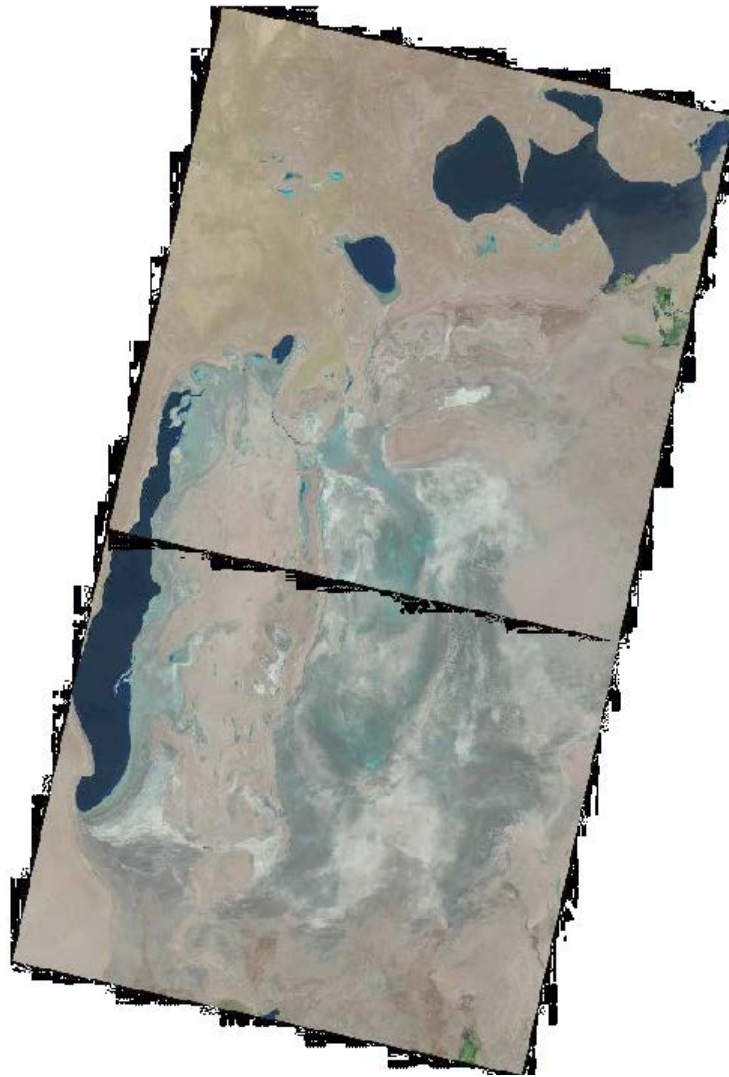


## **Monitoring of changes in the water surface and wetland area of the Aral Sea and the Aral Region**

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 26 May 2023, the areas of wetlands and open water surface were determined



**Figure 1 Western and Eastern parts of the Aral Sea  
Landsat 8-9, 26 May 2023**

**Table 1**

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

	<b>18.01.2023</b>	<b>15.03.2023</b>	<b>26.05.2023</b>
<i>Western part of the Aral Sea, ha</i>			
Wetland	250 244.3	335 725	335 540
Water surface	209 733	213 212	210 294
Dried ground*	101 372.9	12 413	1 5 516
<i>Eastern part of the Aral Sea, ha</i>			
Wetland	1 386 722	1 342 826	1 405 970
Water surface	364.41	1 128.5	2 588
Dried ground*	109 737.8	152 869	88 266
	January	March	April
Limit	774	185	180
** Inflow to the Aral Region, Mm <sup>3</sup> /month	140	257	106

\*\* bare soil, dense or rare vegetation

\*\*Source BWO Amu Darya



**Figure 2. The Aral Region. Landsat 8 and 9. 26 May 2023**

Table 2

## Areas of wetlands in the Aral Region, ha

Water body	18.01.2023	15.03.2023	26.05.2023
Sudoche	22 244.4	21213.18	21413
Mejdureche	4 443.03	6117.48	2249
Rybatche	1 143.72	1711.26	805
Muynak	753.48	2277.09	310
Djiltyrbas dam-terminated	8270.01	17639.1	3606
Djiltyrbas (together with former right and left streams)	22669.29	30863.79	23991
Dumalak	1365.66	2446.83	1184
Makpalkul	650.7	2466.63	778
Mashan Karadjar	2288.43	4158.36	2638
Water surface southward of Muynak	524.43	1116.18	823
Water surface along Kazakhdarya river channel	355.77	589.23	172
Zakirkol	47.34	151.02	21.06
<b>Total:</b>	<b>64 756.26</b>	<b>90 750.15</b>	<b>57 990.06</b>

Table 3

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

Water body	18.01.2023	15.03.2023	26.05.2023
Sudoche	6906.33	7324.56	9473
Mejdureche	6538.95	7929.36	1827
Rybatche	1574.64	2119.68	1871
Muynak	2754.54	1300.41	129
Djiltyrbas dam-terminated	10924.47	6652.89	5300
Djiltyrbas (together with former right and left streams)	451.17	162.18	175
Dumalak	0	0	0
Makpalkul	3970.71	2005.47	409
Mashan Karadjar	1717.74	1351.26	663
Water surface southward of Muynak	62.64	4.86	0
Water surface along Kazakhdarya river channel	0.27	0	0
Zakirkol	293.31	281.61	22.14
<b>Total:</b>	<b>35 194.77</b>	<b>29 132.28</b>	<b>19 869.14</b>

**Table 4****Dried ground area\* in the Aral Region, ha**

<b>Water body</b>	<b>18.01.2023</b>	<b>15.03.2023</b>	<b>26.05.2023</b>
Sudoche	43546.27	44159.26	41811
Mejdureche	26802.02	23737.16	33708
Rybatche	8774.64	7662.06	8817
Muynak	12655.98	12586.5	15725
Djiltyrbas dam-terminated	28277.91493	23180.40493	38566.39493
Djiltyrbas (together with former right and left streams)	75830.54	67925.03	74785
Dumalak	14684.34	13603.17	14866
Makpalkul	4062.59	4211.9	7497
Mashan Karadjar	23194.83	21691.38	23900
Water surface southward of Muynak	9017.93	8483.96	8782
Water surface along Kazakhdarya river channel	4395.46	4162.27	4579.5
Zakirkol	2450.65	2358.67	2748.1
<b>Total:</b>	<b>253 693.16</b>	<b>233 761.7</b>	<b>275 784.9</b>

\*bare soil, dense or rare vegetation

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