

Қазақстан Республикасы  
Ауыл шаруашылық  
министрлігі



Ministry of Agriculture of  
the Republic of Kazakhstan

**State Institution**

***“National Center of Monitoring,  
Reference, Laboratory Diagnostics  
and Methodology in Veterinary”***

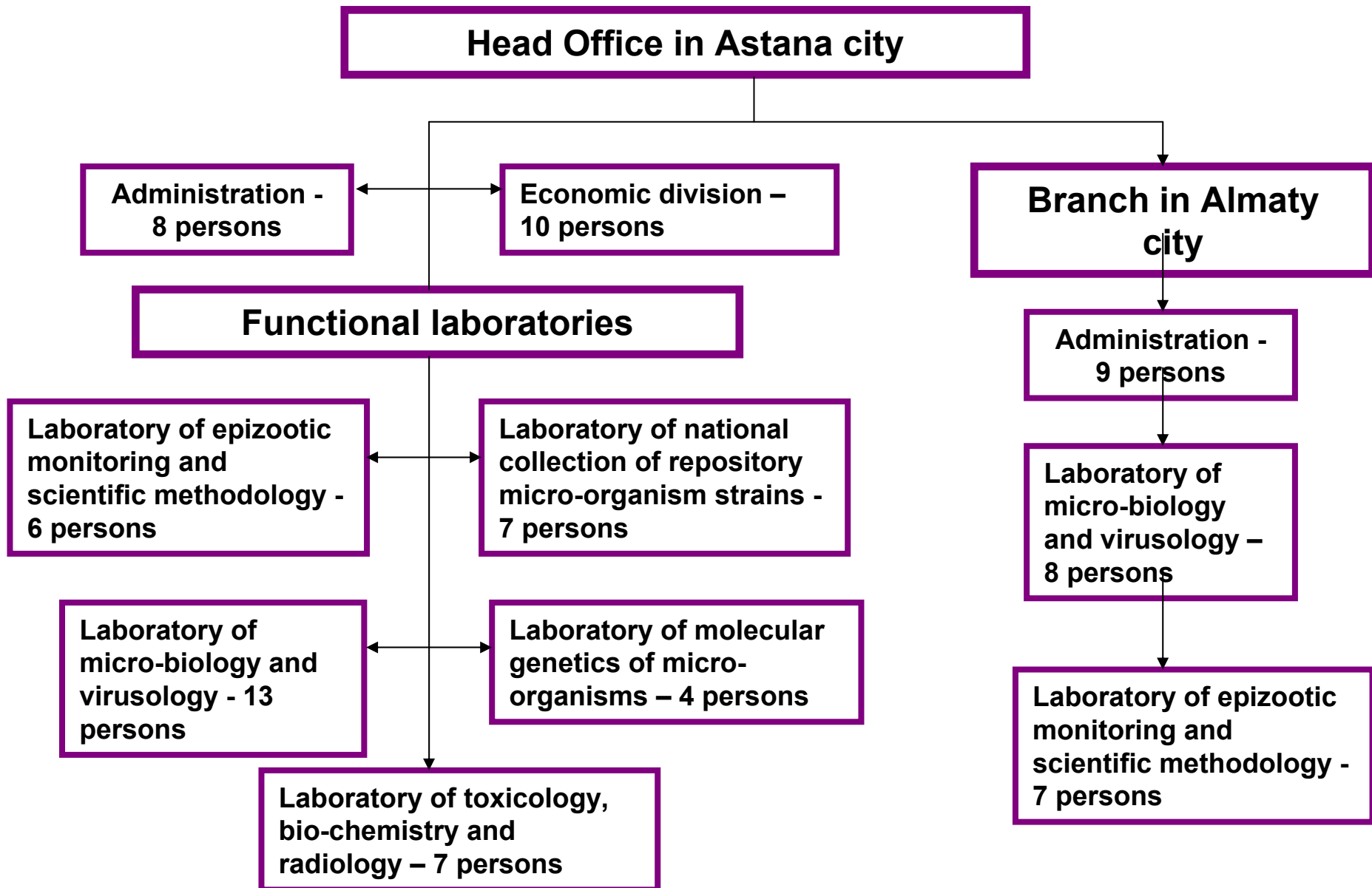
***Tuyakpayeva Anar M.***

**473025, Astana city, micro-district Koktal, 50-th Abai's  
Anniversary st., 22/3,**

**Tel./fax: 301419, E-mail: [ncmr@minagri.kz](mailto:ncmr@minagri.kz)**

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# Structure of the National Center

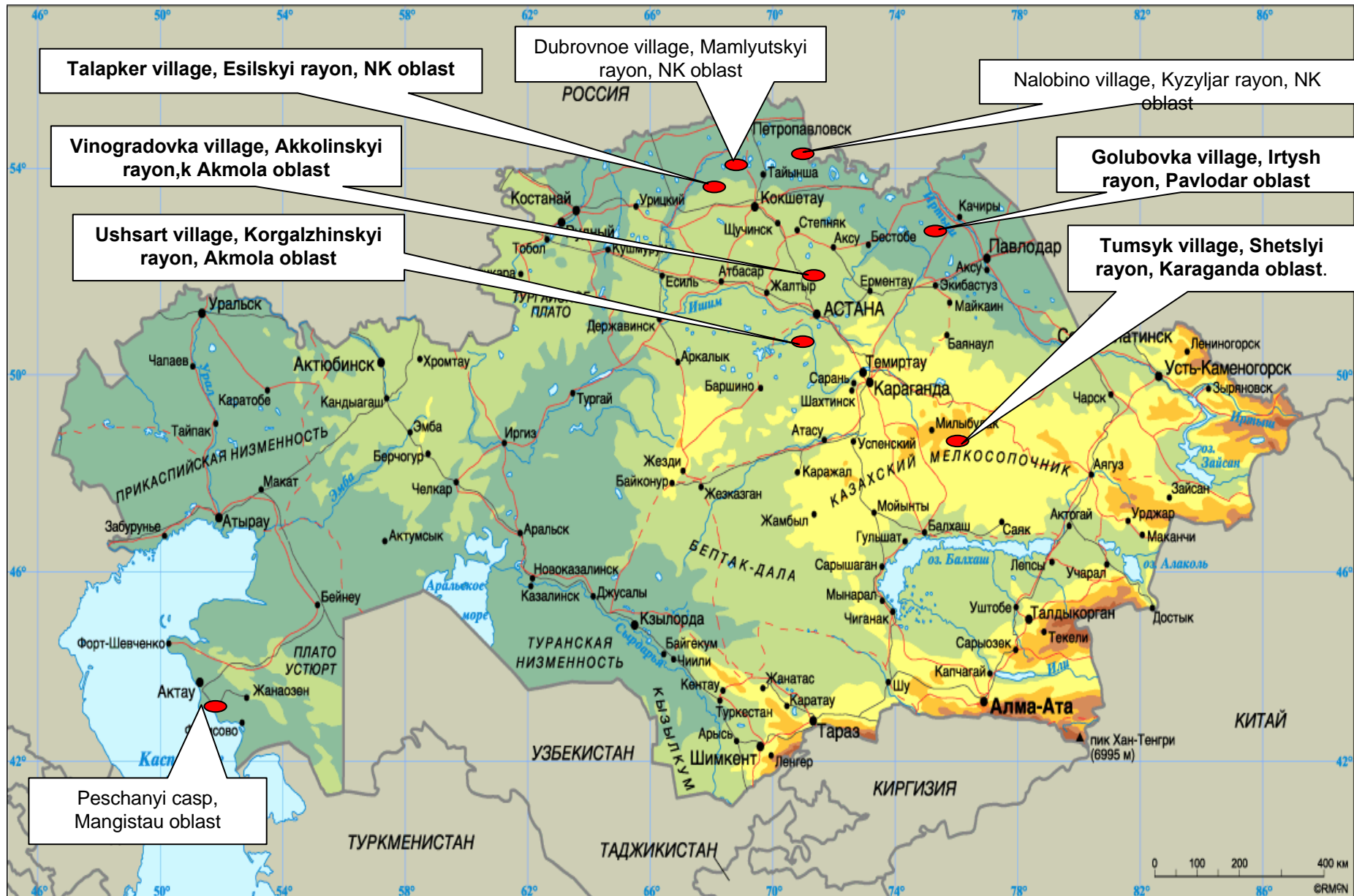


## Functional Activities of the Center

- **Conducting epizootological monitoring of wild fauna;**
- **Methodological support for diagnostics of animal and bird diseases;**
- **Carrying out a reference function in diagnosing animal diseases, including the establishment of the final diagnosis in disputable cases or when having difficulties in establishing the diagnosis in veterinary laboratories;**
- **Maintaining the nation-wide collection of repository micro-organism strains used in veterinary**

# Avian Influenza

# Epizootic Avian Influenza Situation in the Republic of Kazakhstan in 2005-2006



# Projection of a direct threat of AI spreading from adjacent borderline areas of the Russian Federation

## **Northern Kazakhstan oblast**

Kyzyljar rayon район  
M. Jumabaeva  
Akjarskyi  
Ualikhanovslyi

## **Pavlodar oblast**

Ertiskyi  
Zhelezinskyi  
Kashyrskyi  
Uspenskyi

## **Eastern Kazakhstan oblast**

Beskaragaiskyi  
Borodulikhinskyi  
Shemonaikhinskyi  
Glubovskyi  
Zyryanovskyi  
Katonkaragaiskyi

## **Kostanai oblast**

Karabalykskyi  
Fedorovskyi  
Uzynkolskyi

## **Mangistau oblast**

Beineuskyi  
Karakiyanskyi  
Mangustauskyi

## **Atyrau oblast**

Jailyoiskyi  
Inderskyi  
Makatskyi

# **Projection of a direct threat of AI spreading from adjacent borderline areas of the PRC (XUAR)**

**Eastern Kazakhstan  
oblast**

Kurchumskiy rayon  
Zaisanskiy  
Urdjarskiy



**Clinical signs of avian influenza**



**Клинические признаки гриппа птиц**



**Клинические признаки гриппа птиц**

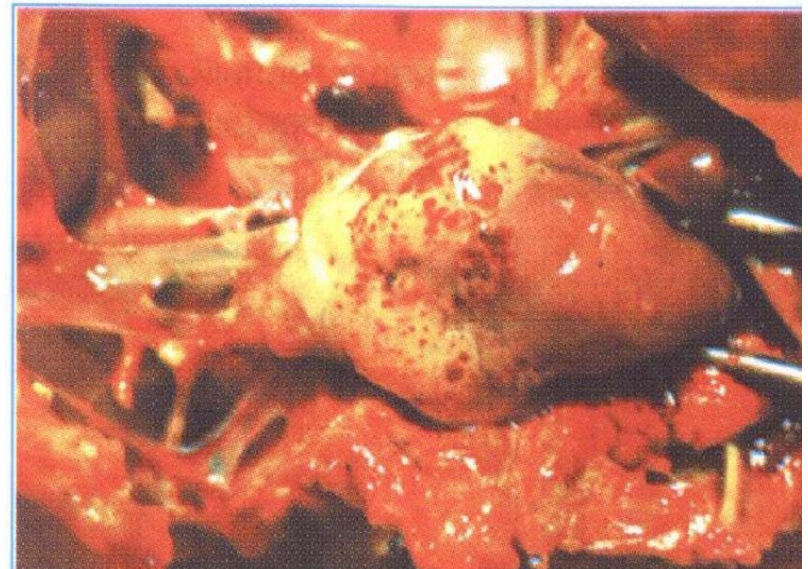
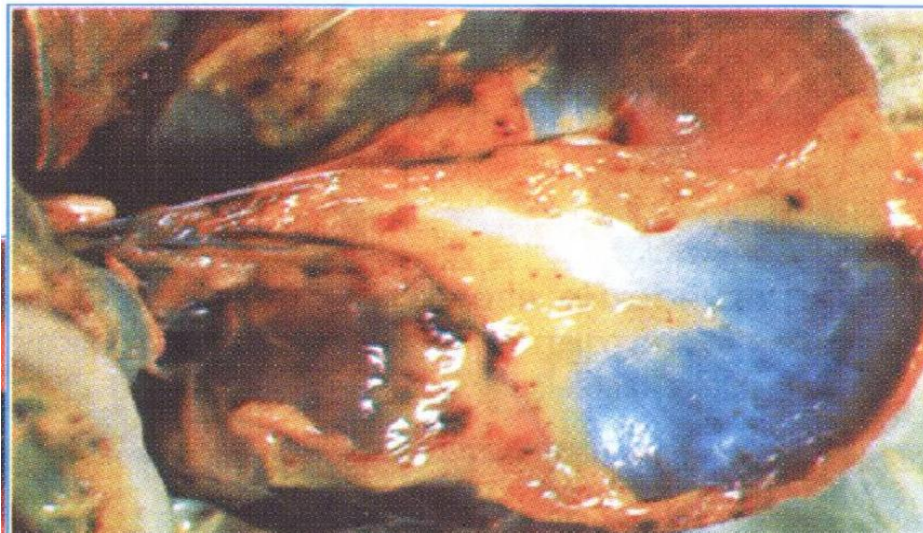
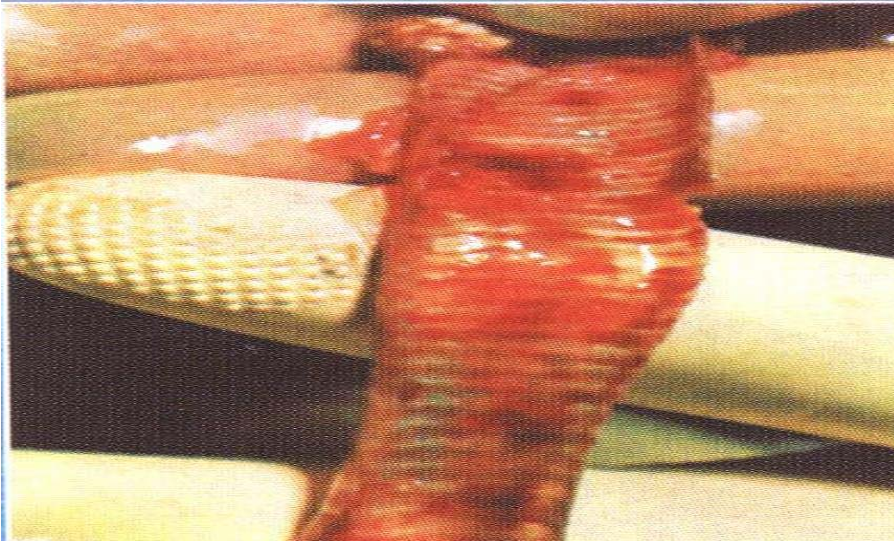


**Клинические признаки гриппа птиц**





# Pathoanatomical changes in stomach and intestinal tract and trachea in birds infected with AI





## Preparation of pathologic anatomy prosection, bird fixation, preparation of bio-containers for sample collection



Taking swabs from bird throat, placement of the swab in a bio-container



## Taking cloacal swabs, placement in a bio-container



# Taking parenchymal samples, placement in a bio-container

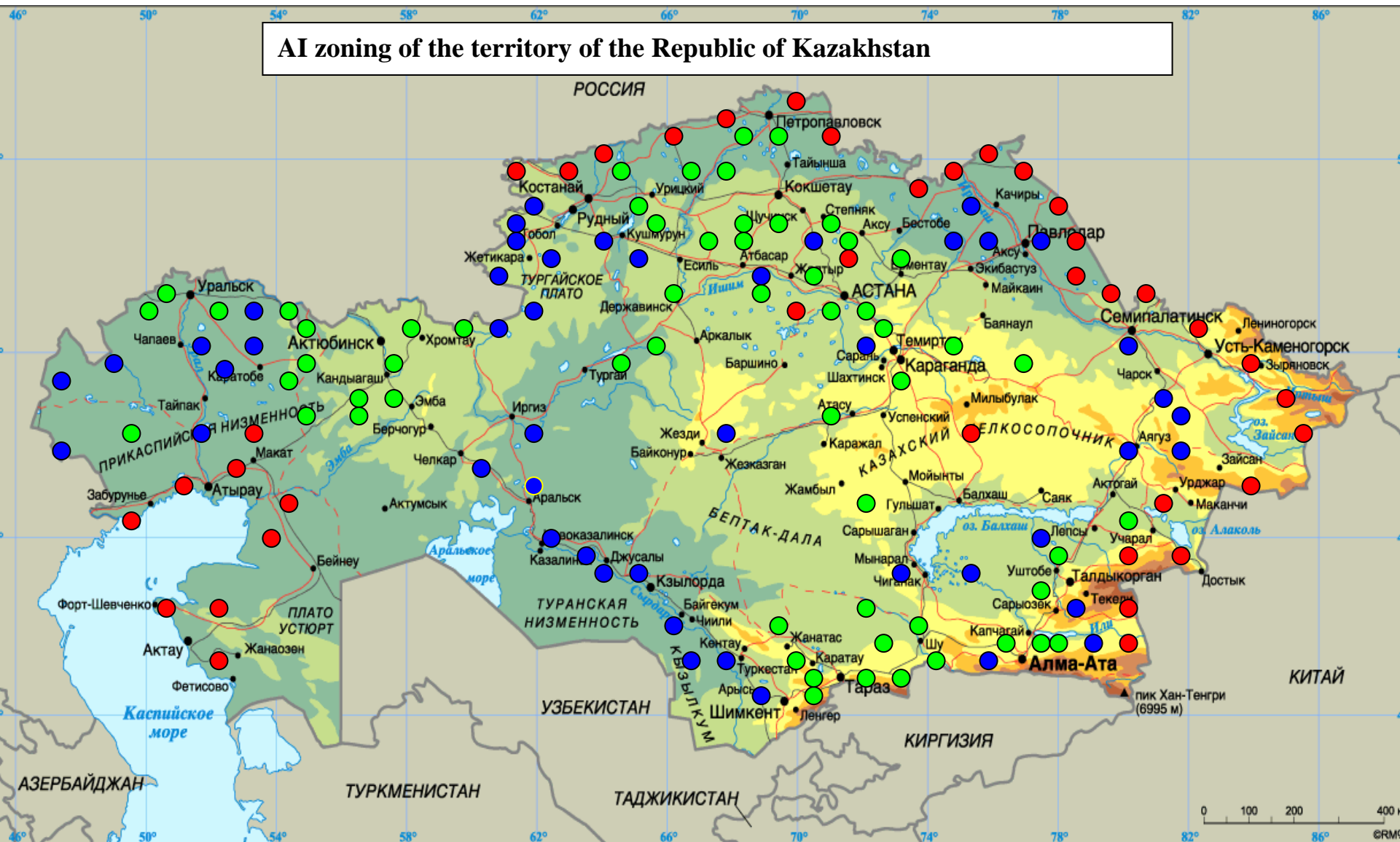




## Making and loading into a bio-container



## AI zoning of the territory of the Republic of Kazakhstan



high risk zone



threatened zone



surveillance zone

# Water basins of the Republic of Kazakhstan

**Aral-Syrdaiya** – Kyzylorda oblast, SKO

**Balkhash-Alakol** – Almaty, Karaganda, Eastern Kazakhstan oblasts

**Irtys** – NKS, EKO, Pavlodar oblast

**Ishim** – NKO, Karaganda, Almola oblasts

**Nura-Sarysuu** – Karaganda, Akmola oblasts

**Tobol-Torgai** – Kostanai oblast

**Shu-Talas** – Jambyl oblast

# Пути миграции птиц

# Flyways



From African and South-European wintering

From Pakistan wintering

From Indian wintering

Probable migration routes

**Рис.3**



## Основные участки миграционных потоков птиц



1 – Урало-Эмбенский, 2 – Арало-Ишимский, 3 – Срединно-Казакстанский, 4 – Около горный, 5 – Горный

# ASSESSMENT OF THE THREAT OF AI SPREADING IN KAZAKHSTAN

Projection of a remote threat of AI spreading by migratory birds (Indian route) for 12 rayons in 3 oblasts of the RK

## Pavlodar oblast

Zhelezinskiyi rayon  
Ertiskiy  
Kashyrskiy  
Pavlodarskiy  
Lebyazhinskiy

## Eastern Kazakhstan oblast

Borodulikhinskiy  
Ulanskiy  
Kokpektynskiy  
Zaisanskiy

## Almaty oblast

Balkhashskiy  
Ilyiskiy  
Alakolskiy

# ASSESSMENT OF THE THREAT OF AI SPREADING IN KAZAKHSTAN

Projection of a remote threat of AI spreading by migratory birds (Pakistani route) for 11 rayons in 5 oblasts of the RK

Northern Kazakhstan oblast	Taiynshinskiy
Akmola oblast	Zerendinskiy Bulandinskiy Astrakhanskiy Ergindykolskiy
Karaganda oblast	Nurinskiy Karkaralinskiy
Kyzylorda oblast	Sarydariynskiy
Southern Kazakhstan oblast	Arysskiy Saryagashskiy Maktaaralskiy

# ASSESSMENT OF THE THREAT OF AI SPREADING IN KAZAKHSTAN

Projection of a remote threat of AI spreading by migratory birds (Northern African route) for 11 rayons in 3 oblasts of the RK

Western Kazakhstan  
oblast

Terektynskiy  
Taskalinskiy  
Zelenovskiy  
Akjaiskiy

Atyrau oblast

Atyrau city  
Inderskiy  
Jalyoiskiy  
Kurmangazinskiy

Mangistau oblast

Mangistauskiy  
Karakiyanskiy  
Beineuskiy