



World
Organisation
for Animal
Health

Organisation
mondiale
de la santé
animale

Organización
Mundial
de Sanidad
Animal

“Epizootic monitoring of wildlife in the Republic of Kazakhstan”

Authors:

Kairzhan Baizhanov,

Talgat Karibayev

Organization:

Committee for Veterinary Control and Supervision of the Ministry of Agriculture of the Republic of Kazakhstan

6th cycle Training of National Wildlife Focal Points

European Region

World Organization for Animal Health





World
Organisation
for Animal
Health

Organisation
mondiale
de la santé
animale

Organización
Mundial
de Sanidad
Animal

Content

- WILDLIFE OF KAZAKHSTAN.
- EPIZOOTIC MONITORING OF WILDLIFE: OBJECTIVES, AUTHORIZED BODIES, INDICATORS.
- SAMPLING. LABORATORY DIAGNOSTICS
- RESEARCH RESULTS.
- PREDICTION.



Wildlife of Kazakhstan



In Kazakhstan there are:
835 species of vertebrates, of which:

- 178 species of mammals,
- 489 species of birds,
- 49 species of reptiles,
- 104 species of fish, etc.,

among the Red Book – snow leopard, kulan, manul, whooper swan, Caspian seal and others. Among the rare endangered terrestrial animals, the largest number are saigas.



World
Organisation
for Animal
Health

Organisation
mondiale
de la santé
animale

Organización
Mundial
de Sanidad
Animal

Epizootic monitoring of wildlife: Objectives



Identification of pathogens of particularly dangerous animal diseases in the monitored area, and their potential spread



Determination of conditions that promote and prevent the spread of infectious animal diseases and their pathogens.



Analysis of the results of epizootic monitoring and implementation of veterinary (anti-epizootic) measures

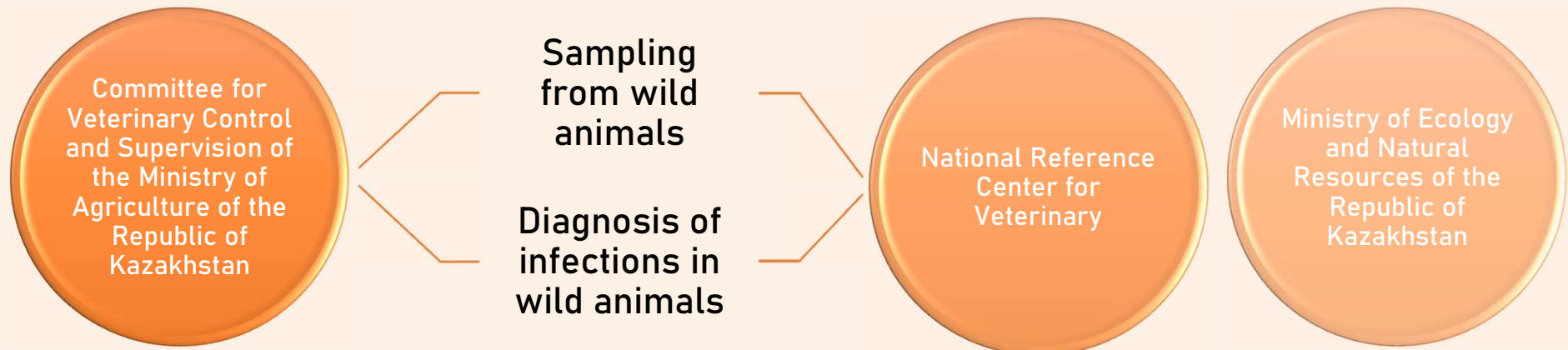


World
Organisation
for Animal
Health

Organisation
mondiale
de la santé
animale

Organización
Mundial
de Sanidad
Animal

Epizootic monitoring of wild fauna: Authorized bodies





World
Organisation
for Animal
Health

Organisation
mondiale
de la santé
animale

Organización
Mundial
de Sanidad
Animal

Epizootic monitoring of wild fauna: Key indicators, 2022

Objects

Wild boars
Wild artiodactyls
Wild carnivores
Wild birds

Regions

Akmolinskaya
Vostochno-Kazahstanskaya
Kostanayskaya
ZapadnoKazahstanskaya
Karagandinskaja
Almatinskaya
Severo-Kazahstanskaya
Pavlodarskaya
Atyrauskaya
Zhambylskaya
Aktjubinskaya
Turkestanaskaya
Mangistauskaya
Kyzylordinskaya regions

Diseases

Pasteurellosis, ASF, CSF,
Brucellosis, Rabies,
Tuberculosis, Anthrax,
Campylobacteriosis, HPAI,
Newcastle disease,
Listeriosis, Leptospirosis,
Foot and mouth disease,
PPR
Capripox viruses
Anaerobic infections
salmonellosis
Canine distemper
Other diseases



World
Organisation
for Animal
Health

Organisation
mondiale
de la santé
animale

Organización
Mundial
de Sanidad
Animal

Sampling

- ❖ 24 expeditions
- ❖ 1267 diagnostic studies
- ❖ Passive Surveillance of wild animals
 - on a permanent basis
- ❖ Active Surveillance - Ongoing

Epizootic monitoring of wildlife 2022





World
Organisation
for Animal
Health

Organisation
mondiale
de la santé
animale

Organización
Mundial
de Sanidad
Animal

Research objects

- ❖ killed animals (hunting trophies, forced shooting, animals accidentally killed by vehicles)
- ❖ dead animal corpses from natural causes
- ❖ captured live animals
- ❖ reserve and zoo animals

Epizootic monitoring of wildlife 2022



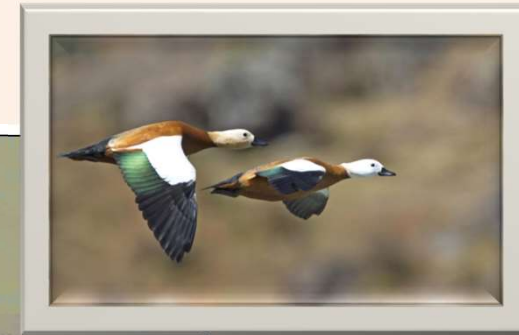
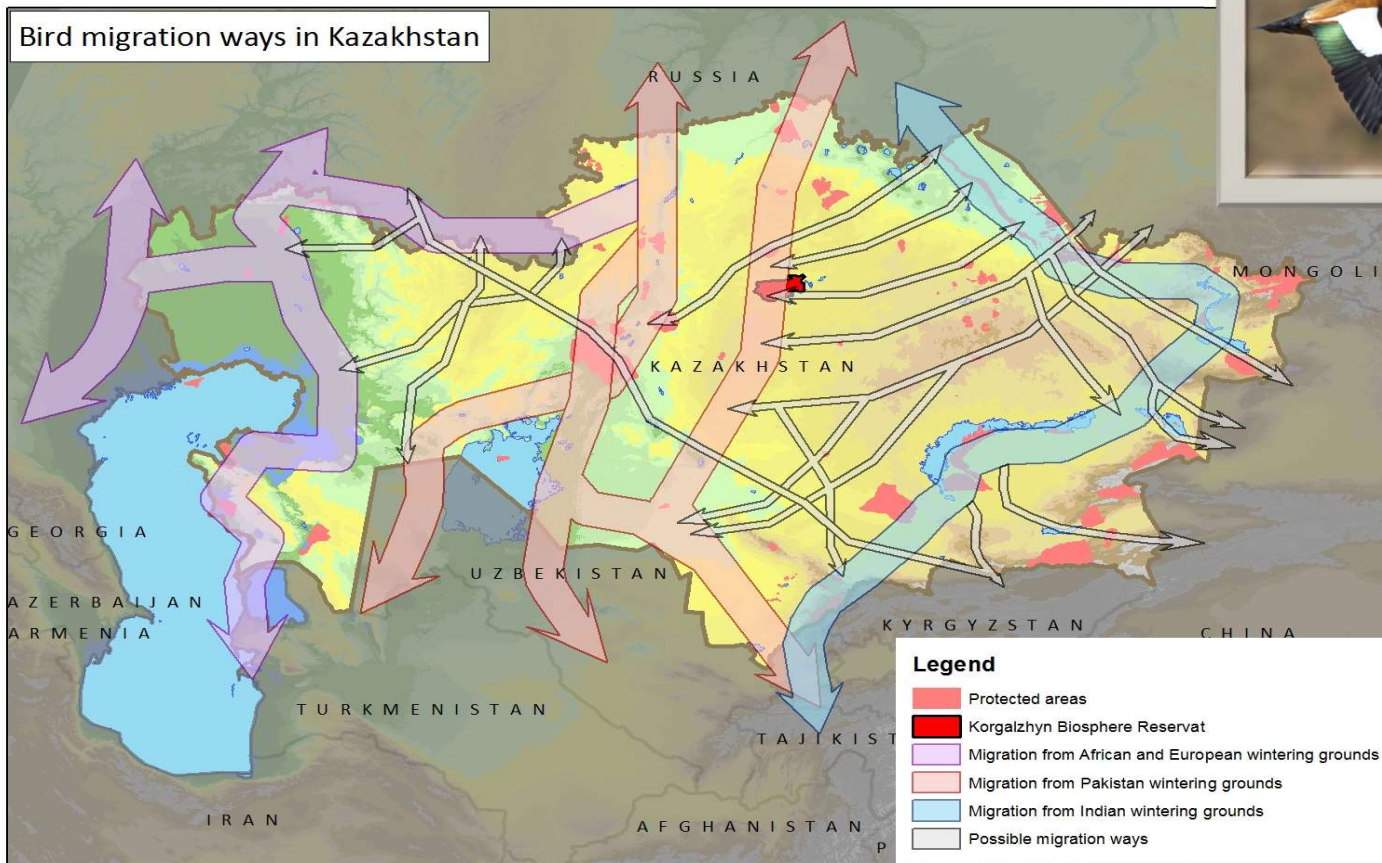


World
Organisation
for Animal
Health

Organisation
mondiale
de la santé
animale

Organización
Mundial
de Sanidad
Animal

Sampling from wild birds





World
Organisation
for Animal
Health
Founded as OIE

Organisation
mondiale
de la santé
animale
Fondée en tant qu'OIE

Organización
Mundial
de Sanidad
Animal
Fundada como OIE

Laboratory diagnostics

Nº	Region	Bird species	Number of samples	Number of positives	Strain
1	Atyrauskaya	Wild bird	2	2	H5N5
2	Mangystauskaya, Aktau city	Wild bird (swans)	3	3	H5N5
	Total		5	5	

Wild Birds testing: Highly Pathogenic Avian Influenza 2022





World
Organisation
for Animal
Health
Founded as OIE

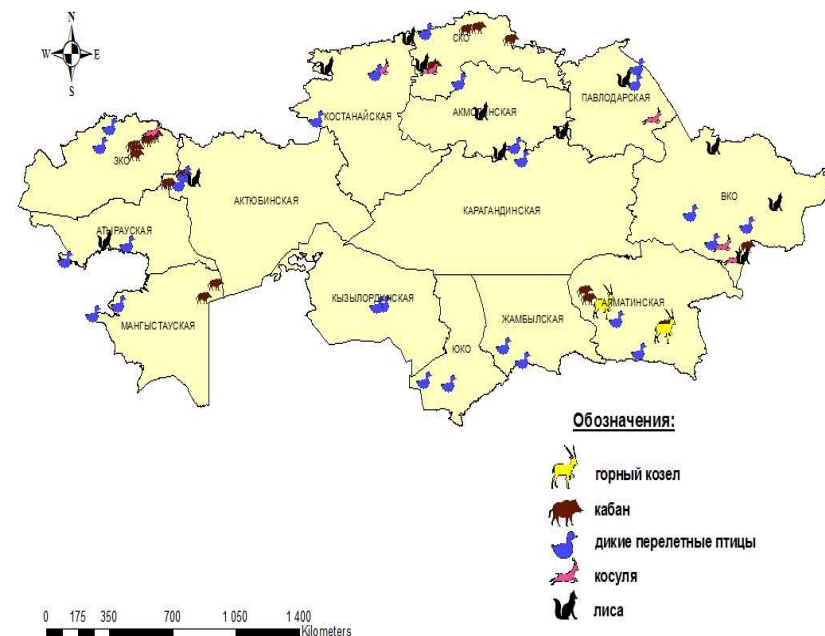
Organisation
mondiale
de la santé
animale
Fondée en tant qu'OIE

Organización
Mundial
de Sanidad
Animal
Fundada como OIE

Laboratory diagnostics

№	Region	Вид и кол-во животных			
		Wild boars	Wild artiodactyls	Wild Carnivores	Wild birds
1	Akmola	2	1	-	36
2	Aktobe	1	1	4	26
3	Almaty	5	2	14	30
4	Atyrau	3	0	10	43
5	East Kazakhstan	-	1	2	12
6	Zhambyl	4	2	7	38
7	West Kazakhstan	3	3	6	30
8	Karaganda	-	3	3	23
9	Kostanay	1	4	6	34
10	Kyzylorda	2	-	9	19
11	Mangystau	-	-	6	33
12	Pavlodar	-	-	-	26
13	North Kazakhstan	1	3	-	45
14	Turkestan	6	-	8	37
15	Astana city	-	-	-	-
16	Almaty city	-	-	-	-
17	Shymkent city	-	-	-	-
Total:		28	20	75	432

In total, on regional level by species of animals and birds





World
Organisation
for Animal
Health
Founded as OIE

Organisation
mondiale
de la santé
animale
Fondée en tant qu'OIE

Organización
Mundial
de Sanidad
Animal
Fundada como OIE

Laboratory diagnostics

Nº	Region	Sampling period	Number of wild boar samples	Number of tests	Positive for ASFV/CSFV
1	Akmola	May 2022	2	4	-
2	Aktobe	September 2022	1	2	-
3	Almaty and Zhetysu	March-November 2022	5	10	-
4	Atyrau	April-September 2022	3	6	-
5	East Kazakhstan and Abay	September 2022	-	-	-
6	Zhambyl	March-October 2022	4	8	-
7	West Kazakhstan	September 2022	3	6	-
8	Kostanay	September 2022	1	1	-
4	Kyzylorda	March 2022	2	4	-
5	Turkestan	March-November 2022	6	12	-
Total:			26	52	0

Monitoring of wild boars





World
Organisation
for Animal
Health
Founded as OIE

Organisation
mondiale
de la santé
animale
Fondée en tant qu'OIE

Organización
Mundial
de Sanidad
Animal
Fundada como OIE

Laboratory diagnostics

Nº n/n	Disease	Number of saiga	Method	Result
1	Pasteurellosis	1	PCR Bacteriology	Negative
2	Rabies	1	PCR	Negative
3	Plague of small ruminants	1	PCR	Negative
4	Foot and Mouth disease	1	PCR	Negative
5	Brucellosis	1	PCR Bacteriology	Negative
6	Leptospirosis	1	PCR	Negative
7	Enterobacteria (salmonellosis, colibacillosis)	1	PCR Bacteriology	Negative
8	Anaerobic infections	1	Bacteriology	Positive
9	Anthrax	1	PCR	Negative
10	Listeriosis	1	PCR Bacteriology	Negative
11	Tuberculosis	1	PCR Bacteriology	Negative
12	Bluetongue	1	PCR	Negative

Monitoring of saiga



Mobile Lab





World
Organisation
for Animal
Health

Organisation
mondiale
de la santé
animale

Organización
Mundial
de Sanidad
Animal

Conclusions

An effective disease surveillance system is needed to quickly detect disease outbreaks before they spread and become difficult to control.

This information is used to plan, implement and evaluate veterinary control activities and programs for wildlife and domestic animals.

A functional surveillance system is needed to provide information for action on priority infectious diseases; it is the most important decision-making tool for all countries



Thank you !

