

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 31 May 2025, the areas of wetlands and open water surface were determined.

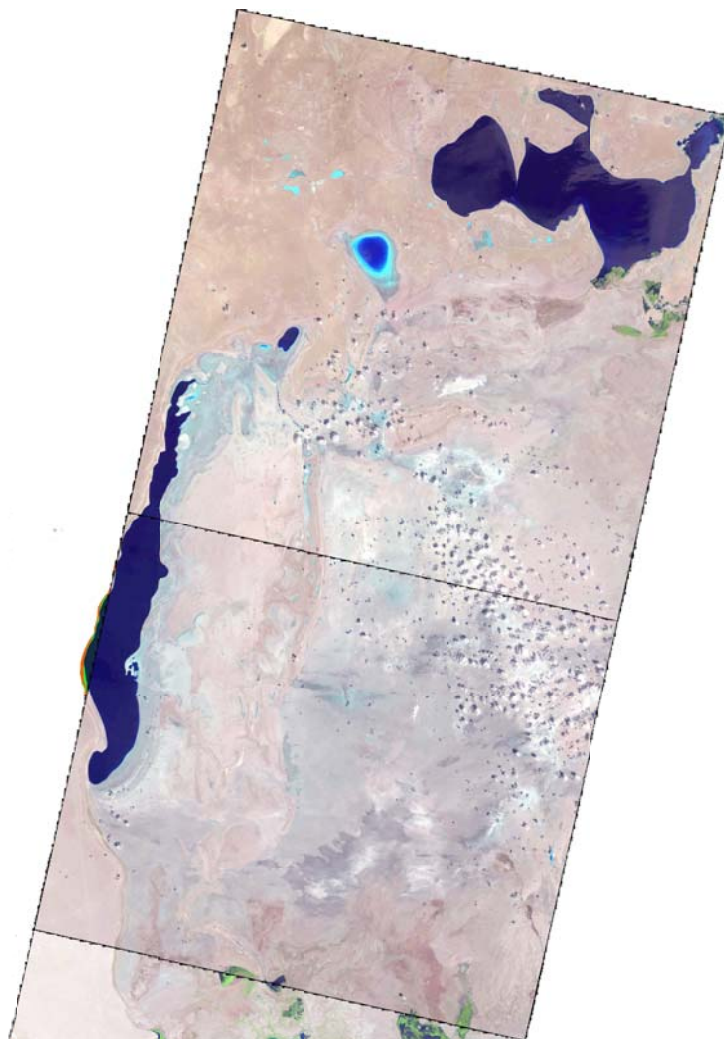


Figure 1. The Aral Region. Landsat 8 and 9, 31 May 2025

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
<i>Western part of the Aral Sea, ha</i>			
Wetland	326552	327496	328980
Water surface	193014	193474	192685
Dried ground*	41784	40380	39685
<i>Eastern part of the Aral Sea, ha</i>			
Wetland	1454077	1466098	Облачно
Water surface	29	43	
Dried ground*	42712	30683	

* bare soil, dense or rare vegetation

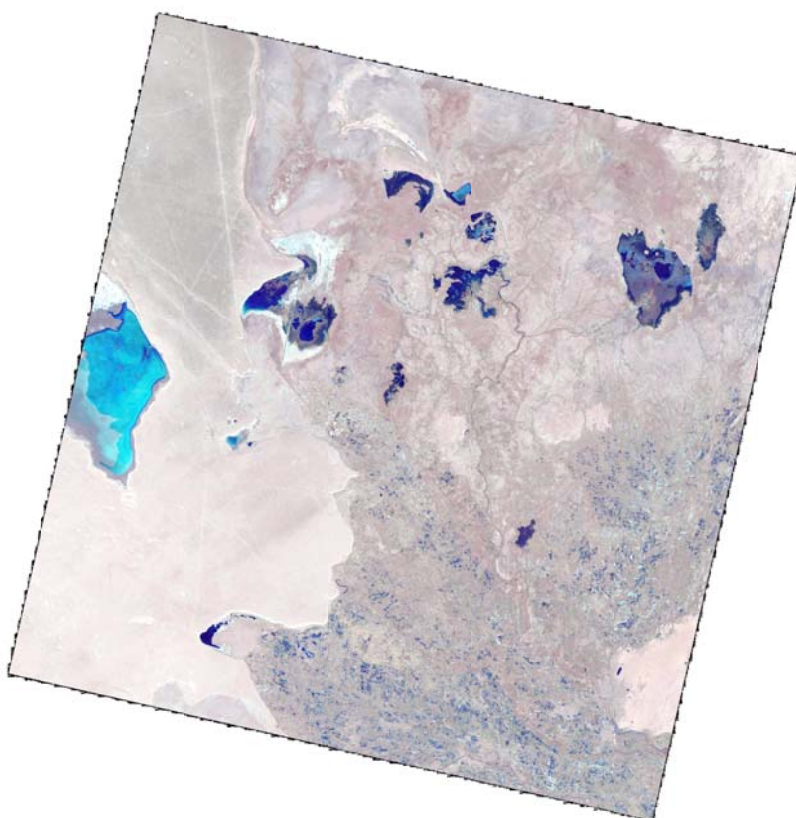


Figure 2. The Aral Region. Landsat 8 and 9, 31 May 2025

Table 2

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

Water body	03.10.2024	22.12.2024	12.03.2025	31.05.2025
Sudoche	18663	46629	32711	6551
Mejdureche	292	3386	1907	519
Rybaché	259	3789	946	323
Muynak	986	8098	2550	199
Djilyrbas dam-terminated	1891	19634	7351	2218
Djilyrbas (together with former right and left streams)	4211	51989	20787	1037
Makpalkul	31	1259	527	338
Mashan Karadjar	762	5362	3091	420
Water surface southward of Muynak	226	4118	1273	11
Zakirkol	1	108	90	22
Total:	27331.35	146444	71447	11638

Table 3

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

Water body	03.10.2024	22.12.2024	12.03.2025	31.05.2025
Sudoche	5490	13821	18004	9854
Mejdureche	2340	12838	13931	1813
Rybaché	656	1207	2688	1586
Muynak	33	1273	2745	339
Djilyrbas dam-terminated	3289	15742	18764	6822
Djilyrbas (together with former right and left streams)	35	704	3161	44
Makpalkul	31	3324	3725	267
Mashan Karadjar	635	2419	2425	560
Water surface southward of Muynak	1	18	171	2
Zakirkol	0	449	581	131
Total:	12510.09	51795.9	66195.78	21418

Table 4

Dried ground area* in the Aral Region, ha

Water body	03.10.2024	22.12.2024	12.03.2025	31.05.2025
Sudoche	48544	12247	21982	56292
Mejdureche	35152	21560	21946	35452
Rybaché	10578	6497	7859	9584
Muynak	15145	6793	10869	15626
Djilyrbas dam-terminated	42292.3	12096.3	21357.3949 3	38432.3949 3
Djilyrbas (together with former right and left streams)	94705	46258	75003	97870
Makpalkul	8622	4101	4432	8079
Mashan Karadjär	25804	19420	21685	26221
Water surface southward of Muynak	9378	5469	8161	9592
Zakirkol	2790.3	2234.3	2120.3	2638.3
Total:	313802.7	155404.2	216001.4	299786.6

* bare soil, dense or rare vegetation

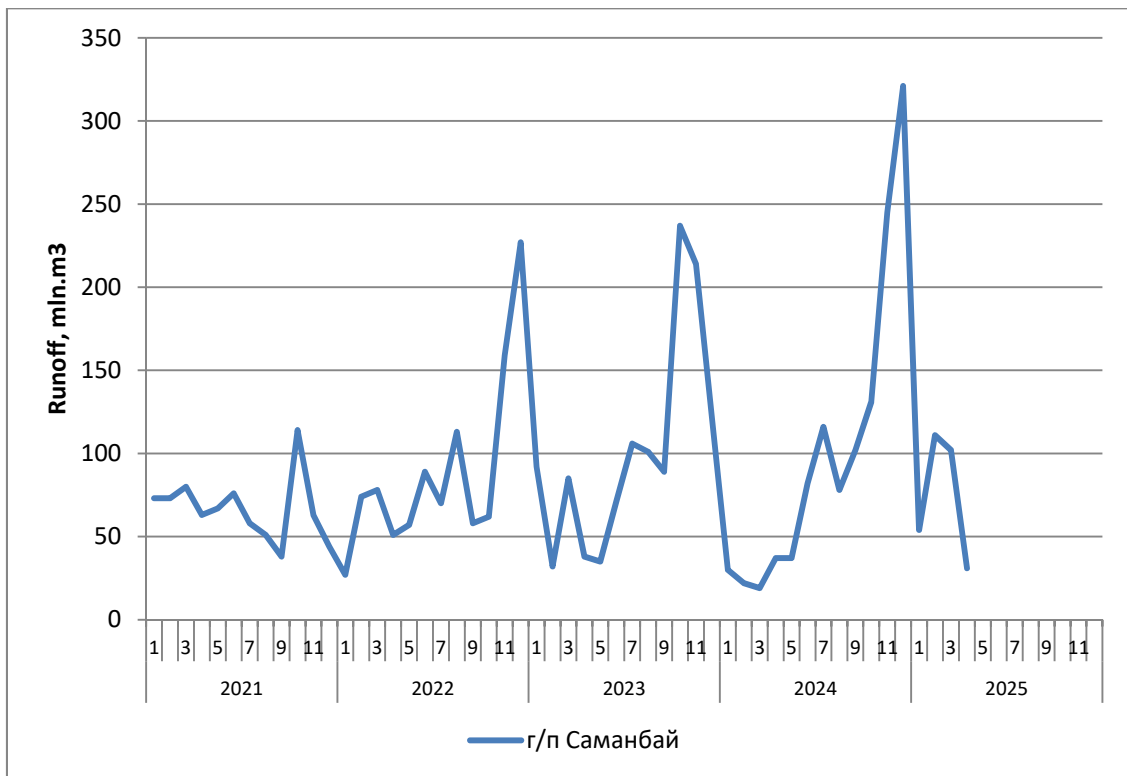


Fig.3 Dynamics of the Amu Darya River runoff at the Samanbay gauging station

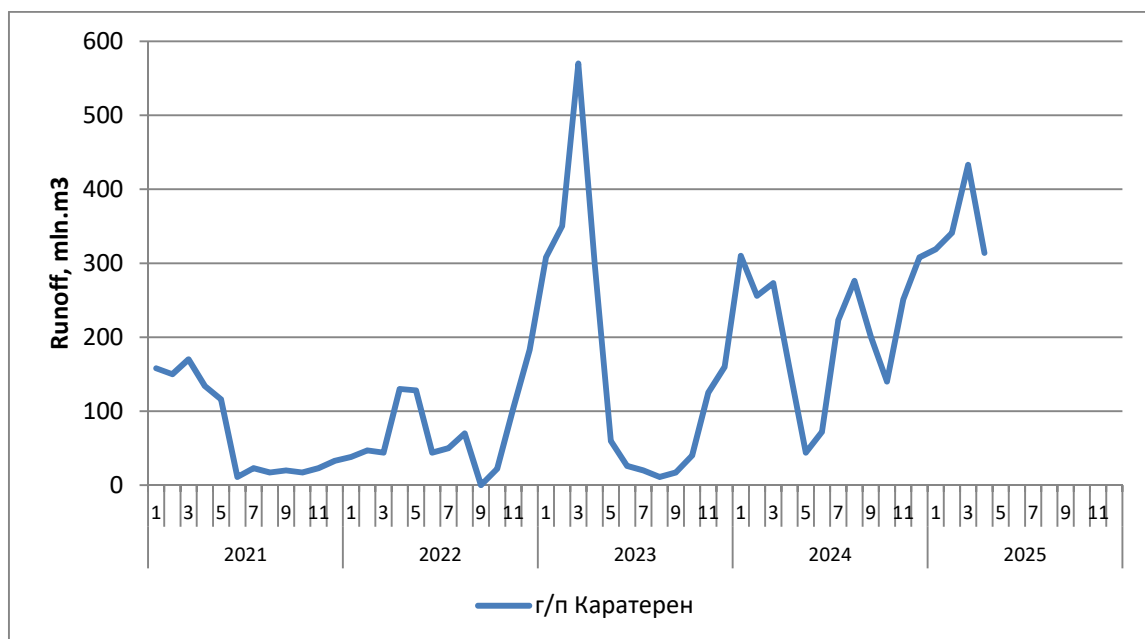


Fig.4 Dynamics of the Syr Darya river flow along the Karateren gauging station

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

*Source: Uzhydrometeoservice

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

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