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Nicosia-Cyprus

# Interactive state-of-the-environment report of the Republic of Kazakhstan

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**SUSTAINABLE MONITORING INFRASTRUCTURE AND CONTINUOUS  
INNOVATION IN IMPLEMENTING A SHARED ENVIRONMENTAL  
INFORMATION SYSTEM**

5 November 2022





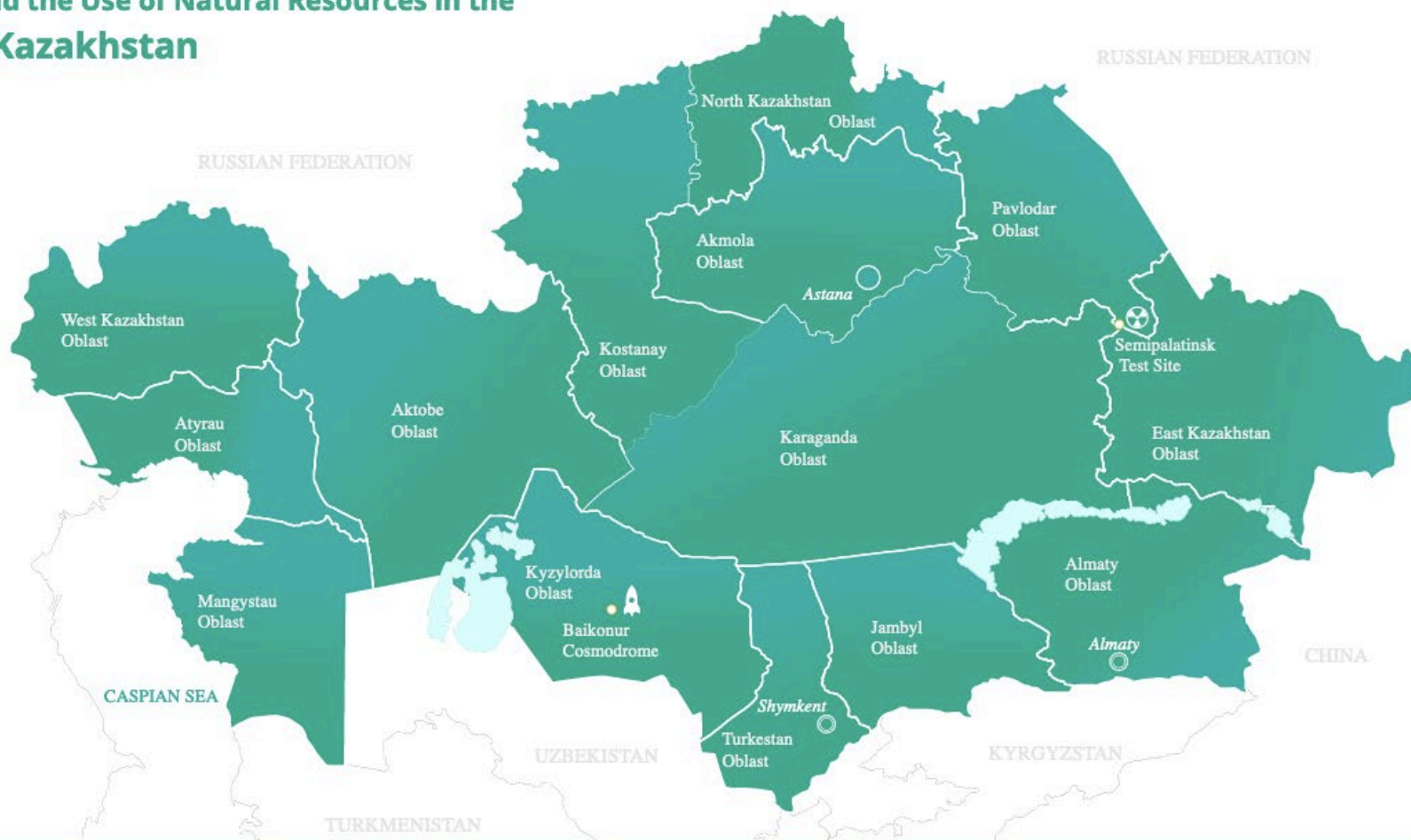
**Министерство экологии,  
геологии и природных ресурсов**



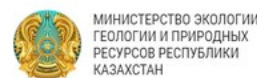


-  Air
-  Water
-  Land
-  Biodiversity
-  Agriculture
-  Transportation
-  Energy
-  Climate Change
-  Waste

## Interactive Report on the State of the Environment and the Use of Natural Resources in the Republic of Kazakhstan



This website was created with the support of: the European Commission, the United Nations Environment Programme, the Zoï Ecological Network, and the Ministry of Ecology, Geology and Natural Resources of the Republic of Kazakhstan.





Air

Since 2015, emissions of airborne steadily increasing. This may be traced to the economy and the preponderance of outdated, environmentally harmful technology. In 2019, nearly 2.4 million tons of pollutants were emitted into the atmosphere, a number that increased by 1.5 million tons. Incidents of high and extremely high pollution levels decreased significantly from 2018 to 2019: from 13 to three; despite this, overall emissions remained high.

- Air
- Water
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- Waste

**Airborne Pollutant Emissions - by oblast - 2014-2019 (thousand tons)**

Region	2014 y	2015 y	2016 y	2017 y	2018 y	2019 y
Kazakhstan overall	2258	2180	2272	2358	2447	2483
Karaganda Oblast	604	596	593	599	588	641
Pavlodar Oblast	610	553	542	610	709	721
Atyrau Oblast	109	111	167	177	172	164
Aktobe Oblast	122	134	155	169	158	137
East Kazakhstan Oblast	130	127	129	129	131	129
Kostanay Oblast	104	92	99	115	124	131
Akmola Oblast	85	86	95	87	85	77
North-Kazakhstan Oblast	72	75	78	76	76	75
South Kazakhstan Oblast	60	69	72	-	-	-
Turkestan Oblast	-	-	-	68	30	33
Mangystau Oblast	88	73	66	63	66	65
Jambyl Oblast	38	42	52	52	52	56
Almaty Oblast	52	55	50	43	50	48
West Kazakhstan Oblast	45	42	43	42	48	41
Kyzylorda Oblast	31	30	30	28	26	24
Nur-Sultan	65	56	62	59	56	65
Almaty	44	39	39	41	43	46
Shymkent	-	-	-	-	33	30

The high levels of nitrogen dioxide, carbon monoxide, sulfur dioxide, formaldehyde, hydrogen sulfide, suspended solids, phenol and ammonia encountered in population centers is associated with automobile traffic congestion, emissions by industrial enterprises and substandard urban atmospheric ventilation.

**5** The top five regions for volume of atmospheric pollutant emissions in 2018 and 2019:

1. Pavlodar
2. Karaganda
3. East Kazakhstan
4. Akmola
5. East Kazakhstan

In 2018, efforts of industries and private entrepreneurs captured and neutralized **93%** of all pollutants emitted; in 2019, carbon capture and neutralization as a percentage of pollutants emitted was **93,2%**

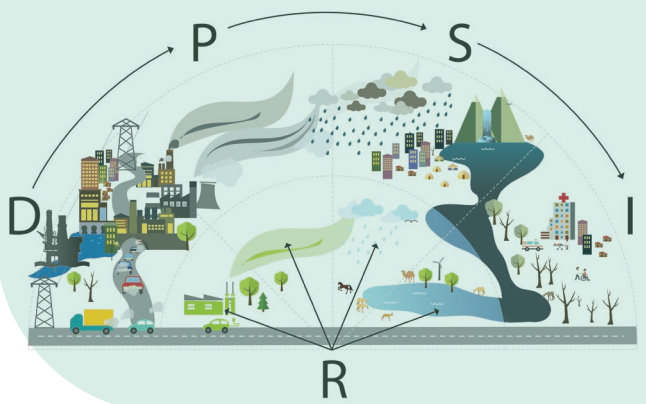
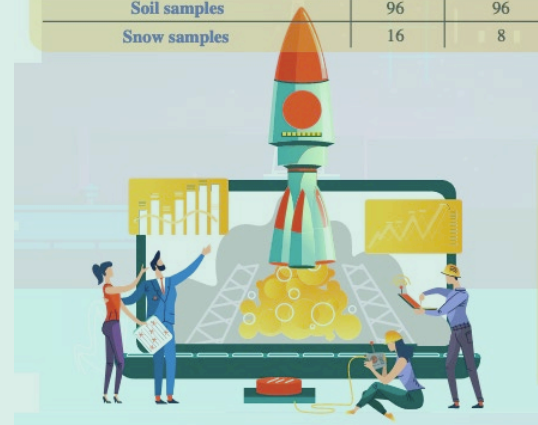
- Primary airborne pollutants in 2019:**
- dust and ash (solids);
  - sulfur dioxide;
  - nitrogen oxides;
  - carbon oxides;
  - volatile organic compounds;
  - ammonia;
  - hydrogen sulfide.

**Ratios of solid, liquid and gaseous airborne pollutants released in 2018-2019**



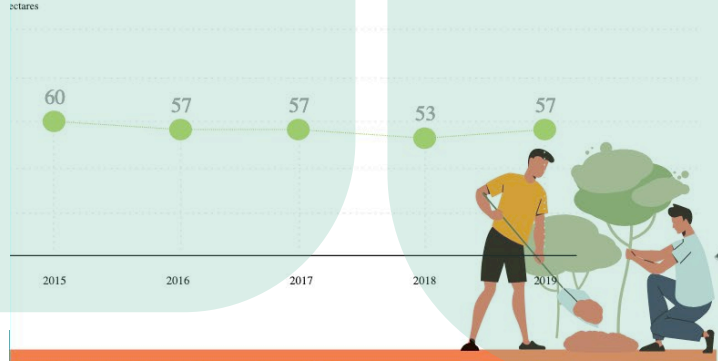
**Aggregate and type of environmental analyses of rocket launches at the cosmodrome - 2018-2019**

	2018	2019
Metered surface atmosphere		
air quality samples	52	47
Air samples	14	12
Soil samples	96	96
Snow samples	16	8



ion and reforestation projects in 2019 covered 56,000 hectares, with plantings undertaken on over 29,000 hectares. The bulk of this work was conducted in the south of the country, where Saxaul plantings were conducted on a total area of 21,000 hectares.

**Reforestation and Afforestation**



In the Irtysh region, the creation of a green zone at Nur-Sultan, and the establishment in the Irtysh region, more than 4,000 hectares of new-growth forestation was introduced in 2019. In total, 21,000 hectares of saxaul were planted on the drained Aral Sea basin over a period of two years.

Kazakhstan is a participant in the Global Program for the Conservation of the Snow Leopard and Its Ecosystems, employing satellite monitored collars and camera stations in protected nature reserves in order to monitor the numbers and viability of this rare species. In 2019, camera stations managed to capture snow leopard activity in the territory of Kolsai Lakes National Park.



As a part of the "5 Years of the Republic of Kazakhstan" program, the Institute has conducted research on the snow leopard, a species of the Red List of the IUCN, Juglans regia.

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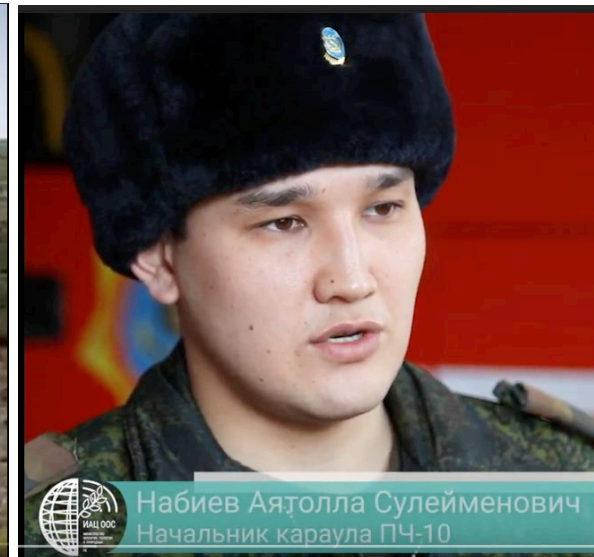
To both preserve a

The Kazakhstan Zoological Institute conducts research to identify threats to rare mammal species of mammals listed in the Republic of Kazakhstan Red List. The Institute has tagged around 5,000 rare and endangered birds from 45 species to study their migration patterns resulting in new data on the migratory resting locations of the demioselle crane, among other benefits of the program. Working with the Alaol State Nature Reserve, the institute engaged in extensive tagging and registration of bird colonies. More than 250 virus samples collected from migratory birds were able to be cataloged. In addition, studies for monitoring and taking counts of the wolf populations in western Kazakhstan were carried out, resulting in recommendations for regulating wolf populations.





- Customised access formats
- Promotion through social media
- Targeted interviews
- Feature films
- Advertising on buses...





# Key messages

## Legal and institutional support

part of the Environmental Code, strong national anchors, international support

## Logic and comparability

topics, consistent use of indicators and of the DPSIR chain

## Accessibility

length, language(s), extensive visualisation, diverse access formats

## Targeted communication

on- and off-line advertising, social media focus