

**DISTRIBUTION AND EVOLUTION PERMAFROST IN MONGOLIA
OF A PART, IS LOCATED IN SOUTH – SIBERIAN REGION OF RUSSIAN**

Batchuluun Gantsetseg (researcher, master of technical sciences)

Kh. Sharkhuu (researcher, geo-cryology)

Geo-ecology Institute of Mongolian Academy of Sciences

Southern areas of Siberian region are located on territory of Mongolia. To them concern basin of lake Khubsgul, Orkhon-Selenge, Khentii a mountain. In orographic the attitude (relation) the Khubsgul basin is located between on northern aspect of East Sayan, in the south of offshoot Khangai, on west of mountain system Tuva and on east of Baikal mountain area. Khubsgul concerns to basin of Arctic Ocean and adjoins to basins Baikal, Angari and Enisei. [5]

On territory of this region natural complexes in a large degree degraded and the industry strongly pollutes natural environment. The Greatest infringements give emissions to air the enterprise Irkutsk, Angarska, Usolya-Siberian, Shelekhova, Ulan-Ude. First of all it is the enterprises heating energy sector, chemical and petrochemical industry, color metallurgy.

The most influence on ecosystem of Southern Siberia render South and North-Baikal, Gusenozer, Kyakhtiya, Down Selenge industrial junction, heating power station of Ulan-Ude ,Ulan-Ude an airfactory, and organization "Buryatnephtproduct".[4]

Basic pollutants for air basin are the stationary source is located on an industrial object.

Agricultural the manufacture in South-Siberian region renders influence on air, water and in the greatest degree ground resources. Process of decrease (reduction) of soil fertility proceeds, that is caused number (beside) of the reasons: is not compensated carrying out nutritious of substances, terms, methods of processing of fields are broken, are not observed rotation of crops.

Not looking on the fact, that pasture load has decreased in comparison with 1991 on 70-80 %. Alongside with it there is the problem of accommodation of cattle on territory. Is observed intensive degradation of vegetation cover and development erosion processes in places, which is living concentration animals. Require (demand) pasture radical improvement.

Except gold mining product an industry the large role in pollution of an environment on territory South-Siberian of area is played by (with) production quarrying coal. It is connected

first of all to infringement lithosphere, when at production by an open way will be formed technogenic landscapes.

The ecological conditions in sphere and agriculture of this region require (demands) permanent monitoring, rational land use and necessary investment.

In this region alongside with proceeding deterioration of quality of an environment, continues to be worsened health of the population, which is an aggravated and Socio-economic factor.

The South-Siberian region is located on territory of Mongolia to belong high mountains to regions, that is to the most cold regions. Almost northern half of Mongolia is occupied continuous and islands region of permafrost. (fig. 1)

Global warming of a climate results (brings) to change a rule (situation) of borders permafrost, that strongly influences duration vegetative season (growing season) of various kinds pasture of plants, and also on dispersion of their distribution.

Are used 5 geocryologic regions: continuous, faltering, island, rary island, sporadic. All as a whole occupied permafrost 63 % of the all territory Mongolia.[2]

The author has made an approached estimation for change of territorial distribution permafrost in Mongolia at the various scripts of possible (probable) change of a current climate. For this purpose I used 2 indexes (parameters): air and soil permafrost an index. [1] Calculated factors correlation between average annual in temperatures and sums positive and negative temperatures and has constructed the regression equations. Further with the help of the received regression equations, found out new meanings (importance) for two indexes at increase or decrease long-term average annual temperature of air and has defined(determined) new expected rules(situations) of borders for permafrost regions.

On new received meanings (importance) soil permafrost an index has made the following conclusions for expected change of borders for permafrost regions.

- At reduction of air on 2, 4, 6 degrees accordingly the borders for permafrost regions moves for south 160,340,600 km.
- At increase temperature of air on 2, 4, 6 degrees accordingly the borders for permafrost regions moves for the north of 90,200,250 kms.
- At cold spell of a climate raises soil permafrost an index, and at warming on the contrary. [1]

Knowing expected rules(situations) of borders for permafrost regions at cold spell or warming it is possible to make the new specifications for building, service railway and highways and other branches of a national economy or condition ecosystem .

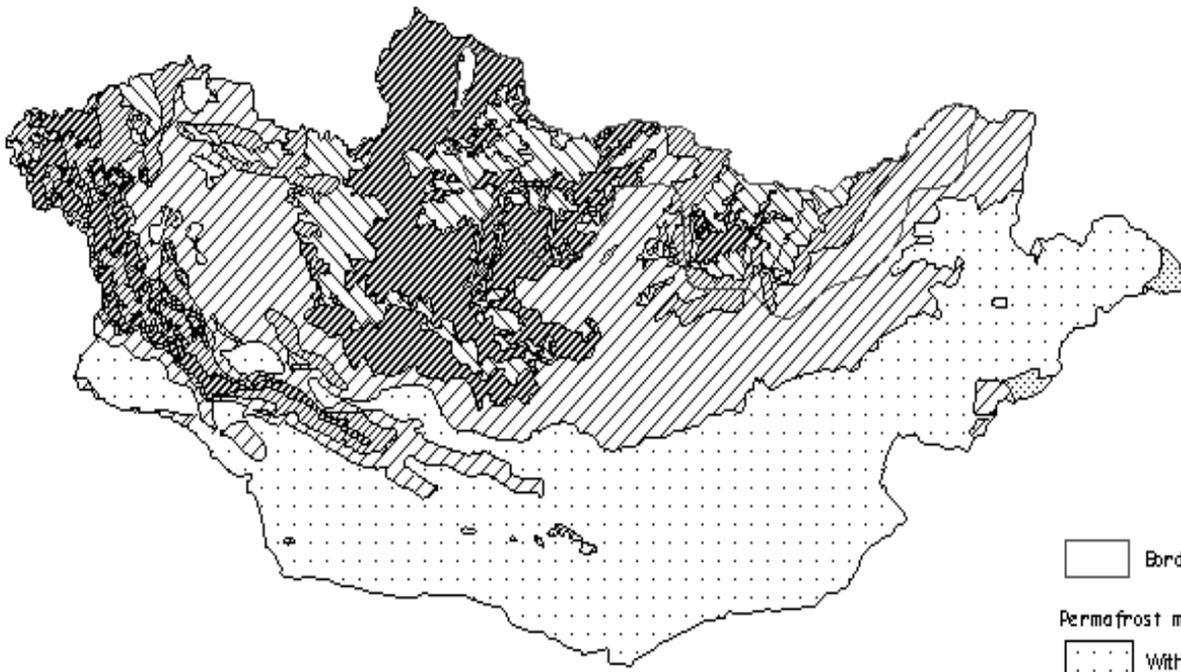
Possible (probable) distribution of permafrost region are certain (determined) on the basis of change of main permafrost region. [3,6] (0àà.1)

The future tendency of permafrost distribution of Mongolia not only for northern area of the country, but also for a southern part South-Siberian region that is such forecast permafrost is existing for a southern part South-Siberian region.

On the basis of the specified tendency of permafrost distribution is higher it is possible to define(determine) other factors, which influence on change ecosystem for South-Siberian region.

REFERENCES

1. B.Gantsetseg " Influence of change of a climate of Mongolia to permafrost distribution ", UB, 2000
2. The Geocryologic condition of Mongolian National Republic, 1975
3. R.Mijiddorj, P.Ochirbat,Sh.Bayasgalan, Kh.Khairat, " Ecology- Sustainable development", 15, UB, 1999
4. B.S.Molotov, B.B Shaibonov, A.N Denisova " Cleaning water of Buryatii" 1997
5. N.Sodnom, N.Ph Losev " Envoronmental condition and resources in surrounding area Khubsgul of Mongolia", Moscow. 1976
6. D.Tumurbaatar. Seasonaly land perennially frozen ground around Ulaanbaatar, Mongolia. " In abstracts of 7-th international Conference on permafrost ". Yellowkift, Ganada.pp.202-203



-  Border of South-Subur in Mongolia
- Permafrost map of Mongolia
-  Without permafrost
-  Seasonally permafrost
-  Sporadic
-  Rare spread island
-  Island
-  Wide spread island
-  Discont inuous
-  Cont inuous

100 0 100 Miles



PERMARFOST MAP OF MONGOLIA