

The classroom trainings provided to herders during the project covered the following 6 topics:

- Animal health
- Veterinary clinic
- Pastureland use

- Principle of business
- Household finance and budgeting
- Fundamental knowledge about cooperative

In total 800 herders of 5 baghs participated in classroom trainings.

### PROJECT III

## Inborn and acquired abnormal developments among the five types of the livestock - 2019

The study on inborn and acquired abnormal developments among the five types of the livestock was performed by the United Private Veterinary Clinics of Mongolia in 2019.

#### Scope of the study:

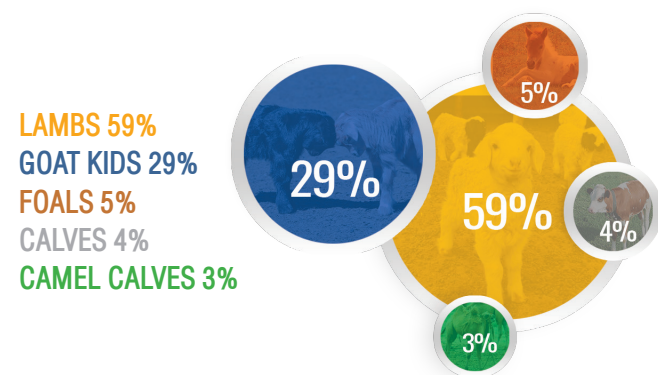
- 21 provinces
- Ulaanbaatar city

#### Study approaches

- Conduct survey based on questionnaire among veterinary clinics
- Make analysis on abnormal development, organ and systemic disorders
- Make conclusion on abnormal development and pathology types.

81% of all veterinary clinics or 819 veterinary units covered by the survey.

Out of 253 cases of abnormal developments in total



Inborn and acquired abnormal developments are more common in small livestock animals.

#### Survey registered in total 253 cases

- 218 cases declared by herders
- 35 cases registered by veterinarians
- for 20 cases out of 253, samples sent to laboratory

By the similar features encountered, they can be distinguished into 12 types. It shows that 14-16 abnormal developments on average occur in a province (excluding Ulaanbaatar).

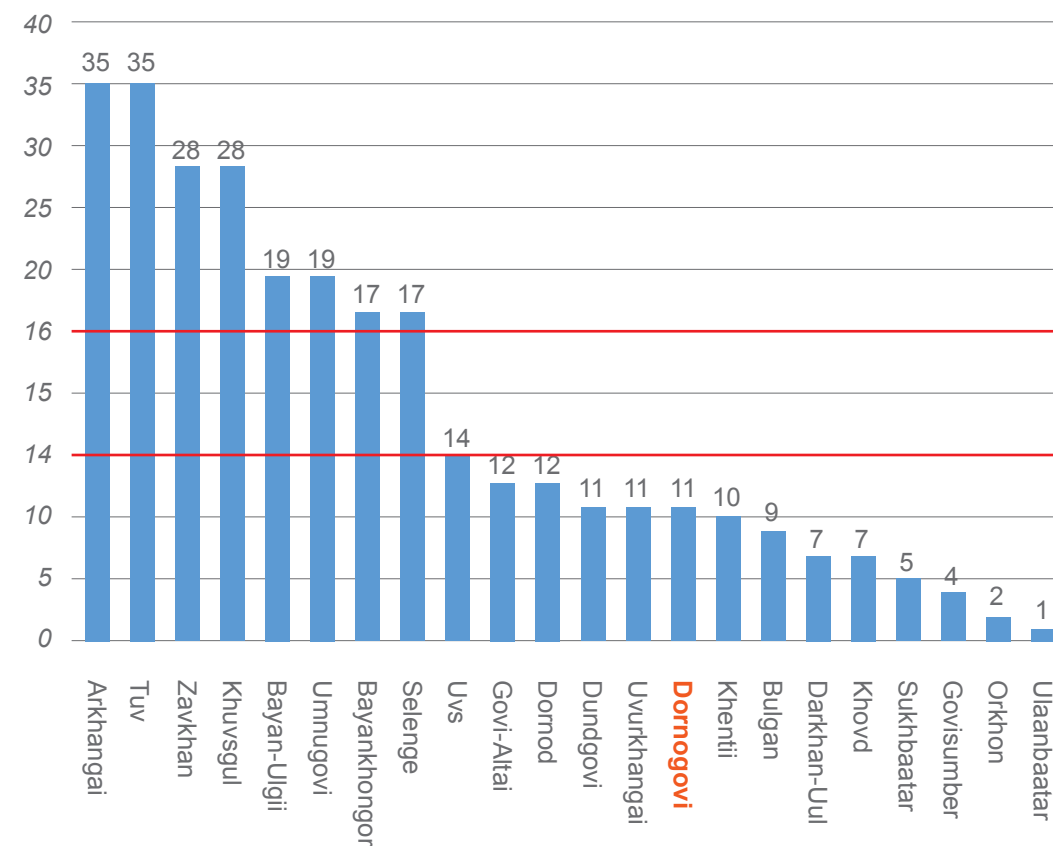
In total 304 cases of abnormal developments were registered:

- 23% related to having two heads
- 23% related to having multiple legs
- 17% related to limbs
- 13% related to having a closed anus.



#### CASES OF ABNORMAL DEVELOPMENTS

(by provinces)



In terms of the geographical location,

- the cases were mostly in the high alpine region
- somewhat few in steppe region provinces
- relatively few in Gobi region provinces

All provinces of our country had cases of pathological developments of the livestock organs, systems and whole body.



E-mail: [byambadolgor.luvсанjamts@orano.group](mailto:byambadolgor.luvсанjamts@orano.group)

Badrakh Energy LLC  
ICC Tower, 8 floor, Jarmyan Gun street 9, 1st khoroo, Sukhbaatar district,  
Ulaanbaatar 14240, Mongolia,  
Telephone: (+976) 11 320698, 11 323400, (+976) 7011 0475, (+976) 7011 0675



## Animal Health Study Ulaanbadrakh and Sainshand soums of Dornogovi province 2014-2019



МОНГОЛЫН МАЛ ЭМНЭЛГҮҮДИЙН  
ДУНДЫН ХОРШОО

PROJECT I

Animal health study and assessment of situation in Sainshand and Ulaanbadrakh soums of Dornogovi province - 2014

The United Private Veterinary Clinics of Mongolia carried out the animal health study and assessment of situation in Sainshand and Ulaanbadrakh soums of Dornogovi province in May and June 2014.

This study had an objective to plan further measures to implement on the conditions of epidemics of infectious and parasites diseases in Sainshand and Ulaanbadrakh soums of Dornogovi province upon assessment of the health conditions of herder households residing in the areas and outside the special license areas of Badrakh Energy LLC (present name) for the recent decade.

Twenty herder households divided in 2 groups were selected for assessment in consultation with the soum authorities

- 15 herder households living within licensed area of Badrakh Energy LLC
- 5 herder households living outside of the licensed area of the company.



Assessment were performed based on:

- On-field research
- Statistical data as of last 10 years or 2004-2014

I. ON-FIELD RESEARCH

474 cattles from the above 20 households constituted the pool for random selection of animals for general pathological exam and analysis

The following samples were taken from these cattle and made subject of analysis:

- Blood samples of 62 cattle
- Dung samples of 46 cattle
- Full pathological anatomy autopsy on 8 cattle

A. RESULTS OF BLOOD AND DUNG ANALYSIS AND AUTOPSY:

RESULTS OF THE BLOOD ANALYSIS:

|    |            | Normal standard level | Higher than standard level | Lower than standard level | Difference between 1st and 2nd groups of herder households       |
|----|------------|-----------------------|----------------------------|---------------------------|------------------------------------------------------------------|
| 1. | Selenium   | 12                    | 9                          | 39                        | No difference between 1 <sup>st</sup> and 2 <sup>nd</sup> groups |
| 2. | Calcium    | 15                    | 0                          | 46                        | No difference between 1 <sup>st</sup> and 2 <sup>nd</sup> groups |
| 3. | Phosphorus | 4                     | 56                         | 0                         | No difference between 1 <sup>st</sup> and 2 <sup>nd</sup> groups |
| 4. | Zinc       | 12                    | 9                          | 39                        | No difference between 1 <sup>st</sup> and 2 <sup>nd</sup> groups |
| 5. | Magnesium  | 41                    | 0                          | 19                        | No difference between 1 <sup>st</sup> and 2 <sup>nd</sup> groups |

Based on results of analysis to determine content of Cu, Se, Ca, P, Zn, Mg in blood plasma the above mentioned elements are comparatively different, but **we note there is no difference between the two groups living within the licensed area of the company or outside.**

TESTS RESULTS MADE IN DUNGS OF ANIMAL TO REVEAL PARASITES FROM HERDER HOUSEHOLDS

According to the parasites revelation tests, 16 out of 20 herder households had eggs of Trichostrongylus sp, Nematodirus sp types hookworms from nematoid or round hookworms and bacteria of Eimeriidae origin.

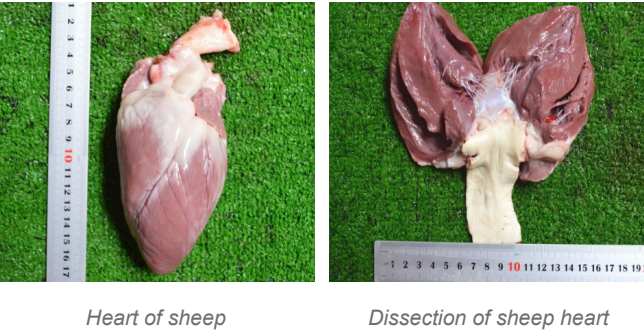
Dung analysis 16 out of 20 herder households had eggs

- Small livestock hookworms
- Round hookworms
- Big livestock hookworms

B. ANATOMICAL DISSECTION ANALYSIS

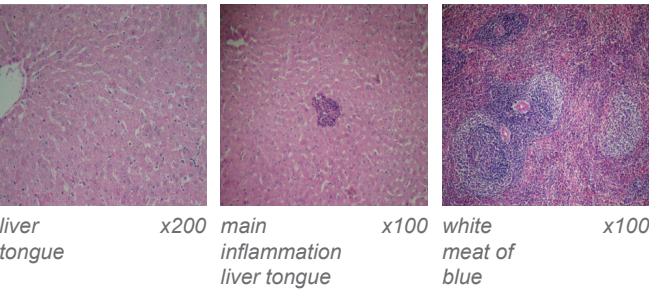
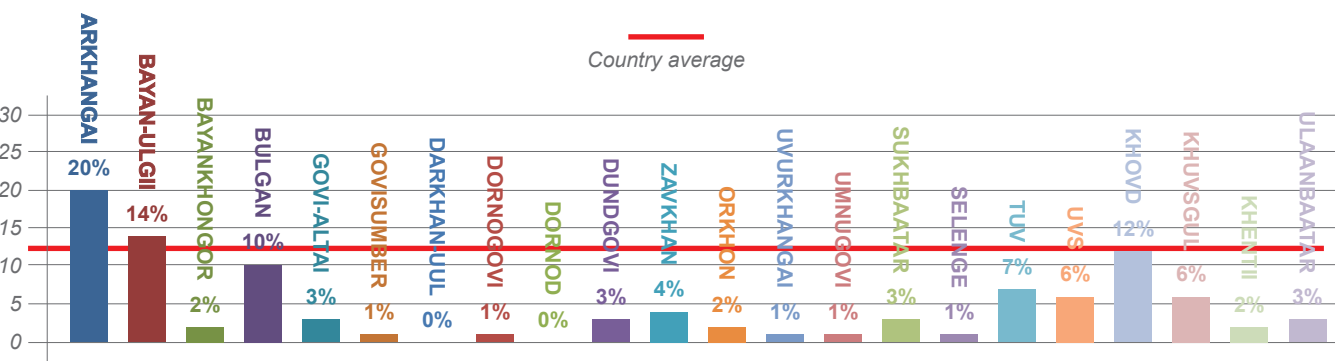
Autopsy was conducted on 8 animals: 4 animals (1 large and 3 small) from 1st group herders and 4 animals (1 large, 3 small) from 2nd group herders under framework of assessment of animal health situation.

Conducted full anatomical dissection and documented and photographed normal organs and organs with pathological changes and took histological samples from these tissues and organs. Processed samples according to common histological sample preparation methodology and used Hematoxylin and Eosin (H&E) stain for microscopic analysis and results were also documented with photography.



ANIMAL INFECTIOUS DISEASES AT NATIONAL LEVEL BETWEEN 2011 - 2013

Based on statistical data analysis, the occurrence of infectious disease in Dornogovi province was lower than the national average.



General physical conditions of cattle or bodily strength, fattening, behavior, distance orientation, skin, mucous membranes, color pollution, lymph nodules, and thyroid glands were palpated for checkups to examine intactness and normality in livestock of selected 20 herder households in Zuunbayan bagh of Sainshand soum, Argalant, Sangiin Dalai baghs of Ulaanbadrakh soum and Khuvsgul soums of Dornogovi province. **There were not definite differences in the general therapeutic and physiological data of cattle in the first and second groups.**

II. STATISTICAL DATA ASSESSMENT

Analysis of statistics on parasitic diseases that have occurred Dornogovi province over the past 10 years shows that five types of parasitic diseases had occurred urging washing, purging, and disinfection within the province.

Totally 9 types of infectious diseases occurred showing the necessity to take measures of prevention and to implement international instructions. The data shows that, the occurrence of infectious disease in Dornogovi province was lower than the national.

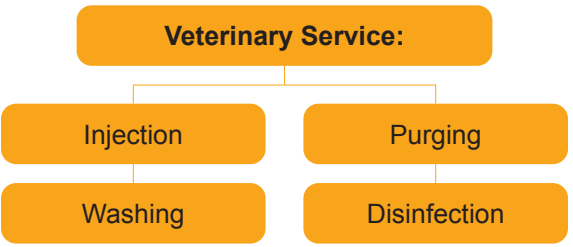
PROJECT II

Project to improve Veterinary Service

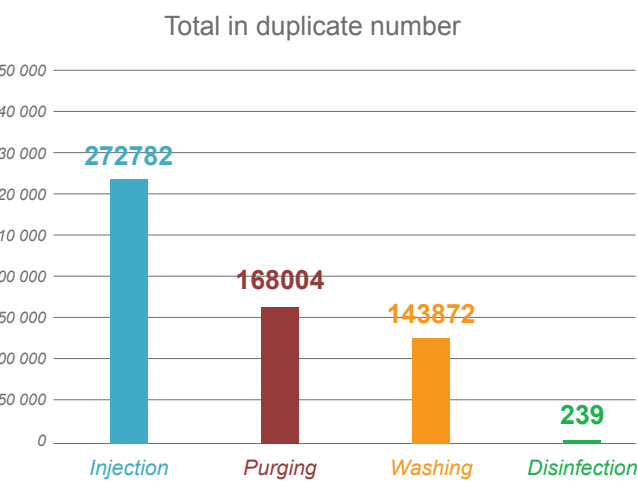
The United Private Veterinary Clinics of Mongolia implemented this project in 2014-2017 to provide animal health services through surveillance of livestock diseases within herds with high occurrence of diseases, including in total 5 baghs like 4 bagsh of Ulaanbadrakh soum and 1 bagh of Sainshand soum of Dornogovi province and providing veterinary services to improve livestock health by working with herders.

Main activities of the project:

- Provide veterinary service
- Organize training to herders



Number of livestock covered by veterinary project during project

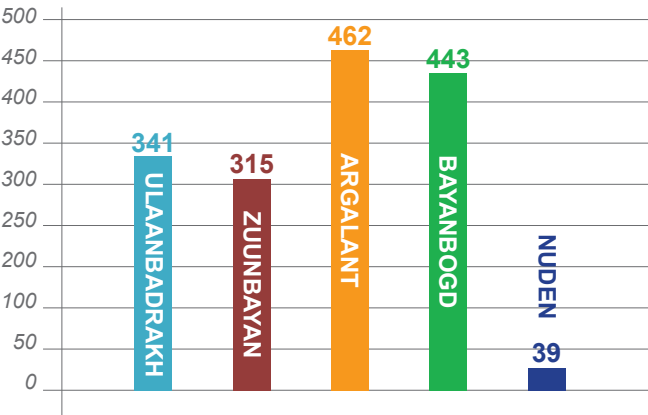


VETERINARY SERVICE

During the project implementation, 814 visits were made to 239 herder households for check-up and examination covering 78% of all herder households in the region. In total 1600 livestock animals were examined.

Veterinary Service

- 239 herder households visited
- 814 visits
- 78% of all herder households
- in total 1600 livestock animals examined



Conclusion:

Outbreak of livestock animal disease in 5 baghs of Ulaanbadrakh soum and Sanshand soum of Dornogovi province covered by the project was the same as in others provinces.

Cases of livestock animal disease, death and miscarriage rate occurring in animals of 4 baghs of Ulaanbadrakh soum and 1 bagh of Sainshand soum varied in each bagh every year and can be explained by climate factor, quality of pasture and episode and movement of livestock animals.

Observation made on animals covered by the project did not reveal any special problems or concern. In addition, there was no single epicenter.

TRAINING FOR HERDERS

