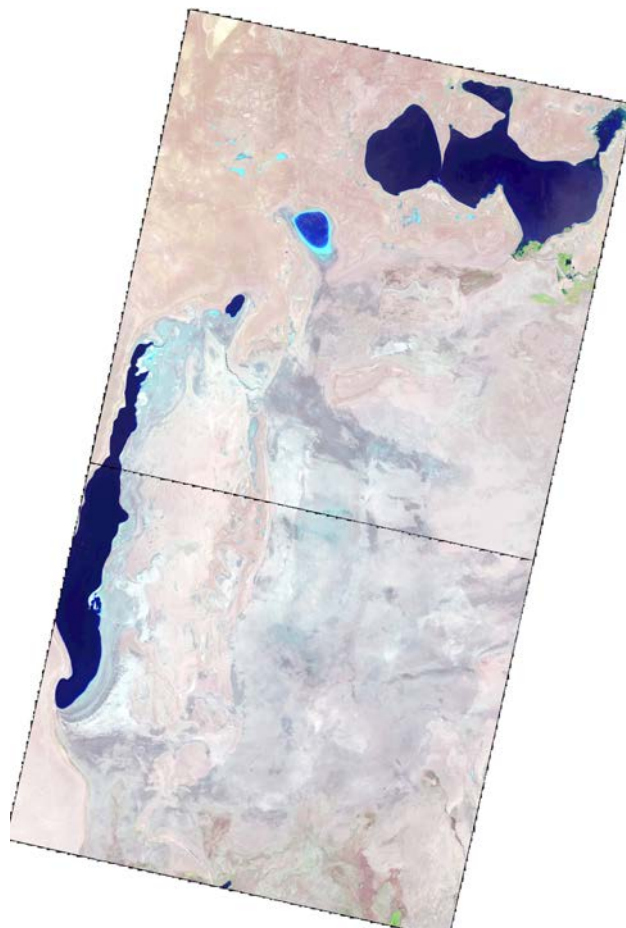


## **Monitoring of changes in the water surface and wetland area of the Aral Sea and the Aral Region**

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 July 2024, the areas of wetlands and open water surface were determined

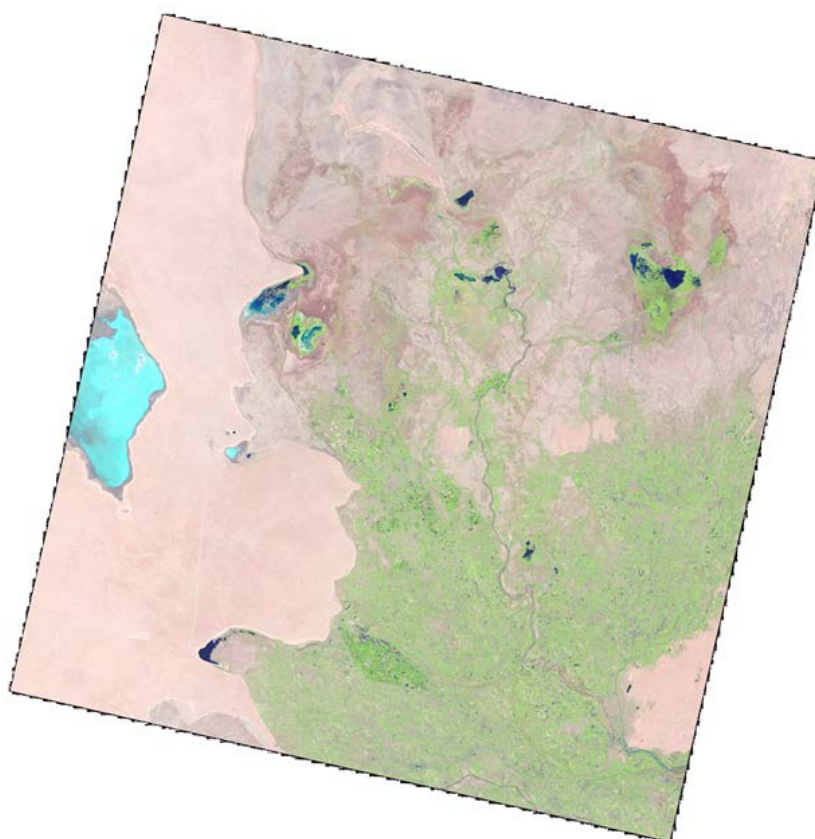


**Figure 1 Southern part of the Aral Sea  
Landsat 8-9, 31 July 2024**

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

	17.10.2023	02.11.2023	01.03.2024	18.04.2024	06.06.2024	31.07.2024
<i>Western part of the Aral Sea, ha</i>						
Wetland	324 587	331 197	302 160	309 003	319 959	321 683
Water surface	200 855	200 819	202 022	199 234	199 079	196 825
Dried ground*	35 908	29 334	57 169	53 113	42 312	42 842
<i>Eastern part of the Aral Sea, ha</i>						
Wetland	1 462 390	1 470 950	1 316 379	1 461 355	1 432 497	1 449 835
Water surface	15	32	46	15	47	22
Dried ground*	34 419	25 842	180 399	35 454	64 280	46 697

\* bare soil, dense or rare vegetation



**Figure 2. The Aral Region. Landsat 8 and 9, 31 July 2024**

**Table 2****Areas of wetlands in the Aral Region, ha**

<b>Water body</b>	<b>17.10.2023</b>	<b>02.11.2023</b>	<b>01.03.2024</b>	<b>18.04.2024</b>	<b>06.06.2024</b>	<b>31.07.2024</b>
Sudoche	23576.2	33806.8	13257.2	16276	7377	10470
Mejdureche	352.8	2117.5	3095.3	1191	534	275
Rybatche	41.3	2480.9	1812.1	241	79	103
Muynak	185.6	2537.9	2989.1	2136	106	131
Djiltyrbas dam-terminated	1552	9370.7	16892.4	16353	960	535
Djiltyrbas (together with former right and left streams)	5033.8	17307	16697	10236	668	895
Dumalak	20.7	342.2	632.6	37	6	7
Makpalkul	22.9	488.3	559.0	385	302	30
Mashan Karadjar	1169.1	3028.9	2595.2	1388	326	232
Water surface southward of Muynak	272.5	2949.2	1171.7	166	2	40
Water surface along Kazakhdarya river channel	4.5	93.0	76.3	11	0	0.09
Zakirkol	1.8	25.8	84.3	117	56	1
<b>Total:</b>	<b>32234.0</b>	<b>74548.6</b>	<b>59862.7</b>	<b>48537</b>	<b>10416</b>	<b>12719.09</b>

**Table 3****The area of open water surface in the Aral region, ha**

<b>Water body</b>	<b>17.10.2023</b>	<b>02.11.2023</b>	<b>01.03.2024</b>	<b>18.04.2024</b>	<b>06.06.2024</b>	<b>31.07.2024</b>
Sudoche	4981.0	9686.43	14748.03	15293	9521	4412
Mejdureche	2816.4	9016.56	12208.68	7391	2078	1648
Rybatche	0	0.18	1493.82	1996	1735	1037
Muynak	11.8	24.39	1172.88	1382	168	19
Djilyrbas dam-terminated	2326.2	5373.82	15505.2	14247	5522	4637
Djilyrbas (together with former right and left streams)	382.6	483.75	1164	1771	51	30
Dumalak	1.5	0.09	0	0	0	0
Makpalkul	7.4	307.53	3261.42	3180	206	60
Mashan Karadjar	490.3	544.77	1519.11	1150	420	170
Water surface southward of Muynak	0	0	44.91	0	0	0.18
Water surface along Kazakhdarya river channel	0.09	1.17	0.09	0	0	0.18
Zakirkol	0	139.14	740.52	534	79	0
<b>Total:</b>	<b>11017.71</b>	<b>25577.83</b>	<b>51858.66</b>	<b>46944</b>	<b>19780</b>	<b>12013.36</b>

Table 4

## Dried ground area\* in the Aral Region, ha

Water body	17.10.2023	02.11.2023	01.03.2024	18.04.2024	06.06.2024	31.07.2024
Sudoche	44139.73	29203.69	44691.7	41128	55799	57815
Mejdureche	34614.65	26649.92	22479.95	29202	35172	35861
Rybatche	11451.69	9011.88	8187.03	9256	9679	10353
Muynak	15966.45	13601.7	12001.95	12646	15890	16014
Djiltyrbas dam-terminated	43593.664 93	32727.864 93	15074.734 93	16872.394 93	40990.394 93	42300
Djiltyrbas (together with former right and left streams)	93534.44	81160.25	81090	86944	98232	98026
Dumalak	16027.77	15707.64	15417.39	16013	16044	16043
Makpalkul	8653.58	7888.13	4863.5	5119	8176	8594
Mashan Karadjar	25541.58	23627.28	23086.65	24663	26455	26799
Water surface southward of Muynak	9332.48	6655.79	8388.38	9439	9603	9564.82
Water surface along Kazakhdarya river channel	4746.91	4657.27	4675.09	4740.5	4751.5	4751.23
Zakirkol	2789.5	2626.33	1966.45	2140.3	2656.3	2790.3
<b>Total:</b>	<b>310392.4</b>	<b>253517.7</b>	<b>241922.8</b>	<b>258163</b>	<b>323448</b>	<b>328911.74</b>

\* bare soil, dense or rare vegetation

**Table 5****Inflow to Inflow to the Aral Region and Aral Sea in 2024, mln.m<sup>3</sup>**

Month	From Amu Darya River	from canal systems	collector-drainage runoff	Total	Plan	Runoff from North Aral Sea
January	30	34	30	<b>94</b>	774	0
February	22	37	26	<b>85</b>	167	0
March	19	0	107	<b>126</b>	185	0
April	37	0	219	<b>256</b>	180	0
May	37	0	81	<b>118</b>	336	0
June	82	0	87	<b>169</b>	391	0

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