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 16 June 2025, the areas of wetlands and open water surface were determined.

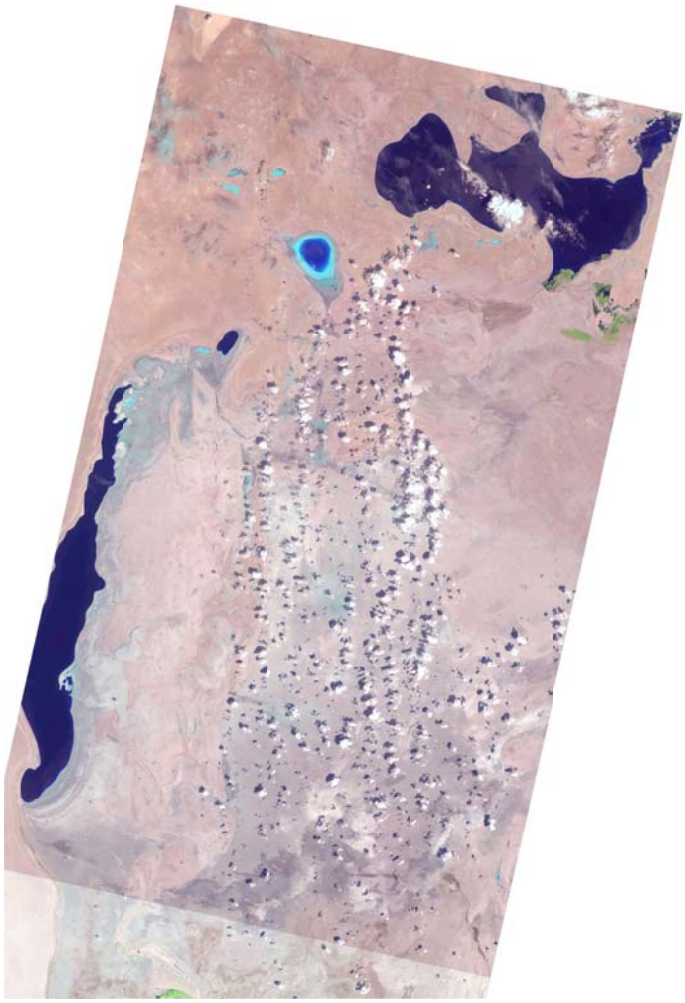

Figure 1. The Aral Region. Landsat 8 and 9, 16 June 2025

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
Western part of the Aral Sea, ha				
Wetland	326552	327496	328980	308277
Water surface	193014	193474	192685	191657
Dried ground*	41784	40380	39685	61416
Eastern part of the Aral Sea, ha				
Wetland	1454077	1466098	Cloudy	Cloudy
Water surface	29	43		
Dried ground*	42712	30683		

* bare soil, dense or rare vegetation

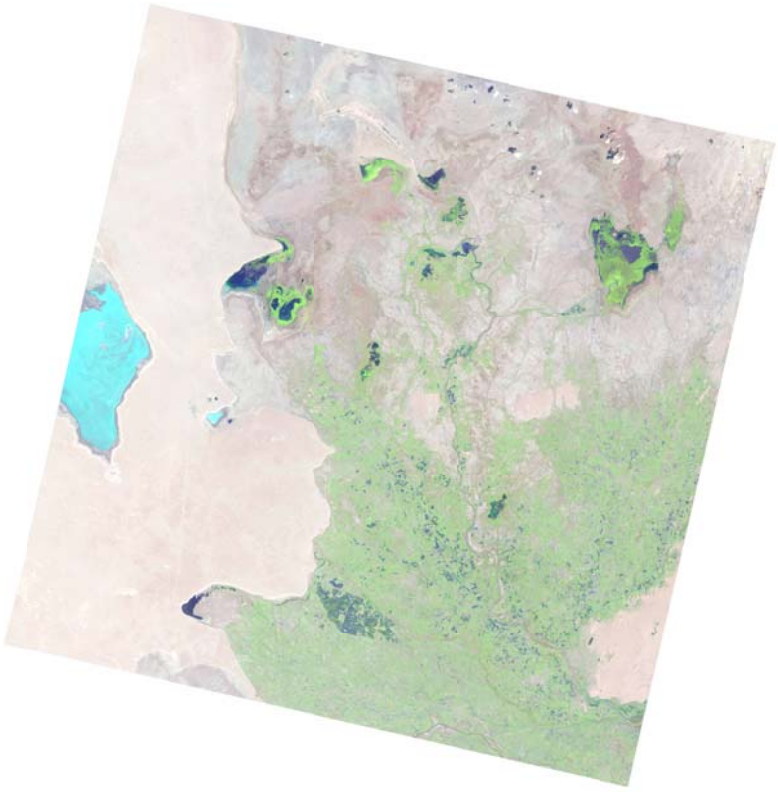

Figure 2. The Aral Region. Landsat 8 and 9,16 June 2025

Table 2

Wetland areas of the Southern Aral Sea region, ha

Water body	12.03.2025	31.05.2025	16.06.2025
Sudoche	32711	6551	12420
Mejdureche	1907	519	398
Rybache	946	323	254
Muynak	2550	199	172
Djiltyrbas dam-terminated	7351	2218	1700
Djiltyrbas (together with former right and left streams)	20787	1037	2053
Dumalak	140	0	0
Makpalkul	527	338	201
Mashan Karadjar	3091	420	528
Water surface southward of Muynak	1273	11	3.06
Water surface southward of Kazakhdarya	74	0	0
Zakirkol	90	22	77
Total:	**71447**	**11638**	**17806.06**

Table 3

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

Water body	12.03.2025	31.05.2025	16.06.2025
Sudoche	18004	9854	8057
Mejdureche	13931	1813	1683
Rybache	2688	1586	1366
Muynak	2745	339	167
Djiltyrbas dam-terminated	18764	6822	5662
Djiltyrbas (together with former right and left streams)	3161	44	0
Dumalak	0.18	0	0
Makpalkul	3725	267	170
Mashan Karadjar	2425	560	609
Water surface southward of Muynak	171	2	0.09
Water surface southward of Kazakhdarya	0.8	0	0
Zakirkol	581	131	6
Total:	**66195.78**	**21418**	**17720**

Table 4

Dried ground area* in the Aral Region, ha

Water body	12.03.2025	31.05.2025	16.06.2025
Sudoche	21982	56292	52220
Mejdureche	21946	35452	35703
Rybache	7859	9584	9873
Muynak	10869	15626	15825
Djiltyrbas dam-terminated	21357.39	38432.39	40110.39
Djiltyrbas (together with former right and left streams)	75003	97870	96898
Dumalak	15909.8		16050
Makpalkul	4432	8079	8313
Mashan Karadjar	21685	26221	26064
Water surface southward of Muynak	8161	9592	9601.85
Water surface southward of Kazakhdarya	4679.9	4751.5	4751.5
Zakirkol	2120.3	2638.3	2708.3
Total:	**216001.4**	**299786.6**	**318118**

* bare soil, dense or rare vegetation

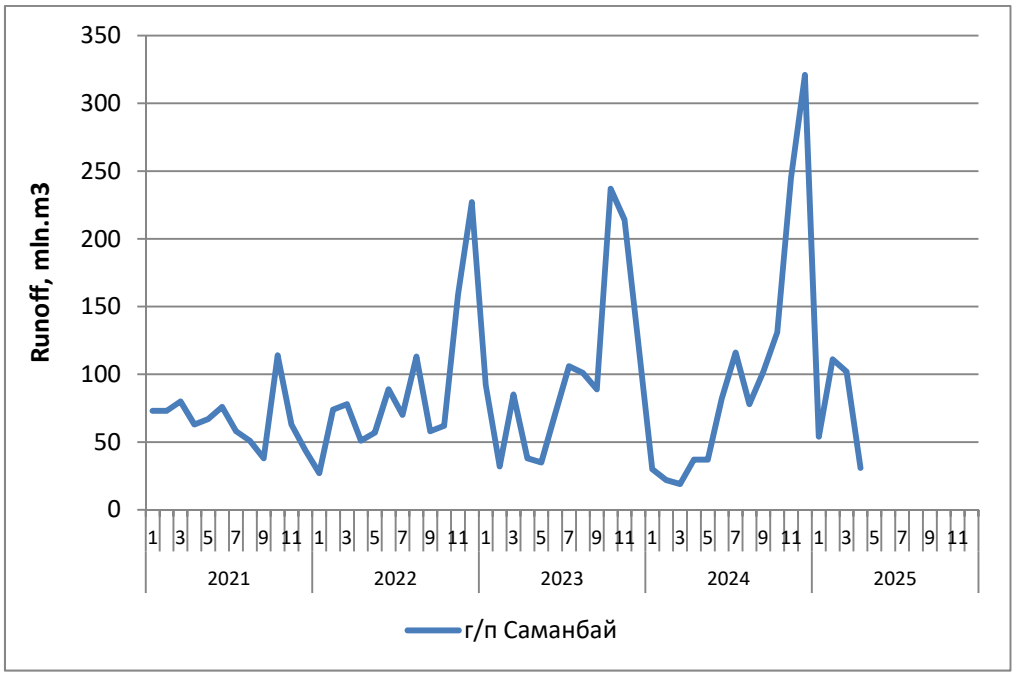

Fig.3 Dynamics of the Amu Darya River runoff at the Samanbay gauging station

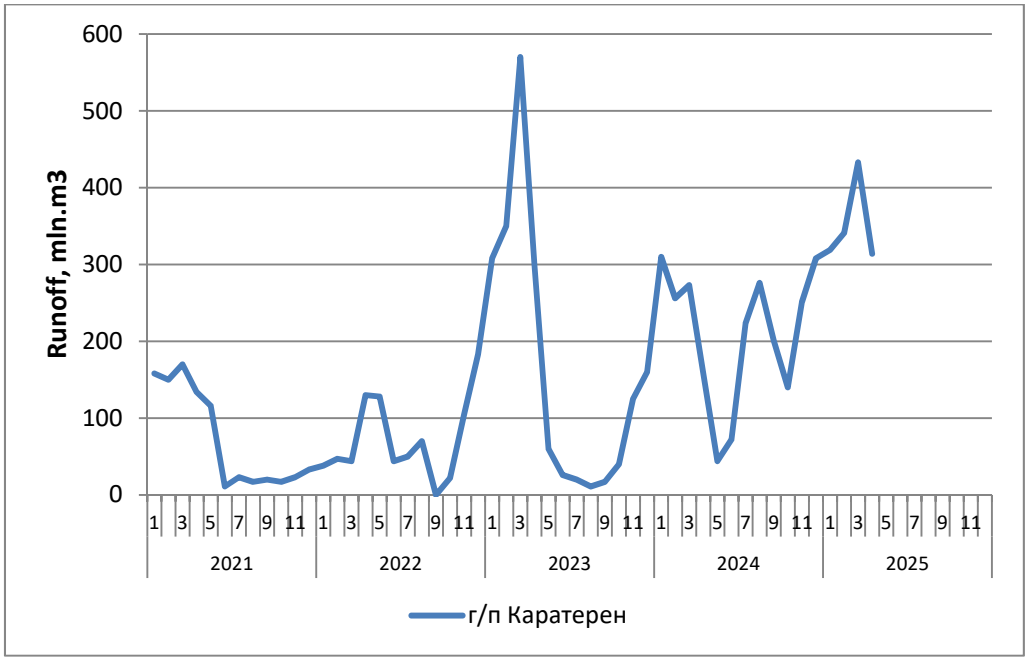

Fig.4 Dynamics of the Syr Darya river flow along the Karateren gauging station

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

*Source: Uzhydrometeoservice

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

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