



PROJECT

Transboundary water management adaptation in the Amudarya basin to climate change uncertainties

Report

3.1. Conduct series of simulation for different scenarios for 2016-2055
3.1.2.6. Trends of water demand by economic sector, cropping pattern, and yield for the planning zones based on scenarios for 2016-2055 and taking into account innovations

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I. BASIC CONCEPTS

Research objective and tasks

Research objective is calculating forecast indicators of water consumption in the household and industry sectors based on the current trends and population growth in the future and on the long-term strategy for industrial development in the Amudarya basin countries.

Given that, the following **tasks** were set:

- calculate forecast indicators of water consumption in the household sector in the planning zones in the Amudarya basin until 2055
- calculate forecast indicators of water consumption in industry in the planning zones in the Amudarya basin until 2055

Research methodology

The methodology is based on systematic approach and dialectical method, which in dynamics allow considering patterns and processes related to state regulation, as well as to population growth in the future and long-term strategy for industrial development in the Amudarya basin countries.

In the research, various methods were applied: abstract-logical one, systematization and classification, expert evaluation, analysis and synthesis, statistical analysis, comparison, plotting time series, and plotting trend lines (approximation and smoothing).

I. FORECAST OF WATER CONSUMPTION IN THE HOUSEHOLD SECTOR IN THE PLANNING ZONES IN THE AMUDARYA BASIN UNTIL 2055

1.1. Republic of Uzbekistan

Forecast of water consumption in the household sector in the Uzbek part of the Amudarya basin until 2055

Year	mcm						
	Bukhara PZ	Karshi PZ	Navoi PZ	Surkhandarya PZ	Khorezm PZ	South Karakalpakstan PZ	North Karakalpakstan PZ
2000	30.76	101.57	30.32	140.69	72.31	14.32	33.42
2001	27.88	121.71	30.61	140.59	73.60	11.72	27.35
2002	39.32	101.14	30.76	144.01	74.76	14.07	32.84
2003	39.98	96.13	30.82	122.58	75.67	14.50	33.83
2004	40.11	91.63	31.05	113.04	76.88	14.50	33.83
2005	39.87	90.03	31.25	142.80	77.33	14.50	33.83
2006	40.66	89.98	31.78	144.60	78.12	14.50	33.83
2007	41.62	81.43	31.85	147.32	78.14	14.43	33.67
2008	40.08	83.51	31.86	139.88	78.16	13.94	32.53
2009	40.16	83.27	32.01	134.92	87.82	13.94	32.52
2010	41.50	154.56	32.00	135.00	88.10	14.65	34.19
2011	40.83	151.86	32.69	119.57	85.51	14.58	34.02
2012	44.15	156.34	32.74	125.53	88.64	15.05	34.46
2013	44.40	140.35	32.81	125.90	81.80	15.09	34.50
2014	46.60	153.75	32.87	123.50	83.80	14.46	33.74
2015	46.91	155.66	32.91	125.01	84.50	14.61	34.08
2016	46.97	156.02	33.23	126.19	85.24	14.71	34.17
2017	47.29	158.08	33.59	127.59	85.84	14.82	34.29
2018	47.60	160.08	33.94	128.94	86.42	14.92	34.41
2019	47.90	162.02	34.27	130.25	86.98	15.02	34.53
2020	48.18	163.91	34.60	131.53	87.52	15.11	34.65
2021	48.46	165.75	34.90	132.77	88.04	15.21	34.77
2022	48.72	167.53	35.20	133.97	88.54	15.29	34.88
2023	48.98	169.26	35.49	135.13	89.02	15.38	35.00
2024	49.22	170.95	35.76	136.26	89.49	15.46	35.11
2025	49.46	172.58	36.02	137.35	89.93	15.54	35.22
2026	49.69	174.16	36.27	138.40	90.36	15.62	35.33
2027	49.90	175.69	36.51	139.43	90.77	15.69	35.44
2028	50.11	177.18	36.74	140.41	91.17	15.76	35.54
2029	50.31	178.62	36.96	141.37	91.55	15.82	35.65
2030	50.50	180.02	37.16	142.29	91.91	15.89	35.75
2031	50.68	181.37	37.36	143.18	92.25	15.95	35.86
2032	50.85	182.67	37.55	144.04	92.58	16.01	35.96
2033	51.02	183.93	37.72	144.87	92.90	16.06	36.06

Year	Bukhara PZ	Karshi PZ	Navoi PZ	Surkhandarya PZ	Khorezm PZ	South Karakalpakstan PZ	North Karakalpakstan PZ
2034	51.17	185.15	37.89	145.66	93.19	16.11	36.16
2035	51.32	186.33	38.05	146.43	93.48	16.16	36.25
2036	51.46	187.46	38.20	147.17	93.75	16.21	36.35
2037	51.59	188.55	38.34	147.87	94.00	16.26	36.44
2038	51.72	189.61	38.47	148.55	94.24	16.30	36.54
2039	51.83	190.62	38.60	149.20	94.46	16.34	36.63
2040	51.94	191.60	38.71	149.83	94.68	16.38	36.72
2041	52.05	192.53	38.82	150.42	94.87	16.41	36.81
2042	52.14	193.43	38.91	150.99	95.06	16.45	36.90
2043	52.23	194.30	39.01	151.54	95.23	16.48	36.98
2044	52.31	195.12	39.09	152.05	95.39	16.50	37.07
2045	52.38	195.91	39.16	152.55	95.54	16.53	37.15
2046	52.45	196.67	39.23	153.02	95.67	16.56	37.23
2047	52.51	197.39	39.29	153.46	95.79	16.58	37.32
2048	52.57	198.08	39.35	153.88	95.90	16.60	37.40
2049	52.61	198.73	39.39	154.27	96.00	16.62	37.47
2050	52.66	199.35	39.43	154.65	96.09	16.63	37.55
2051	52.69	199.94	39.47	155.00	96.16	16.64	37.63
2052	52.72	200.50	39.49	155.33	96.23	16.66	37.70
2053	52.75	201.03	39.52	155.63	96.28	16.67	37.78
2054	52.77	201.53	39.53	155.92	96.32	16.68	37.85
2055	52.78	202.00	39.54	156.18	96.36	16.68	37.92

1.2. Republic of Tajikistan

II. Forecast of water consumption in the household sector in the Tajik part of the Amudarya basin until 2055

mcm

Year	Gorno-Badakhshan PZ	Upper Kafirnigan PZ	Garm PZ	Karatag-Shirkent PZ	Vakhsh PZ	Lower Kafirnigan PZ	Pyandj PZ
2000	24.12	94.10	31.71	25.58	117.85	42.32	85.87
2001	24.55	96.55	32.54	26.24	119.09	42.76	86.77
2002	24.94	97.30	32.79	26.45	120.61	43.31	87.87
2003	25.57	99.75	33.62	27.11	124.01	44.53	90.35
2004	26.09	101.67	34.26	27.63	127.03	45.61	92.55
2005	26.04	101.68	34.27	27.64	126.75	45.51	92.35
2006	26.52	102.61	34.58	27.89	128.81	46.25	93.85
2007	26.70	103.16	34.77	28.04	129.56	46.52	94.40
2008	27.23	104.66	35.27	28.45	130.24	46.77	94.89
2009	27.67	105.23	35.46	28.60	130.64	46.91	95.18
2010	27.98	104.38	35.18	28.37	131.12	47.08	95.53
2011	28.13	104.73	35.29	28.47	131.50	47.22	95.81
2012	29.82	107.14	36.11	29.12	134.51	48.30	98.00
2013	30.40	108.09	36.43	29.38	135.80	48.76	98.94
2014	30.62	108.50	36.77	29.73	136.05	49.01	99.23
2015	30.71	108.98	36.92	29.86	137.38	49.32	99.83
2016	30.85	110.53	37.23	30.17	138.99	49.91	100.52
2017	30.99	112.05	37.53	30.48	140.55	50.49	101.18
2018	31.13	113.52	37.82	30.77	142.07	51.05	101.81
2019	31.26	114.95	38.11	31.06	143.54	51.59	102.43
2020	31.40	116.34	38.38	31.34	144.97	52.12	103.02
2021	31.53	117.69	38.64	31.61	146.36	52.64	103.59
2022	31.66	119.01	38.90	31.87	147.70	53.13	104.14
2023	31.79	120.28	39.14	32.12	149.01	53.62	104.67
2024	31.92	121.52	39.38	32.37	150.27	54.09	105.18
2025	32.04	122.73	39.61	32.60	151.50	54.54	105.66
2026	32.17	123.90	39.83	32.83	152.68	54.98	106.13
2027	32.29	125.03	40.04	33.05	153.83	55.40	106.58
2028	32.41	126.13	40.24	33.27	154.94	55.82	107.00
2029	32.54	127.19	40.44	33.47	156.01	56.21	107.41
2030	32.65	128.22	40.62	33.67	157.05	56.60	107.80
2031	32.77	129.22	40.80	33.86	158.05	56.97	108.18
2032	32.89	130.19	40.98	34.05	159.01	57.33	108.53
2033	33.00	131.12	41.14	34.23	159.94	57.67	108.87
2034	33.12	132.02	41.30	34.40	160.84	58.01	109.18

Year	Gorno-Badakhshan PZ	Upper Kafirnigan PZ	Garm PZ	Karatag-Shirkent PZ	Vakhsh PZ	Lower Kafirnigan PZ	Pyandj PZ
2035	33.23	132.90	41.45	34.56	161.70	58.33	109.49
2036	33.34	133.74	41.59	34.72	162.53	58.64	109.77
2037	33.45	134.55	41.73	34.87	163.32	58.93	110.04
2038	33.55	135.33	41.86	35.01	164.09	59.22	110.29
2039	33.66	136.08	41.98	35.15	164.82	59.49	110.53
2040	33.77	136.81	42.10	35.28	165.53	59.76	110.75
2041	33.87	137.51	42.21	35.41	166.20	60.01	110.95
2042	33.97	138.18	42.31	35.53	166.84	60.25	111.14
2043	34.07	138.82	42.41	35.64	167.46	60.48	111.32
2044	34.17	139.44	42.50	35.75	168.04	60.70	111.48
2045	34.27	140.03	42.59	35.85	168.60	60.91	111.63
2046	34.37	140.59	42.66	35.95	169.13	61.11	111.76
2047	34.46	141.13	42.74	36.04	169.63	61.30	111.88
2048	34.56	141.65	42.81	36.12	170.11	61.48	111.98
2049	34.65	142.14	42.87	36.20	170.56	61.64	112.08
2050	34.74	142.61	42.92	36.28	170.98	61.80	112.16
2051	34.83	143.05	42.98	36.35	171.38	61.96	112.22
2052	34.92	143.48	43.02	36.42	171.75	62.10	112.28
2053	35.01	143.88	43.06	36.48	172.10	62.23	112.32
2054	35.09	144.25	43.10	36.53	172.43	62.35	112.35
2055	35.18	144.61	43.13	36.58	172.73	62.47	112.37

2.1. Turkmenistan

III. Forecast of water consumption in the household sector in the Turkmen part of the Amudarya basin until 2055

mcm

Year	Akhal PZ	Dashoguz PZ	Lebap PZ	Marin PZ
2000	101.17	5.91	72.28	71.63
2001	101.63	6.00	74.13	65.17
2002	101.08	6.09	67.29	65.45
2003	101.73	6.09	66.09	62.49
2004	101.17	6.18	68.86	66.00
2005	103.82	6.23	67.43	63.72
2006	104.90	6.24	68.15	64.43
2007	105.25	6.21	68.40	64.34
2008	105.97	6.25	68.58	64.83
2009	103.46	6.11	66.98	63.30
2010	103.78	6.15	67.21	63.21
2011	104.09	6.14	67.38	63.40
2012	104.38	6.19	67.59	63.58
2013	104.67	6.21	67.78	63.75
2014	105.00	6.23	67.99	63.95
2015	105.23	6.26	68.37	64.64
2016	105.34	6.27	68.61	64.68
2017	105.64	6.28	68.78	64.87
2018	105.93	6.29	68.95	65.05
2019	106.22	6.30	69.12	65.23
2020	106.50	6.31	69.28	65.41
2021	106.77	6.32	69.43	65.58
2022	107.04	6.33	69.59	65.75
2023	107.30	6.33	69.73	65.92
2024	107.55	6.34	69.88	66.08
2025	107.80	6.35	70.02	66.24
2026	108.04	6.36	70.15	66.40
2027	108.27	6.37	70.28	66.55
2028	108.49	6.37	70.41	66.70
2029	108.71	6.38	70.53	66.85
2030	108.92	6.39	70.65	66.99
2031	109.13	6.39	70.77	67.13
2032	109.33	6.40	70.88	67.27
2033	109.52	6.41	70.98	67.41
2034	109.71	6.42	71.09	67.54
2035	109.89	6.42	71.19	67.67
2036	110.07	6.43	71.28	67.79
2037	110.23	6.43	71.38	67.91

Year	Akhal PZ	Dashoguz PZ	Lebap PZ	Marin PZ
2038	110.40	6.44	71.46	68.03
2039	110.55	6.45	71.55	68.15
2040	110.70	6.45	71.63	68.27
2041	110.85	6.46	71.71	68.38
2042	110.99	6.46	71.78	68.49
2043	111.12	6.47	71.85	68.59
2044	111.25	6.47	71.92	68.69
2045	111.37	6.48	71.99	68.79
2046	111.49	6.48	72.05	68.89
2047	111.60	6.49	72.10	68.99
2048	111.71	6.49	72.16	69.08
2049	111.81	6.50	72.21	69.17
2050	111.91	6.50	72.26	69.26
2051	112.00	6.51	72.30	69.34
2052	112.09	6.51	72.34	69.42
2053	112.17	6.51	72.38	69.50
2054	112.24	6.52	72.42	69.58
2055	112.31	6.52	72.45	69.65

IV. FORECAST OF WATER CONSUMPTION IN INDUSTRY IN THE PLANNING ZONES IN THE AMUDARYA BASIN UNTIL 2055

4.1. Republic of Uzbekistan

I. Forecast of water consumption in industry in the Uzbek part of the Amudarya basin until 2055

Year	mcm						
	Bukhara PZ	Karshi PZ	Navoi PZ	Surkhandarya PZ	Khorezm PZ	South Karakalpakstan PZ	North Karakalpakstan PZ
2000	23.67	40.20	697.92	30.00	2.64	85.75	200.08
2001	30.87	58.28	852.19	28.90	2.33	56.20	131.14
2002	33.24	55.94	752.61	28.54	2.89	70.70	164.97
2003	35.12	33.82	752.59	19.50	3.02	98.29	229.34
2004	35.50	56.74	755.07	23.50	3.05	92.15	215.02
2005	35.50	345.60	757.56	14.00	3.00	113.77	265.47
2006	35.10	346.07	848.05	14.80	3.00	100.89	235.41
2007	35.31	348.62	927.96	14.99	2.86	102.04	238.09
2008	34.44	349.33	812.10	15.01	2.95	108.44	253.03
2009	34.81	304.67	813.52	15.72	2.97	90.12	210.29
2010	34.88	284.72	817.60	17.87	2.99	100.92	235.48
2011	36.97	363.42	806.10	16.51	2.76	96.10	224.23
2012	40.54	365.78	811.34	17.46	2.95	99.73	232.70
2013	36.86	336.07	812.01	17.73	3.07	100.63	234.81
2014	36.96	337.52	812.89	17.25	2.64	98.21	229.16
2015	38.88	342.17	819.50	18.37	2.98	105.93	260.44
2016	39.48	352.02	821.66	18.49	2.99	106.67	262.80
2017	40.08	361.27	823.69	18.60	2.99	107.36	265.04
2018	40.69	369.99	825.61	18.71	3.00	108.01	267.17
2019	41.29	378.23	827.42	18.81	3.01	108.63	269.20
2020	41.89	386.06	829.14	18.90	3.01	109.21	271.13
2021	42.50	393.50	830.77	18.99	3.02	109.77	272.99
2022	43.10	400.60	832.33	19.08	3.03	110.30	274.77
2023	43.70	407.38	833.82	19.16	3.03	110.81	276.48
2024	44.31	413.87	835.25	19.24	3.04	111.29	278.13
2025	44.91	420.10	836.62	19.32	3.04	111.76	279.72
2026	45.51	426.09	837.93	19.40	3.05	112.20	281.26
2027	46.12	431.84	839.20	19.47	3.05	112.63	282.75
2028	46.72	437.39	840.42	19.54	3.06	113.05	284.19
2029	47.32	442.74	841.59	19.61	3.06	113.45	285.59
2030	47.93	447.92	842.73	19.67	3.07	113.84	286.95
2031	48.53	452.92	843.83	19.73	3.07	114.21	288.26
2032	49.14	457.76	844.89	19.80	3.08	114.57	289.55
2033	49.74	462.46	845.92	19.86	3.08	114.92	290.79

Year	Bukhara PZ	Karshi PZ	Navoi PZ	Surkhandarya PZ	Khorezm PZ	South Karakalpakstan PZ	North Karakalpakstan PZ
2034	50.34	467.01	846.92	19.91	3.09	115.26	292.01
2035	50.95	471.43	847.89	19.97	3.09	115.59	293.20
2036	51.55	475.73	848.84	20.03	3.09	115.91	294.35
2037	52.15	479.91	849.76	20.08	3.10	116.23	295.48
2038	52.76	483.98	850.65	20.13	3.10	116.53	296.59
2039	53.36	487.94	851.52	20.19	3.10	116.83	297.67
2040	53.96	491.81	852.37	20.24	3.11	117.11	298.72
2041	54.57	495.57	853.20	20.29	3.11	117.40	299.75
2042	55.17	499.25	854.00	20.33	3.12	117.67	300.77
2043	55.77	502.84	854.79	20.38	3.12	117.94	301.76
2044	56.38	506.35	855.56	20.43	3.12	118.20	302.73
2045	56.98	509.77	856.32	20.47	3.12	118.46	303.68
2046	57.58	513.13	857.05	20.52	3.13	118.71	304.61
2047	58.19	516.41	857.77	20.56	3.13	118.95	305.53
2048	58.79	519.62	858.48	20.60	3.13	119.19	306.43
2049	59.39	522.77	859.17	20.64	3.14	119.43	307.32
2050	60.00	525.85	859.85	20.69	3.14	119.66	308.19
2051	60.60	528.87	860.51	20.73	3.14	119.88	309.04
2052	61.21	531.83	861.16	20.77	3.14	120.11	309.88
2053	61.81	534.74	861.80	20.80	3.15	120.32	310.71
2054	62.41	537.59	862.42	20.84	3.15	120.54	311.52
2055	63.02	540.39	863.04	20.88	3.15	120.75	312.32

1.1. Republic of Tajikistan

II. Forecast of water consumption in industry in the Tajik part of the Amudarya basin until 2055 mcm

Year	Gorno-Badakhshan PZ	Upper Kafirnigan PZ	Garm PZ	Karatag-Shirkent PZ	Vakhsh PZ	Lower Kafirnigan PZ	Pyandj PZ
2000	2.21	100.83	33.98	27.41	36.18	12.99	26.36
2001	2.21	102.53	34.55	27.87	40.54	14.56	29.54
2002	2.53	109.24	36.82	29.69	43.52	15.63	31.71
2003	2.63	112.08	37.77	30.46	43.96	15.79	32.03
2004	3.06	116.12	39.13	31.56	44.30	15.91	32.28
2005	2.53	114.07	38.44	31.00	42.88	15.12	32.10
2006	2.53	116.19	39.16	31.58	42.77	15.08	32.62
2007	2.53	116.29	39.19	31.61	43.79	15.44	31.36
2008	2.13	108.33	36.51	29.44	40.95	14.35	29.11
2009	2.08	107.43	36.20	29.20	40.82	14.66	29.74
2010	2.08	102.79	34.64	27.94	40.07	14.39	29.20
2011	2.18	103.23	34.79	28.06	40.22	14.44	29.30
2012	2.22	90.19	32.39	24.51	40.49	14.54	29.50
2013	2.26	77.14	30.00	23.97	40.62	14.59	29.60
2014	2.27	89.01	31.87	23.49	41.88	14.67	29.92
2015	2.29	94.70	33.47	23.18	42.08	14.98	30.70
2016	2.29	93.38	33.17	23.12	42.13	15.00	30.73
2017	2.28	92.09	32.87	23.06	42.17	15.01	30.76
2018	2.28	90.81	32.58	23.01	42.21	15.02	30.79
2019	2.27	89.54	32.28	22.95	42.25	15.03	30.82
2020	2.27	88.30	32.00	22.91	42.28	15.04	30.84
2021	2.27	87.07	31.71	22.86	42.32	15.05	30.86
2022	2.26	85.86	31.42	22.81	42.35	15.05	30.89
2023	2.26	84.67	31.14	22.77	42.38	15.06	30.91
2024	2.26	83.49	30.86	22.73	42.41	15.07	30.93
2025	2.25	82.33	30.59	22.69	42.44	15.08	30.95
2026	2.25	81.18	30.31	22.65	42.47	15.08	30.97
2027	2.25	80.06	30.04	22.61	42.49	15.09	30.99
2028	2.25	78.94	29.77	22.58	42.52	15.10	31.00
2029	2.24	77.85	29.51	22.55	42.54	15.10	31.02
2030	2.24	76.76	29.24	22.51	42.57	15.11	31.04
2031	2.24	75.70	28.98	22.48	42.59	15.12	31.05
2032	2.24	74.64	28.72	22.45	42.61	15.12	31.07
2033	2.23	73.61	28.46	22.42	42.64	15.13	31.08
2034	2.23	72.58	28.21	22.39	42.66	15.13	31.10
2035	2.23	71.57	27.95	22.36	42.68	15.14	31.11
2036	2.23	70.58	27.70	22.34	42.70	15.14	31.13

Year	Gorno-Badakhshan PZ	Upper Kafirnigan PZ	Garm PZ	Karatag-Shirkent PZ	Vakhsh PZ	Lower Kafirnigan PZ	Pyandj PZ
2037	2.23	69.60	27.46	22.31	42.72	15.15	31.14
2038	2.22	68.63	27.21	22.28	42.74	15.15	31.15
2039	2.22	67.68	26.97	22.26	42.75	15.16	31.16
2040	2.22	66.73	26.72	22.23	42.77	15.16	31.18
2041	2.22	65.81	26.49	22.21	42.79	15.17	31.19
2042	2.22	64.89	26.25	22.19	42.81	15.17	31.20
2043	2.22	63.99	26.01	22.16	42.82	15.18	31.21
2044	2.21	63.10	25.78	22.14	42.84	15.18	31.22
2045	2.21	62.22	25.55	22.12	42.86	15.18	31.23
2046	2.21	61.36	25.32	22.10	42.87	15.19	31.24
2047	2.21	60.50	25.09	22.08	42.89	15.19	31.25
2048	2.21	59.66	24.87	22.06	42.90	15.20	31.27
2049	2.21	58.83	24.65	22.04	42.92	15.20	31.28
2050	2.21	58.02	24.42	22.02	42.93	15.20	31.29
2051	2.20	57.21	24.21	22.00	42.95	15.21	31.29
2052	2.20	56.41	23.99	21.98	42.96	15.21	31.30
2053	2.20	55.63	23.77	21.96	42.97	15.21	31.31
2054	2.20	54.86	23.56	21.94	42.99	15.22	31.32
2055	2.20	54.09	23.35	21.92	43.00	15.22	31.33

2.1. Turkmenistan

Forecast of water consumption in industry in the Turkmen part of the Amudarya basin until 2055

mcm

Year	Akhal PZ	Dashoguz PZ	Lebap PZ	Marhi PZ
2000	101.17	6.37	119.63	1202.40
2001	95.45	6.18	122.31	1151.26
2002	94.98	6.09	127.85	1169.45
2003	98.40	6.18	124.62	1164.37
2004	100.25	6.18	125.08	1181.63
2005	100.44	6.34	127.21	1188.09
2006	101.40	6.35	128.42	1200.33
2007	101.59	6.41	128.89	1193.69
2008	101.78	6.48	129.37	1192.85
2009	101.98	6.55	129.64	1173.13
2010	102.17	6.32	130.03	1169.40
2011	101.36	6.40	130.30	1197.48
2012	102.56	6.38	130.80	1191.89
2013	101.75	6.37	131.08	1201.43
2014	101.95	6.46	131.15	1193.73
2015	101.73	6.38	131.21	1200.46
2016	102.30	6.40	131.48	1203.31
2017	102.87	6.41	131.74	1206.15
2018	103.44	6.42	131.99	1209.00
2019	104.01	6.43	132.22	1211.84
2020	104.58	6.45	132.44	1214.68
2021	105.15	6.46	132.65	1217.53
2022	105.72	6.47	132.86	1220.37
2023	106.29	6.48	133.05	1223.22
2024	106.86	6.50	133.23	1226.06
2025	107.43	6.51	133.41	1228.91
2026	108.00	6.52	133.58	1231.75
2027	108.57	6.53	133.75	1234.59
2028	109.14	6.55	133.90	1237.44
2029	109.71	6.56	134.06	1240.28
2030	110.28	6.57	134.21	1243.13
2031	110.85	6.59	134.35	1245.97
2032	111.42	6.60	134.49	1248.81
2033	111.99	6.61	134.62	1251.66
2034	112.56	6.62	134.75	1254.50
2035	113.12	6.64	134.88	1257.35
2036	113.69	6.65	135.01	1260.19
2037	114.26	6.66	135.13	1263.04
2038	114.83	6.67	135.24	1265.88

Year	Akhal PZ	Dashoguz PZ	Lebap PZ	Marin PZ
2039	115.40	6.69	135.36	1268.72
2040	115.97	6.70	135.47	1271.57
2041	116.54	6.71	135.58	1274.41
2042	117.11	6.73	135.69	1277.26
2043	117.68	6.74	135.79	1280.10
2044	118.25	6.75	135.89	1282.94
2045	118.82	6.76	135.99	1285.79
2046	119.39	6.78	136.09	1288.63
2047	119.96	6.79	136.18	1291.48
2048	120.53	6.80	136.28	1294.32
2049	121.10	6.81	136.37	1297.17
2050	121.67	6.83	136.46	1300.01
2051	122.24	6.84	136.55	1302.85
2052	122.81	6.85	136.63	1305.70
2053	123.38	6.87	136.72	1308.54
2054	123.95	6.88	136.80	1311.39
2055	124.51	6.89	136.88	1314.23