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 5 October 2025, the areas of wetlands and open water surface were determined.

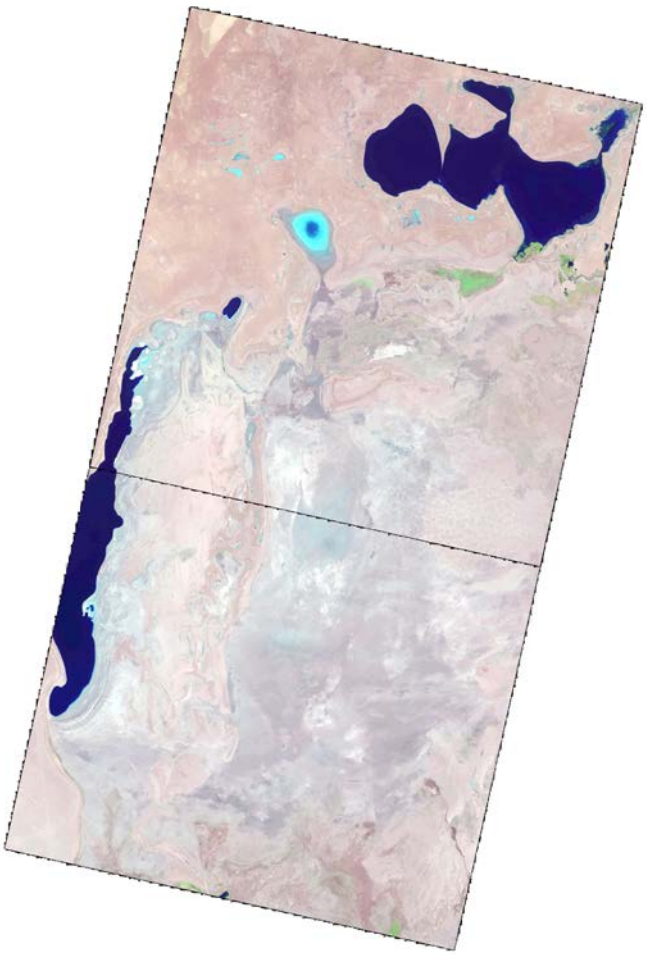

Figure 1. The Aral Region. Landsat 8 and 9, 5 October 2025

Table 1

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

	31.05.2025	16.06.2025	10.07.2025	27.08.2025	04.09.2025	05.10.2025
Western part of the Aral Sea, ha						
Wetland	328980	308277	Cloudy	328207	333464	338323
Water surface	192685	191657		189092	188184	186758
Dried ground*	39685	61416		44021	39702	36269
Eastern part of the Aral Sea, ha						
Wetland	Cloudy	Cloudy	Cloudy	1456135	1458456	1459973
Water surface				11	10	10
Dried ground*				40678	38358	36841

* bare soil, dense or rare vegetation

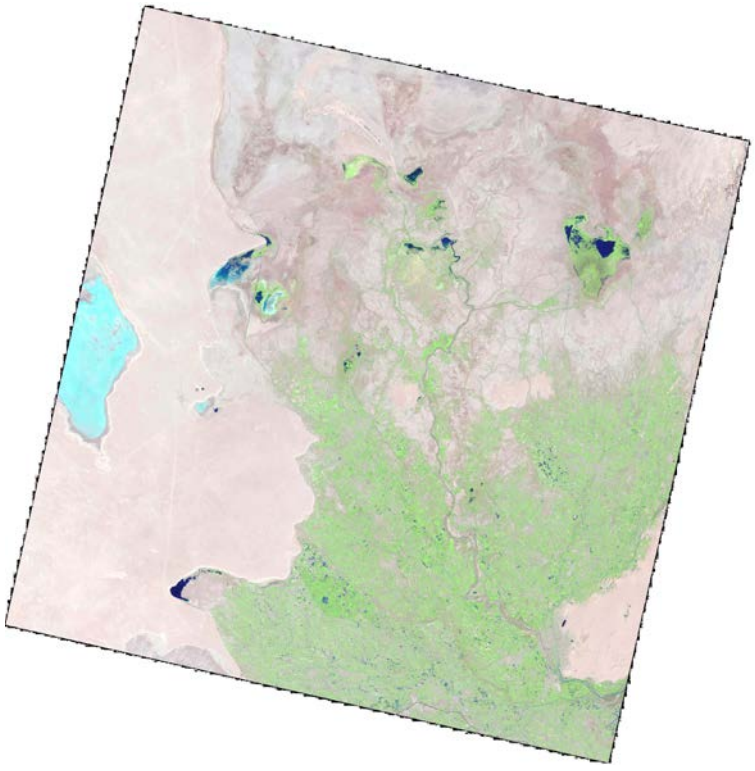

Figure 2. The Aral Region. Landsat 8 and 9, 5 October 2025

Table 2

Wetland areas of the Southern Aral Sea region, ha

Water body	31.05.2025	16.06.2025	10.07.2025	27.08.2025	04.09.2025	05.10.2025
Sudoche	6551	12420	10129	13684	13985	15702
Mejdureche	519	398	318	243	257	331
Rybache	323	254	318	277	302	747
Muynak	199	172	120	146	167	735
Djiltyrbas dam-terminated	2218	1700	781	588	559	989
Djiltyrbas (together with former right and left streams)	1037	2053	931	2074	2103	3687
Dumalak	0	0	0	0	0	30
Makpalkul	338	201	49	25	16	26
Mashan Karadjar	420	528	379	319	318	658
Water surface southward of Muynak	11	3.06	36	199	222	180
Water surface southward of Kazakhdarya	0	0	0	0	0.7	5
Zakirkol	22	77	16	1	0.6	9
Total:	**11638**	**17806.06**	**13077**	**17556**	**17930**	**23099**

Table 3

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

Water body	31.05.2025	16.06.2025	10.07.2025	27.08.2025	04.09.2025	05.10.2025
Sudoche	9854	8057	6915	4146	3785	5762
Mejdureche	1813	1683	1573	957	986	1580
Rybache	1586	1366	952	733	750	896
Muynak	339	167	139	50	42	35
Djiltyrbas dam-terminated	6822	5662	5217	4527	4298	4778
Djiltyrbas (together with former right and left streams)	44	0	17	14	14	60
Dumalak	0	0	0	0	0	0
Makpalkul	267	170	68	70	58	55
Mashan Karadjar	560	609	548	204	171	319
Water surface southward of Muynak	2	0.09	0	0	0	0
Water surface southward of Kazakhdarya	0	0	0	0	0	0
Zakirkol	131	6	0	0	0	0
Total:	**21418**	**17720**	**15429**	**10701**	**10104**	**13485**

Table 4

Dried ground area* in the Aral Region, ha

Water body	31.05.2025	16.06.2025	10.07.2025	27.08.2025	12.09.2025	05.10.2025
Sudoche	56292	52220	55653	54867	54927	51233
Mejdureche	35452	35703	35893	36584	36541	35873
Rybache	9584	9873	10223	10483	10441	9850
Muynak	15626	15825	15905	15968	15955	15394
Djiltyrbas dam-terminated	38432.39	40110.39	41474.39493	42357.39493	42615	41705.39493
Djiltyrbas (together with former right and left streams)	97870	96898	98003	96863	96834	95204
Dumalak		16050	16050	16050	16050	16020
Makpalkul	8079	8313	8567	8589	8610	8603
Mashan Karadjar	26221	26064	26274	26678	26712	26224
Water surface southward of Muynak	9592	9601.85	9569	9406	9383	9425
Water surface southward of Kazakhdarya	4751.5	4751.5	4751.5	4751.5	4751	4746.5
Zakirkol	2638.3	2708.3	2775.3	2790.3	2791	2782.3
Total:	**299786.6**	**318118**	**325138**	**325387**	**325610**	**317060.**

* bare soil, dense or rare vegetation

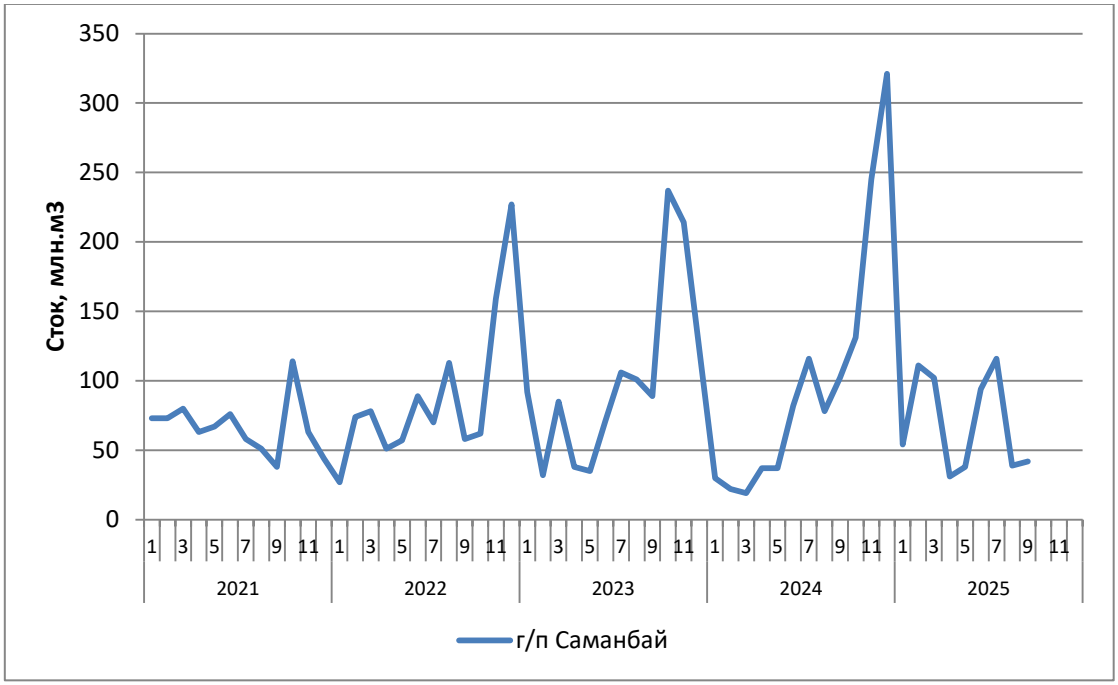

Fig.3 Dynamics of the Amu Darya River runoff at the Samanbay gauging station

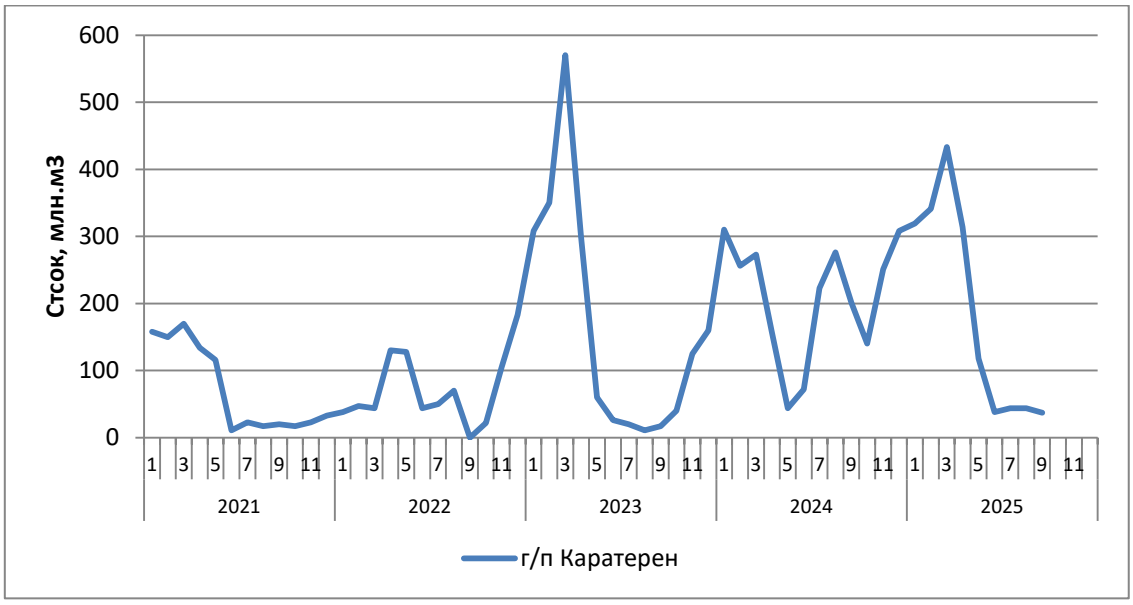

Fig.4 Dynamics of the Syr Darya river flow along the Karateren gauging station

Table 5

Inflow to Inflow to the Aral Region and Aral Sea, mln.m^3

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
August	39	0	124	**163**	0
September	42	0	103	**145**	0

*Source: Uzhydrometeoservice

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

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