



Republic of Kazakhstan

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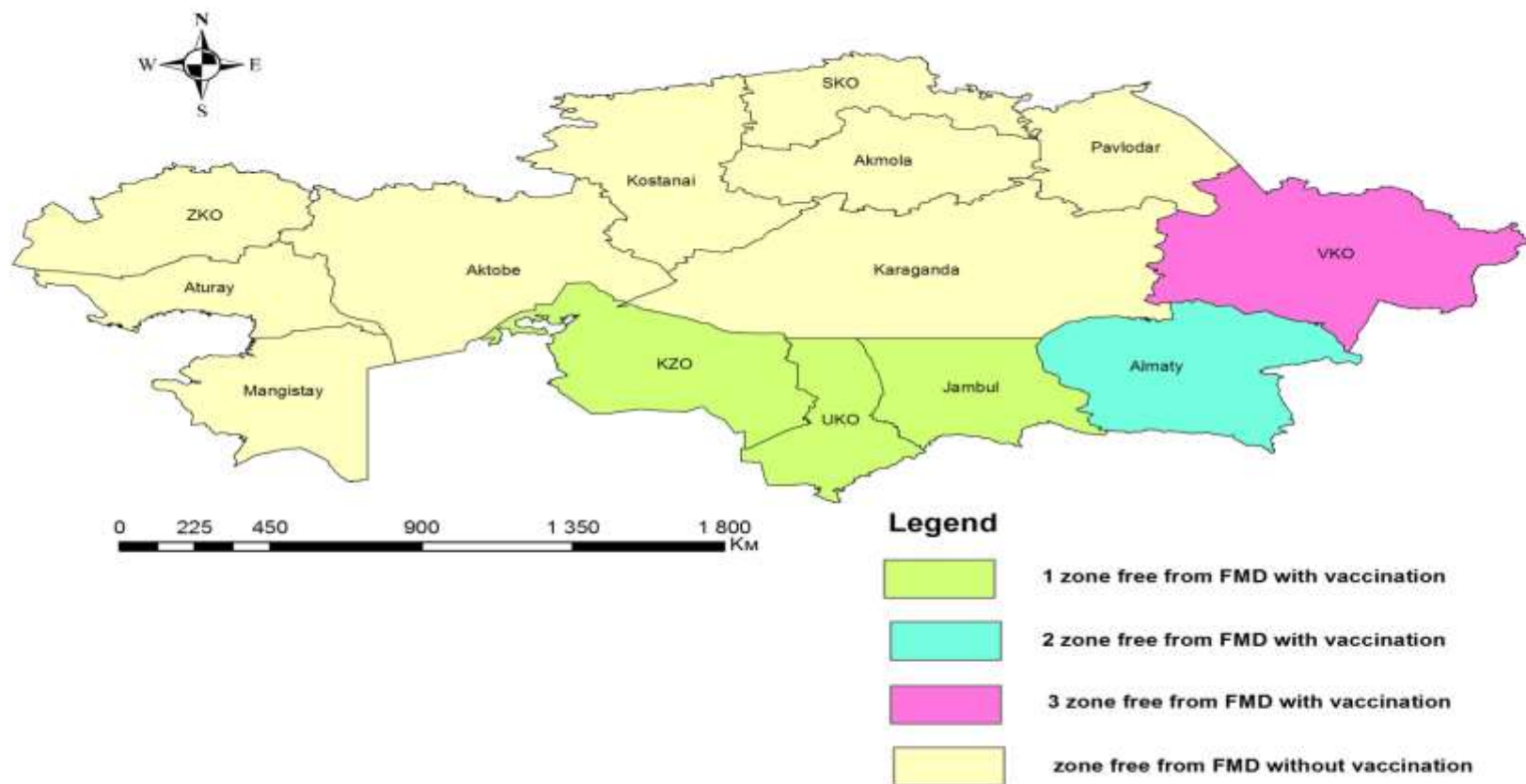


Status of the Republic of Kazakhstan on FMD

- On the 83d OIE General Session in 2015 the Republic of Kazakhstan was officially recognised as zone FMD free without vaccination for 9 regions of the country (Akmola, North Kazakhstan, Kostanay, West Kazakhstan, Aktobe, Atyrau, Pavlodar, Mangistau, Karaganda regions).



Pic. 1- Zoning of the territory of the Republic of





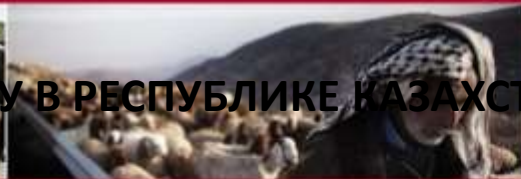
FMD control programme in the Republic of Kazakhstan

Veterinary activity is regulated by the following number of legal acts: 15 major legal acts, 6 main legal acts of the Customs Union and Eurasian Economic Union, 34 Government Regulations of Kazakhstan, 7 Rules, 20 orders and 1 Master-plan on «Modernisation of Veterinary Service of Kazakhstan in accordance with international standards» (*which was approved by the Director General of the OIE- B. Vallat*)

In the Republic of Kazakhstan the FMD surveillance is a part of the constant FMD control programme, aiming to justify FMDV absence or virus activity on the whole territory of the zone and country.

According to the Chapter 1.4. and 8.7 of the OIE Terrestrial Code the system of FMD surveillance is under the responsibility of the Veterinary Service of the Republic of Kazakhstan.

In the framework of this surveillance the targeted population, in which this work is carried out for disease detection, includes all susceptible animals within the zone and the country.



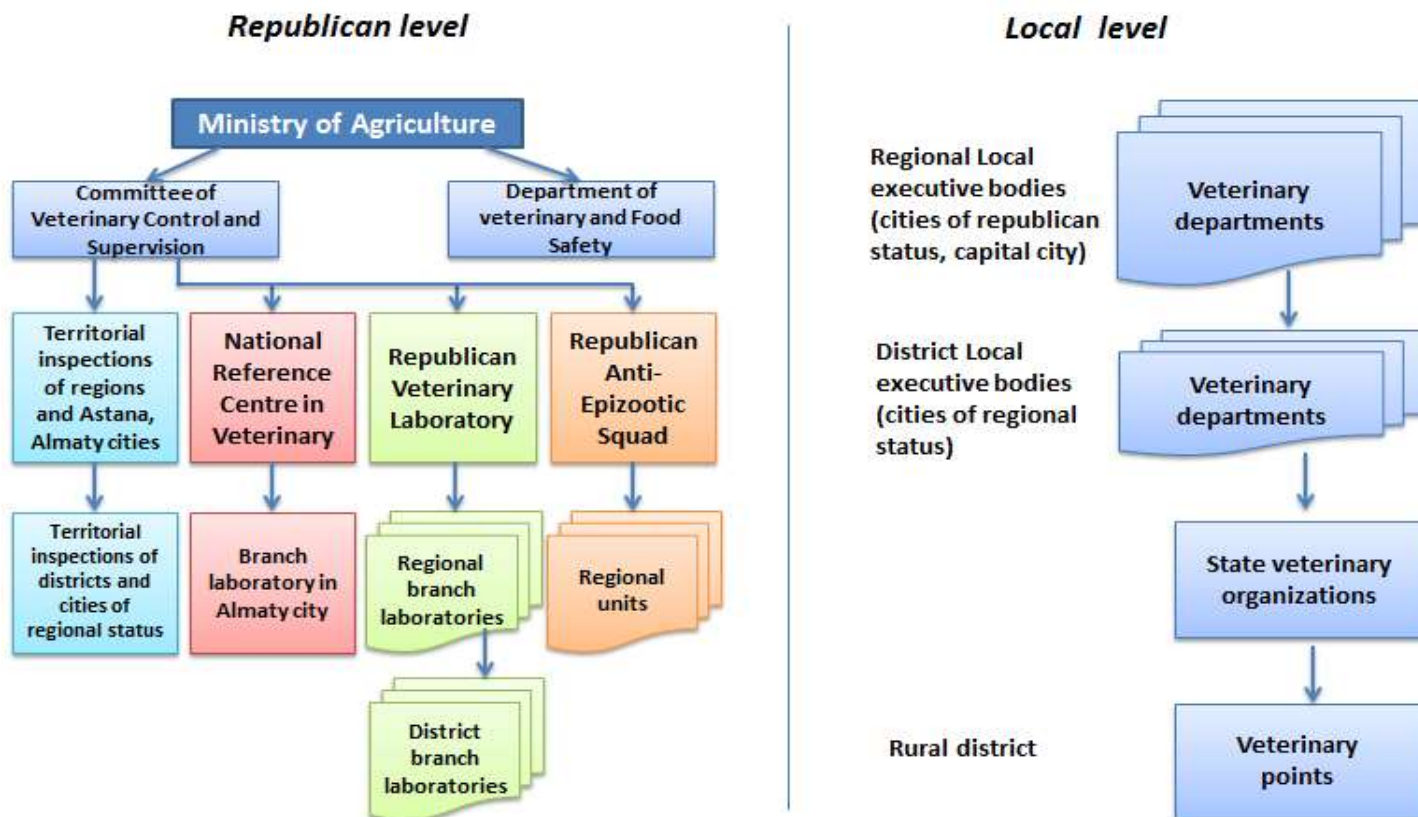
3. ЛИКВИДАЦИЯ ЯЩУР В РЕСПУБЛИКЕ КАЗАХСТАН

FMD Control Programme in the Republic of Kazakhstan

1. The plan on control, prevention and eradication of FMD in the Republic of Kazakhstan.
2. State veterinary organisations on regional level are established, responsible carrying out the veterinary measures against FMD, including sampling, vaccination and identification of livestock;
3. Veterinary measures are carried out based on the principles of analysis, assessment and risk management. Taking into account the results of:
 - monitoring studies on FMD NSP;
 - territory zoning on FMD according to the results of scientific and laboratory studies according to the OIE recommendations;
 - epidemiological surveillance with inclusion of passive and active control is implemented ;
 - newborn livestock animals identification is carrying out;
 - specific immune prevention is used against FMD in the framework of chosen strategy, on the basis of: ***territory zoning; number and the timing of vaccination; connection of the diagnostic studies with the type of vaccine used.***
4. Veterinary Service reaction plan in case of emergency ;



• Scheme 1 – Veterinary Structure of the Republic of Kazakhstan





Vaccination



100 % vaccination coverage of cattle and small ruminants is carried out in 3 zones.

Adult population is vaccinated 2 times, in spring (April- May) and in autumn (September-October).

Young animals are vaccinated starting from 3 months of age, each 3 months until they reach 18 months of age.

- trivalent vaccine, the potency is not less than 6PD50 on each valency in a dose, with the quality guarantee of the manufacturer;
- purified, does not cause antibody formation to NSP FMDV in vaccinated animals;
- containing types O, A and Asia-1 of FMDV, antigenically-related (with the coefficient of antigenic matching/ relation r_1 more than 0,30) with the types of O - Pan-Asia and Pan-Asia 2, type A - SEA-97 and Iran-05, type Asia-1 - Shamir, able to build intensive immunity in vaccinated animals against abovementioned types.

All this strains are genetically related to isolated virus for the last 3 years.





Description of vaccination plan

Table 1. Information on the use of vaccine for the period of 2014-2016.

Name of zone		2014		2015		2016	
		Thousan ds of doses for cattle	Doses for small ruminants	Thousands of doses for cattle	Doses for small ruminants	Thousands of doses will be used for cattle	Thousands of doses will be used for small ruminants
1	Zone 1 (Almaty region)	2024,1	7962,1	1889,4	7414,3	2031,4	7883,2
2	Zone 2 (East Kazakhstan region)	1374,6	4142,5	1880,7	6251,5	1880,7	6251,5
3	Zone 3 (Zhambyl, Kyzylorda, South Kazakhstan region)	3252,6	16850,1	3468,6	17160,2	3204,7	16498,7
Total:		6651,3	28954,7	7238,8	30826,0	7116,8	30633,4

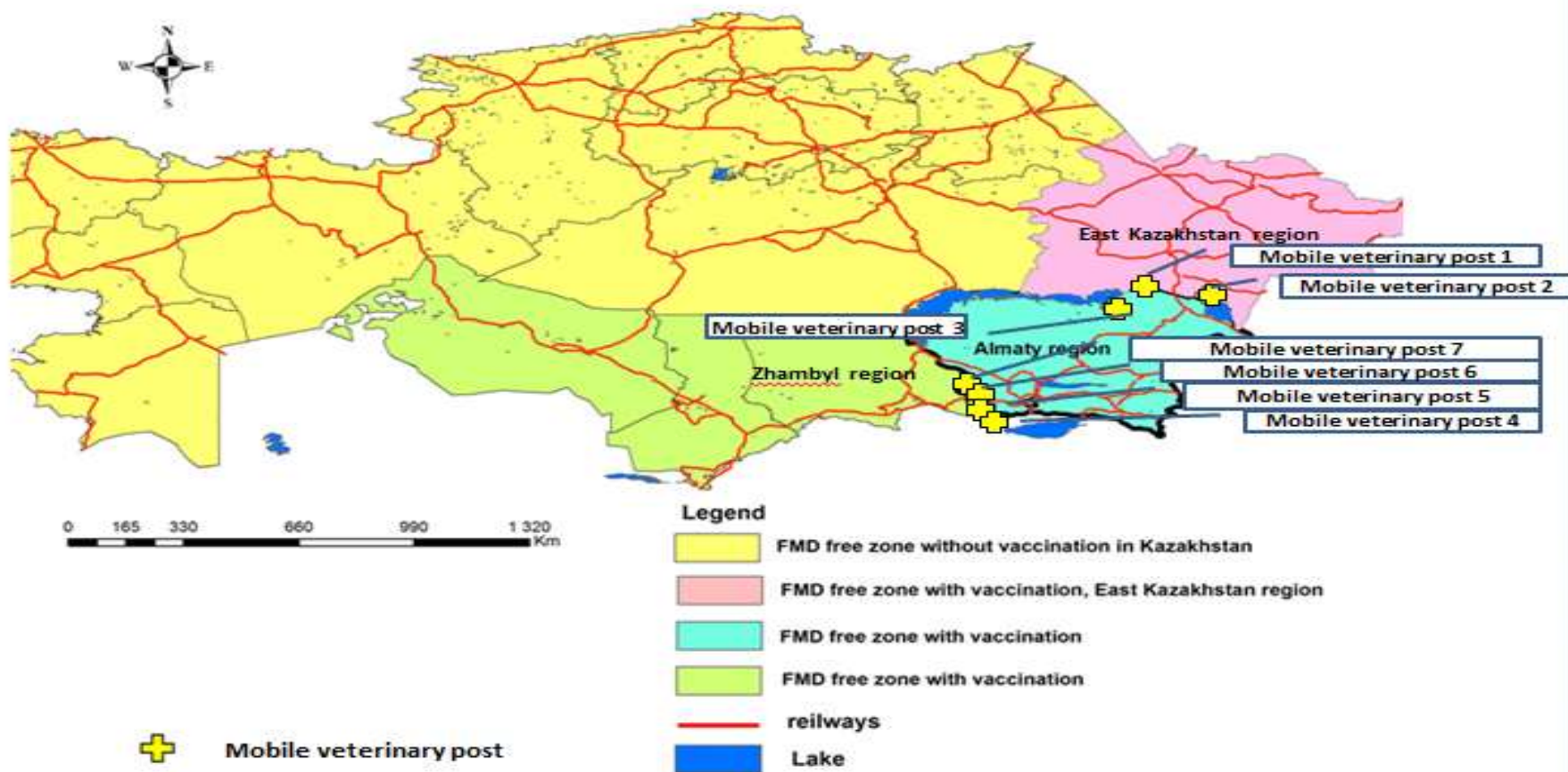


Table 2. Results of serological surveillance by ELISA on antibody titre after vaccination in 2015

Name of the zone	Cattle, small ruminants, pigs							Cp %
	Number of studied	Results			Results in %			
		A	O	Asia-1	A	O	Asia-1	
Zone 1 (Almaty region)								
up to 12 months	3638	3413	3417	3408	94	93,6	94	93,9
from 12 to 24 months	3742	3584	3601	3585	93	95	93,3	93,7
older than 24 months	37881	34457	34253	34041	91	91,3	91	91,1
Zone 2 (East Kazakhstan region)								
up to 12 months	3386	3109	3058	3067	91,3	90,4	90,4	90,7
from 12 to 24 months	6014	5529	5573	5498	91	90,5	90,6	90,6
older than 24 months	35911	30850	30619	30188	86,6	84,7	84,2	85,2
Zone 3 (Zhambyl, Kyzylorda, South Kazakhstan region)								
up to 12 months	2118	2068	2035	2055	93,7	95,3	94,7	94,5
from 12 to 24 months	6971	3998	3965	3971	94	96	96,4	96
older than 24 months	93427	90500	89650	90128	96	95,2	94,6	94,6



Pic. 2 Control on the borders between FMD free zones with vaccination





Serological surveillance

FMD serological surveillance based on the identification of antibodies to NSP is carried annually with the aim of no virus transmission in accordance with the Chapter 1.4 of the OIE Code.

1. Surveillance was developed by the method of random selection of cattle, SR, pigs herds for coverage of the whole territory of zones (in accordance with subparagraph 1) point a) Paragraph 1 of the Chapter 1.4.4 OIE Terrestrial Code, the simple method of random selection was used). Random selection was used on the whole territory of all 3 zones by the randomselection of village, herd in selected villages and animals in different herds.
2. Surveillance was developed for coverage cattle herds with the high risk, where two methods of village selection was used: villages, where outbreaks were registered in 2000-2013 (last outbreak) and neighbouring villages; and settlements, situated within the border with Kyrgyzstan and China.



Study design

Strategy design of sampling is based on following:

Number of animals, subjected to testing is calculated with the use of two steps random sampling. Firstly, herds were selected for testing and then animals were selected within the selected herd.

Surveillance is covering young cattle and SR from the age of 3 months up to 1 year.

Unit of selection is a herd as epiunit



Table 3. Planned number of cattle for testing on NSP in 2015

Zones	Total number of animals	Cattle population	Expected young animals	Young animals on the time of sampling	Proportion of studied young cattle	Number of tested animals
Zone 1 (Almaty region)	897 002	456 716	306 000	306 000	1%	3 060
Zone 2 (East Kazakhstan region)	843 389	310 444	251 460	208 000	1%	2 080
Zone 3 (Zhambyl, Kyzylorda, South Kazakhstan region)	1 439 607	686 568	556 120	460 000	1%	4 600
Total	3 179 998	1 453 728	1 173 845	974 000	1%	9 740



Table 4. Total number of livestock, planned for conduction of studies stratified by herds in 2015.

Zones	Cattle			Small ruminants		
	herds, total number	herds, selected	animals, selected	herds, total number	herds, selected	animals, selected
Zone 1 (Almaty region)	14 269	153	3 060	8 455	293	9 900
Zone 2 (East Kazakhstan region)	9 373	104	2 080	23 703	297	7 500
Zone 3 (Zhambyl, Kyzylorda, South Kazakhstan regions)	30 937	104	4 600	111 789	298	10 000
Total	54 579	486	9 740	143 947	888	27 400



- Table 5. Results of serosurveillance for cattle**

Zones	Number of animals planned for sampling	Number of sampled animals	Number of young animals, Negative on NSP after retesting by ELISA			Number of animals, Positive on NSP by ELISA				Final results on ELISA and PCR
			In all herds	NSP positive herds		screening		retesting		
				All young animals	Including the age of 3-6 months	среди молодняк а от 6-12 месяцев	среди молодняка от 3-6 месяцев	Among young animals 6-12 months	Among young animals 3-6 months	
Zone 1	3060	3 408	3 407	1 550	1 225	0	26	0	1	negative
Zone 2	2080	2 319	2 318	1 058	712	0	18	0	1	Negative
Zone 3	4600	5 440	5 430	4 120	2 710	0	79	0	10	negtaive
Total	9740	11167	11155	6728	4 647	0	123	0	12	



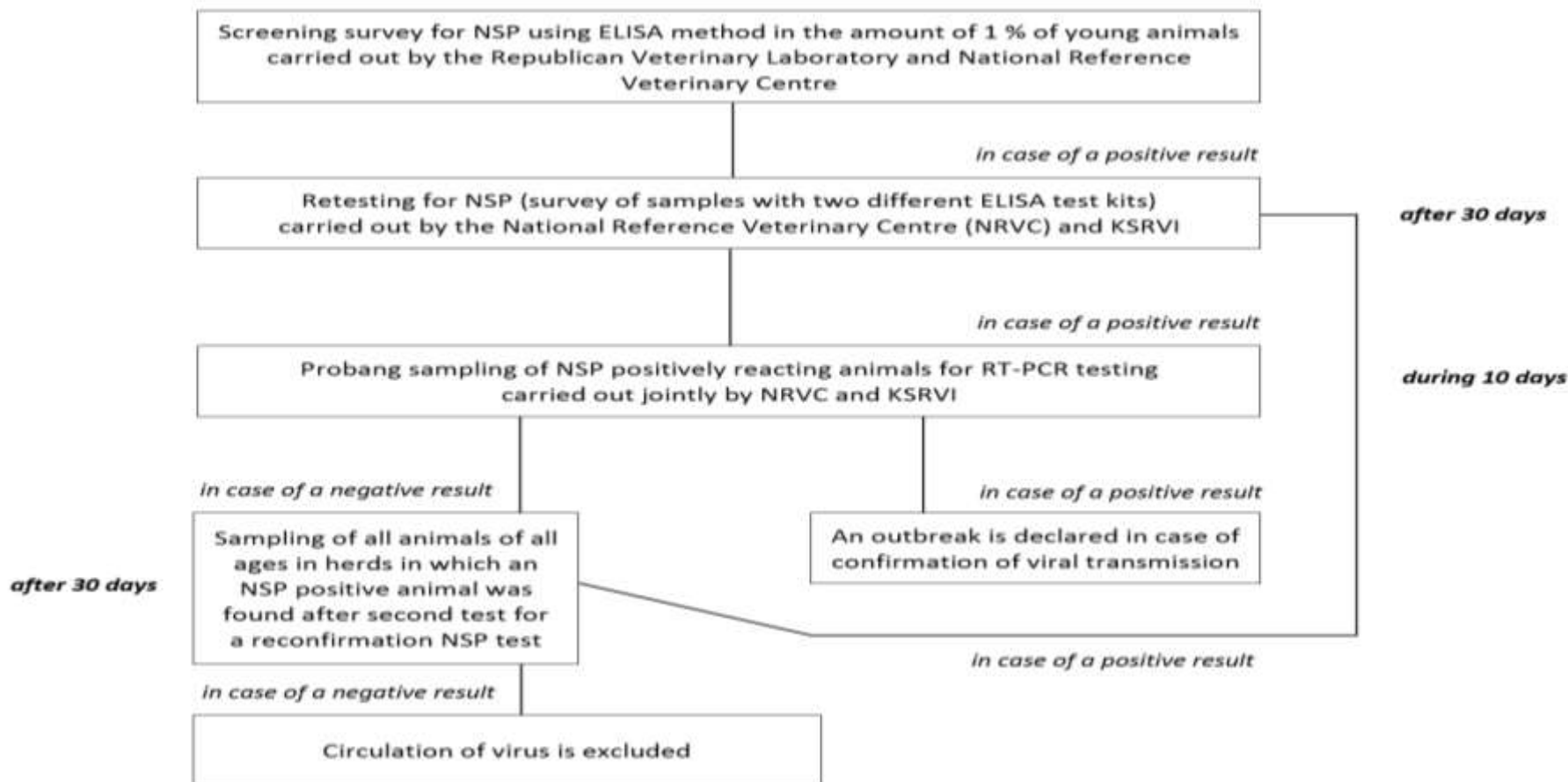
Table 6. Results of serosurveillane for small ruminants

Zones	Number of animals planned for sampling	Number of sampled animals	Number of young animals, negative on NSP after retesting by ELISA			Number of animals, positive for NSP by ELISA				Final results on ELISA and PCR
			In all herds	NSP positive herds in screening		screening		retesting		
				All young animals	Including at the age of 3-6 months	Among young animals aged 6-12 months	Among young animals aged 3-6 months	Among young animals aged 6-12 months	Among animals aged 3-6 months	
Zone 1	9100	14 047	14 046	773	573	0	10	0	1	отрицательно
Zone 2	9100	10 000	9 965	2 939	1 795	0	55	0	35	отрицательно
Zone 3	9200	24 982	24 832	14 644	12 284	0	258	0	150	отрицательно
Total	27400	49029	48843	18356	14652	0	323	0	186	



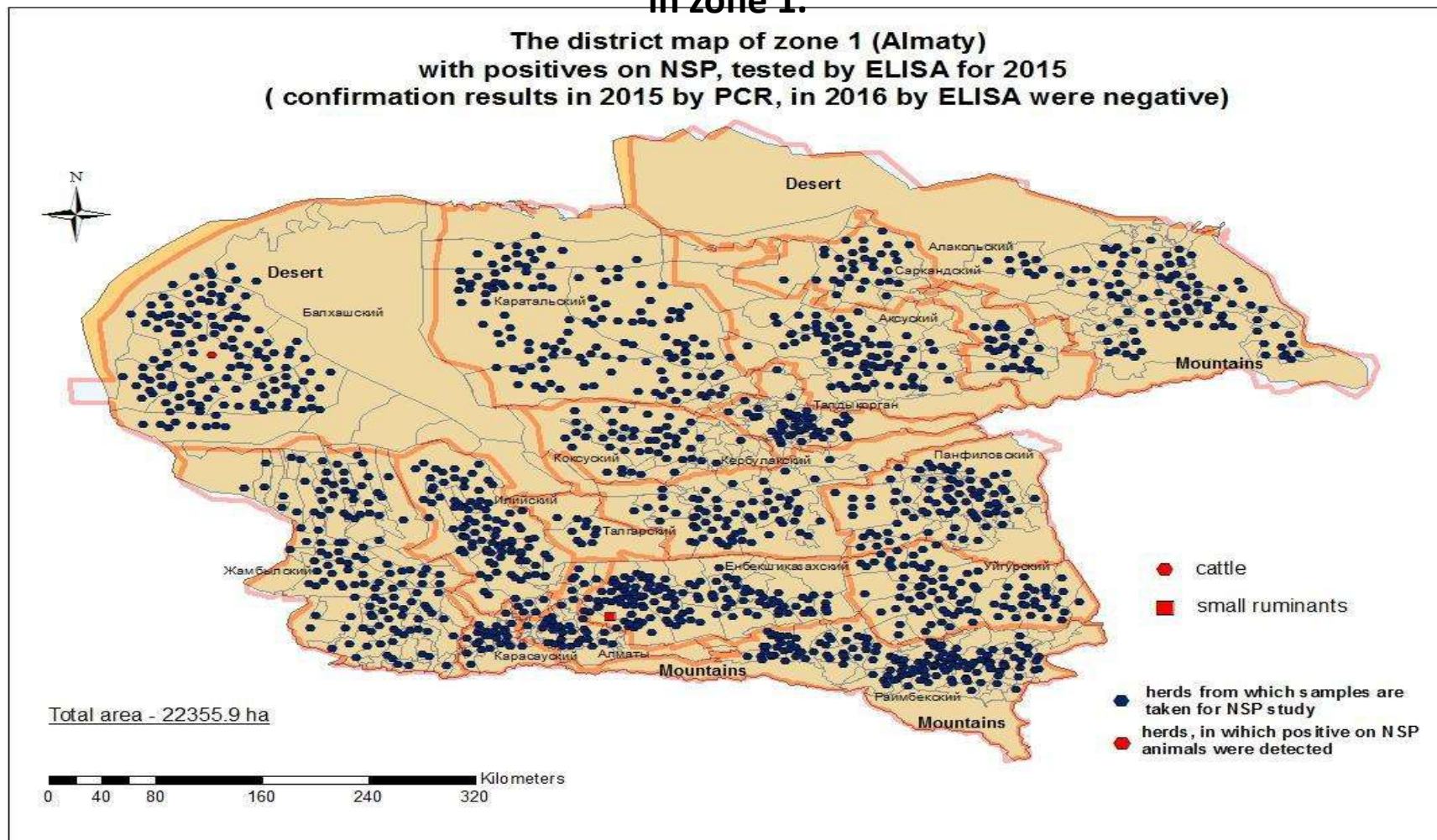
Scheme 2.

Algorithm of actions to demonstrate absence of FMDV transmission



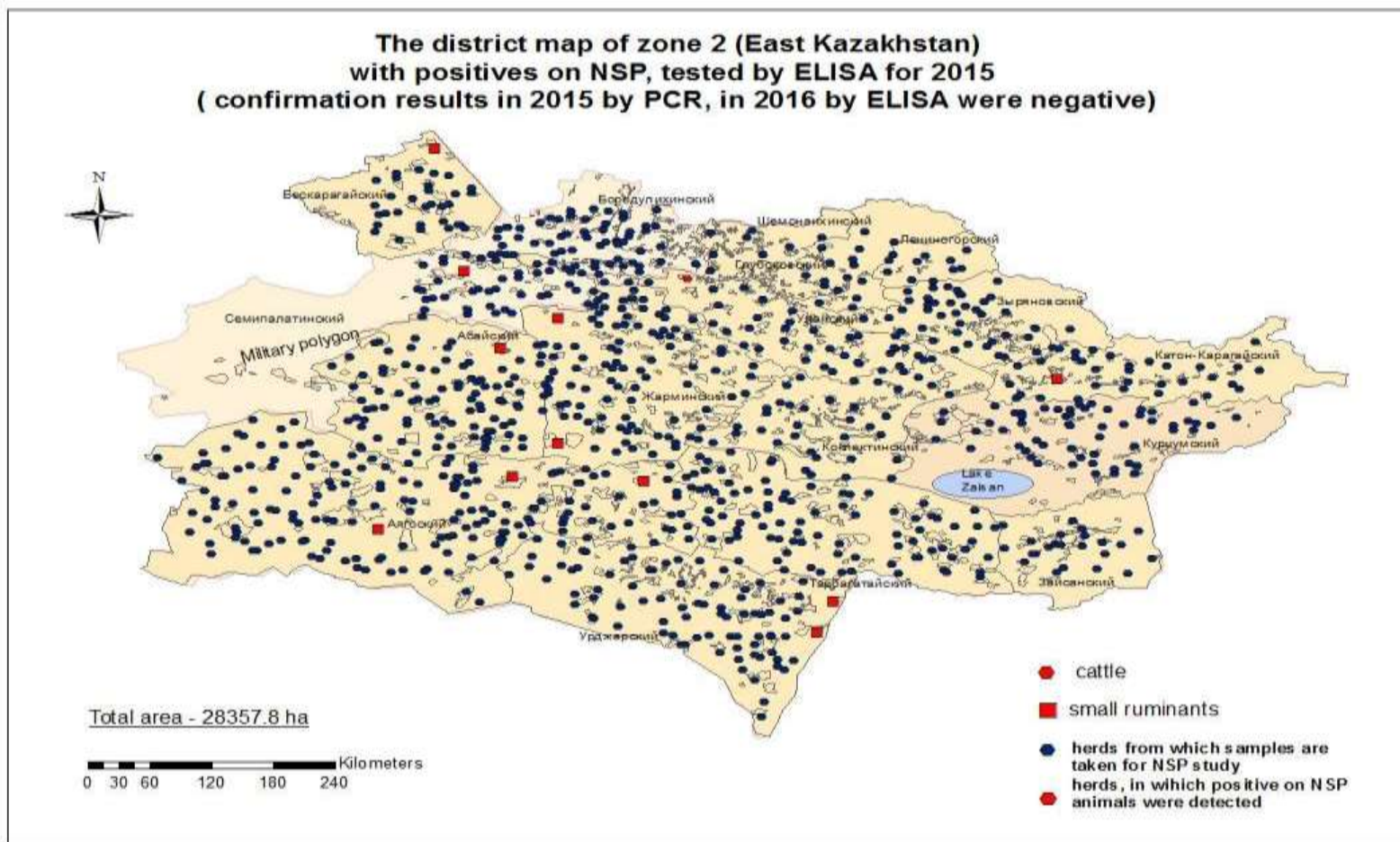


- **Pic. 3 Clustering analysis among seropositive herds in screening studies in zone 1.**





- **Pic.4 Clustering analysis among seropositive herds in screening studies in zone 2.**





- **Pic 5. Clustering analysis among seropositive herds in screening studies in zone 3**

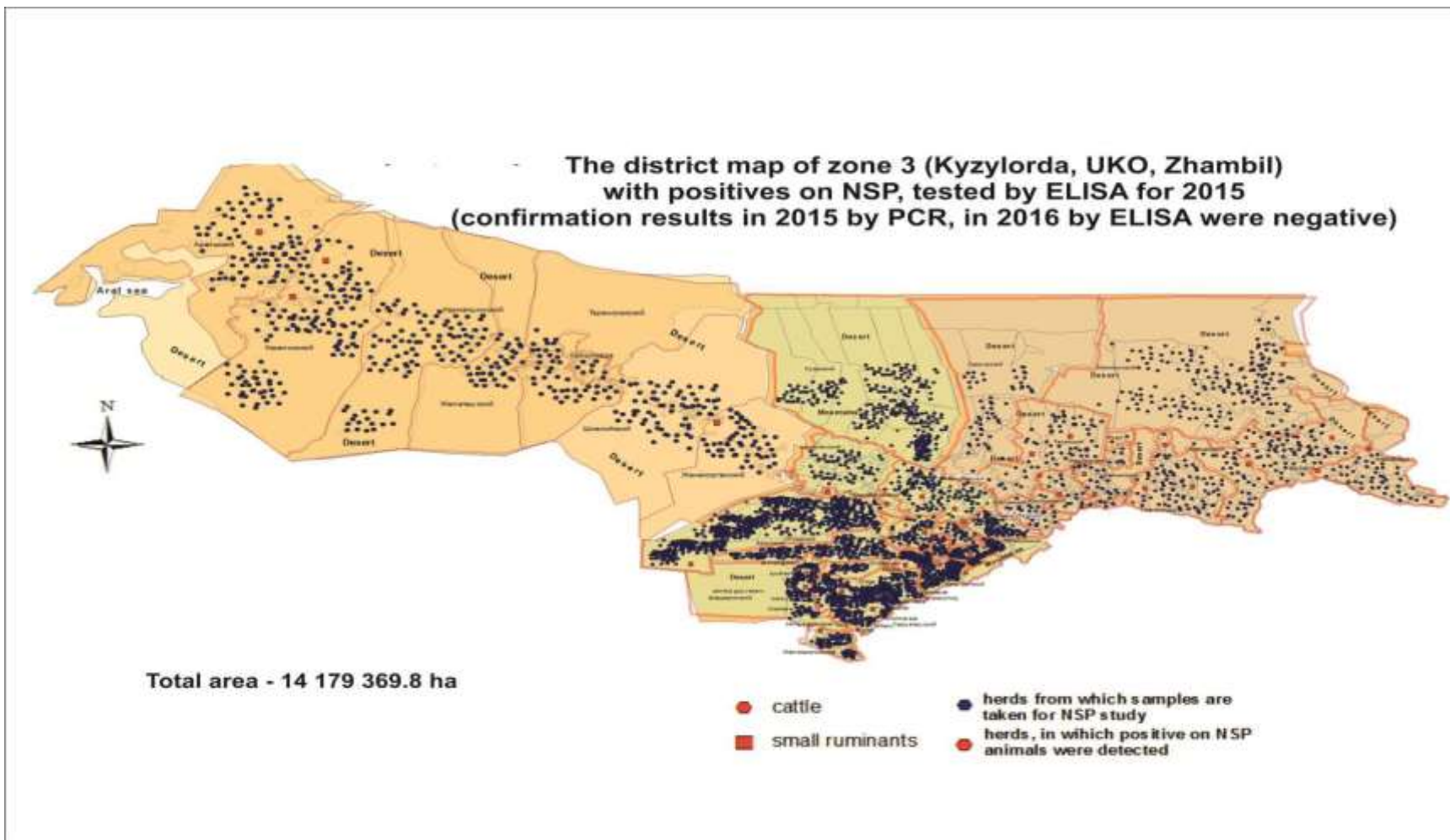




Table 7 - amount of funding of veterinary Republic of Kazakhstan from the state budget

No.	Name of activity	2014		2015	
		KZT million	Euro million	KZT million	Euro million
1.	Diagnosis of diseases of animals	9 082,70	37,3	9 548,5	38,5
2.	Conducting anti-epizootic measures	11 050,20	45,4	11500	46,5
3.	Construction, reconstruction veterinary laboratory, biostorage	1 371,30	5,6	537	4,2
4.	Antiepidemic activities, elimination of outbreaks of acute and chronic infectious diseases of animals, including:	8 614,60	35,4	8954,2	36,5
	purchase and storage of veterinary drugs	6 321,30	25,9	6320,2	25,8
	purchase SI "Republican Antiepidemic Squad"	1 111,50	4,6	1109,2	4,6
	reimbursement of the cost for withdrawing animals and destruction of sick animals	1 181,80	4,9	1203,5	5
5.	Material and technical support of "Republican Antiepidemic Squad"	1,8	0,01	3	0,02
6.	Material and technical support of «National Veterinary Reference Centre»	0	0		
7.	Building of new 126 gov.laboratories (additionally to existing 18 regional + 192 rayon level gov.lab)	52 lab		26 lab	
8.	Total sum for building of new 126 gov.laboratories:12000 mln tenge or 74.9 mlnEUR	6240	31,2	3120	12,5
9.	Material and technical support of «Republican Veterinary Laboratory» of 126 veterinary gov.lab 7170 mln tenge or 34.7 mln euro	2496	12,5	1248	5
10.	Organization and Carrying out identification of farm animals	1 122,90	4,6	1800	6,2
11.	Monitoring, reference laboratory diagnosis and ensuring food safety in veterinary medicine	643,8	2,6	850,2	3,5
12.	Material and technical support of the state veterinary organizations	9 319,90	38,3		
TOTAL:		49 237,90	210,01	41 147,60	207,52
For FMD		2 356,10	6,1	2 255,90	5,9



Short-term plans

1. Republic of Kazakhstan is developed the control programme on FMD and submitted it to OIE for validation;
2. In september-October 2016 the next OIE PVS mission is planned;
3. In the framework of OIE Twinning education the ongoing work on increasing the quality of education of veterinary experts is carried out;
4. In 2016 FMD simulation training in collaboration with OIE, Pirbright Institute will be organised on the territory of the Republic of Kazakhstan.



Thank you for attention!