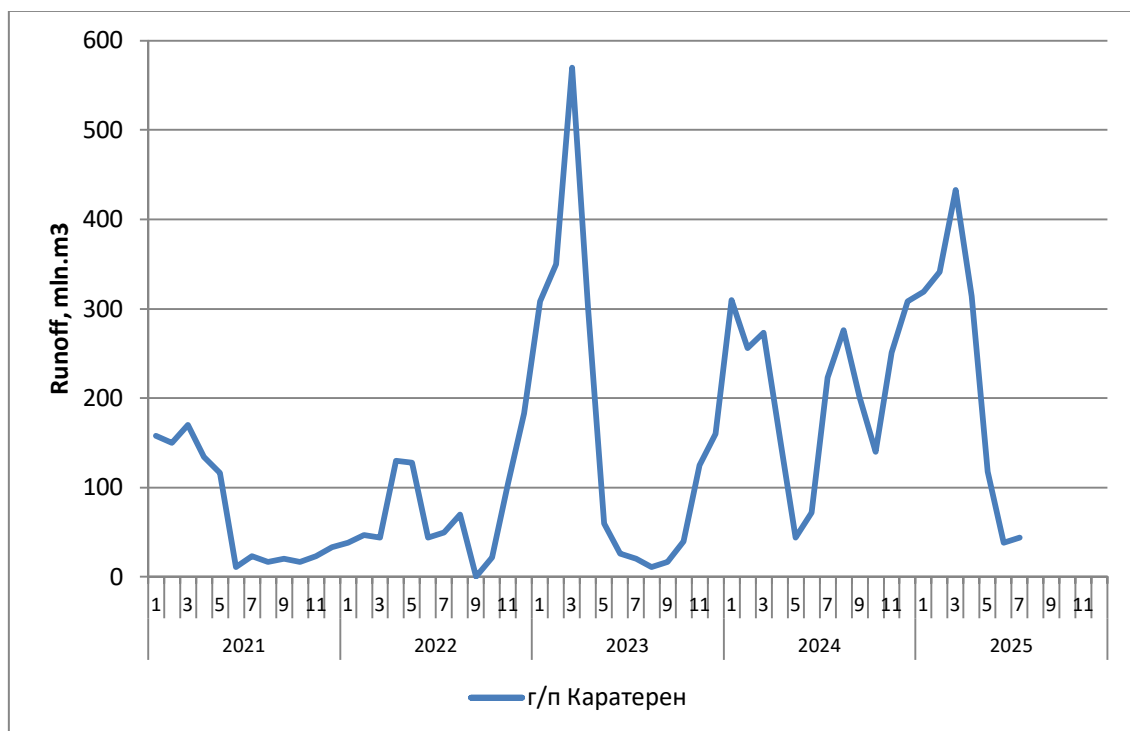


Fig.4 Dynamics of the Syr Darya river flow along the Karateren gauging station

Table 5

Inflow to Inflow to the Aral Region and Aral Sea, mln.m³

Month	From Amu Darya River*	From canal systems**	Collector-drainage runoff**	Total	Release from North Aral sea
January	54	39	54	147	0
February	111	18	57	186	0
March	102	60	81	243	0
April	31	0	105	136	0
May	38	0	90	128	0
June	94	0	82	176	0
July	116	0	129	245	0

*Source: Uzhydrometeoservice

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

Prepared by: I. Ruziev and I. Ergashev