

POST SOVIET PROCESSES OF LAND USE TRANSFORMATION IN SIBERIA

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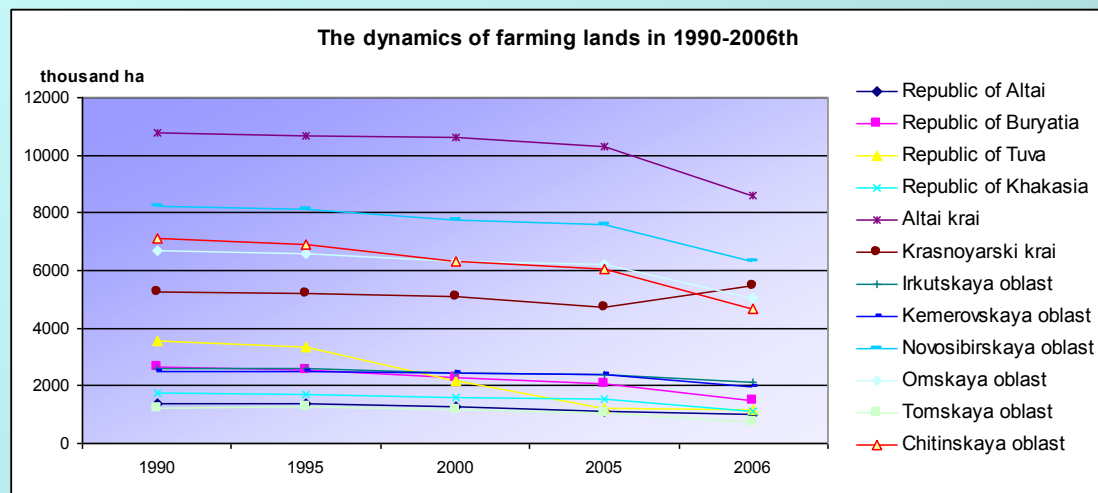
Barnaul, Russia

Geographical location of Siberian Federal District in the Russian Federation

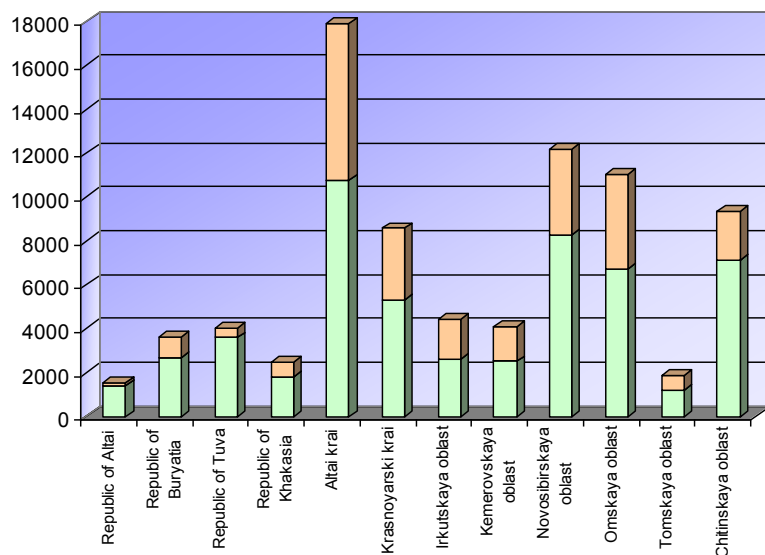


Siberia - nearly 40 % of the Russian territory, 13,8 % of population and 23 % of farming lands where 13 % grain, 18 % potatoes, 12 % vegetables, 8 % fruits and berries, 15 % meat, 18 % milk, 15 % eggs are produced (mostly in south-western regions, i.e. Altai Krai, Omsk, Novosibirsk, Kemerovo)

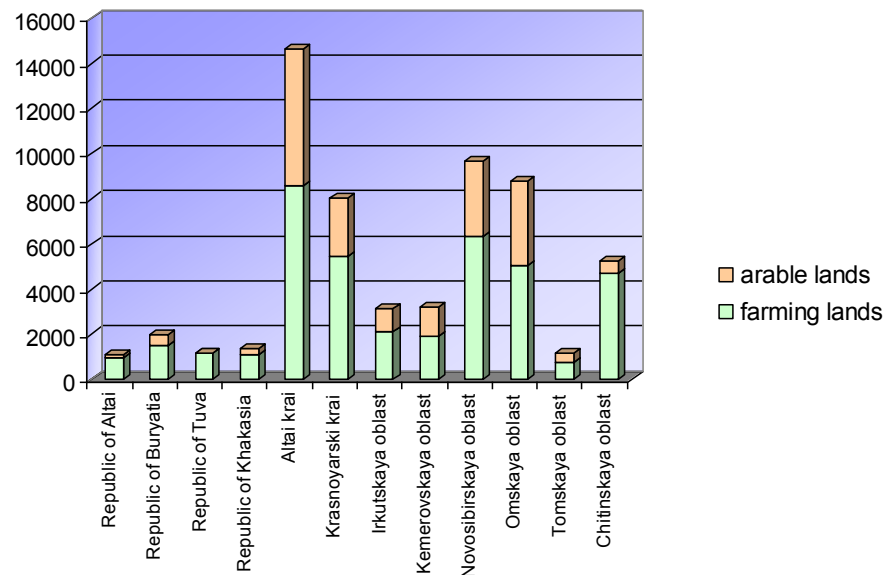
Extensive reduction in farming lands and arable lands (particularly in the border mountainous regions - Altai, Tuva, Buryatia and Zabaikale) is observed.



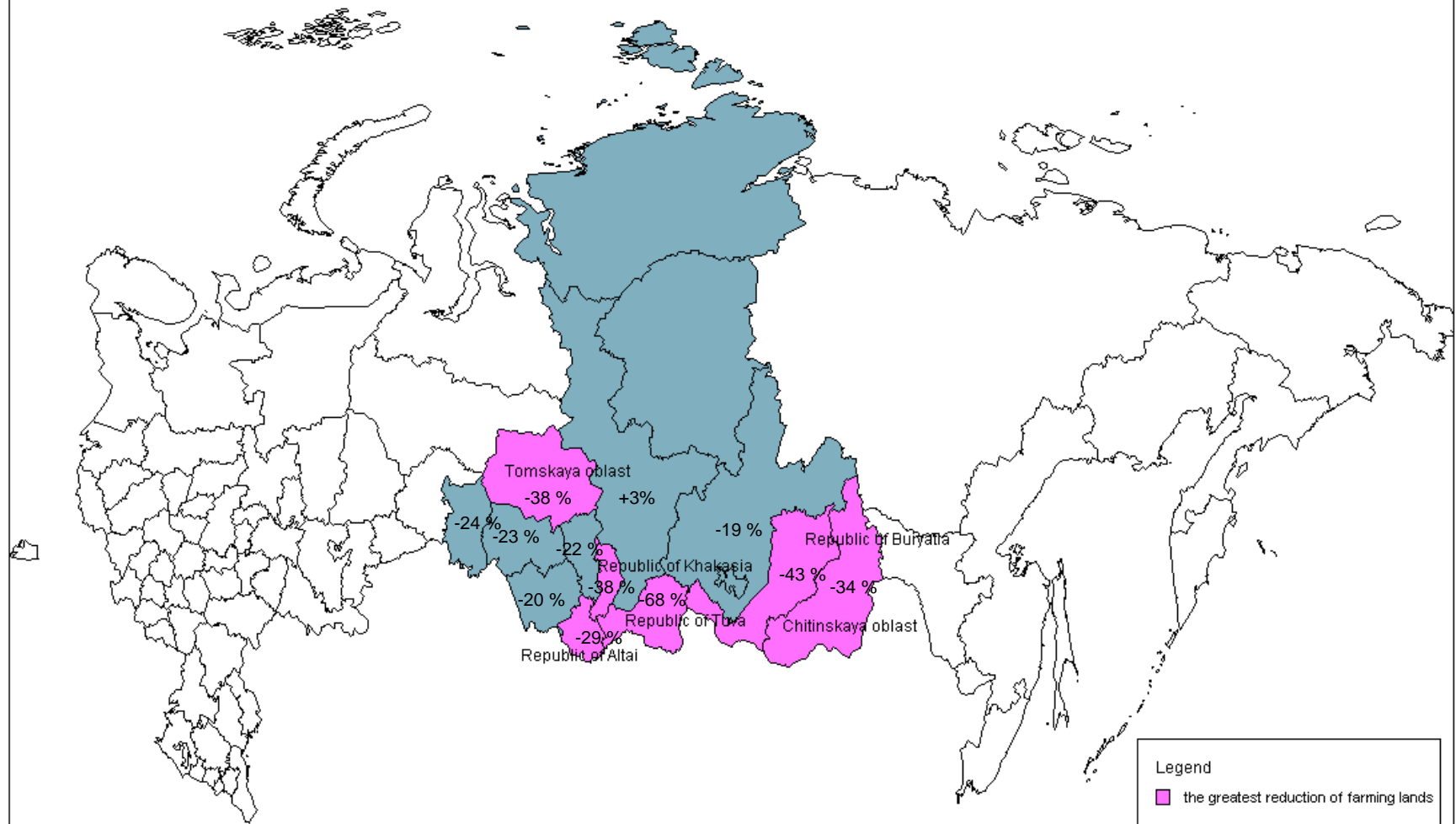
Area of farming and arable lands (thousand ha) in 1990th



Area of farming and arable lands (thousand ha) in 2006th



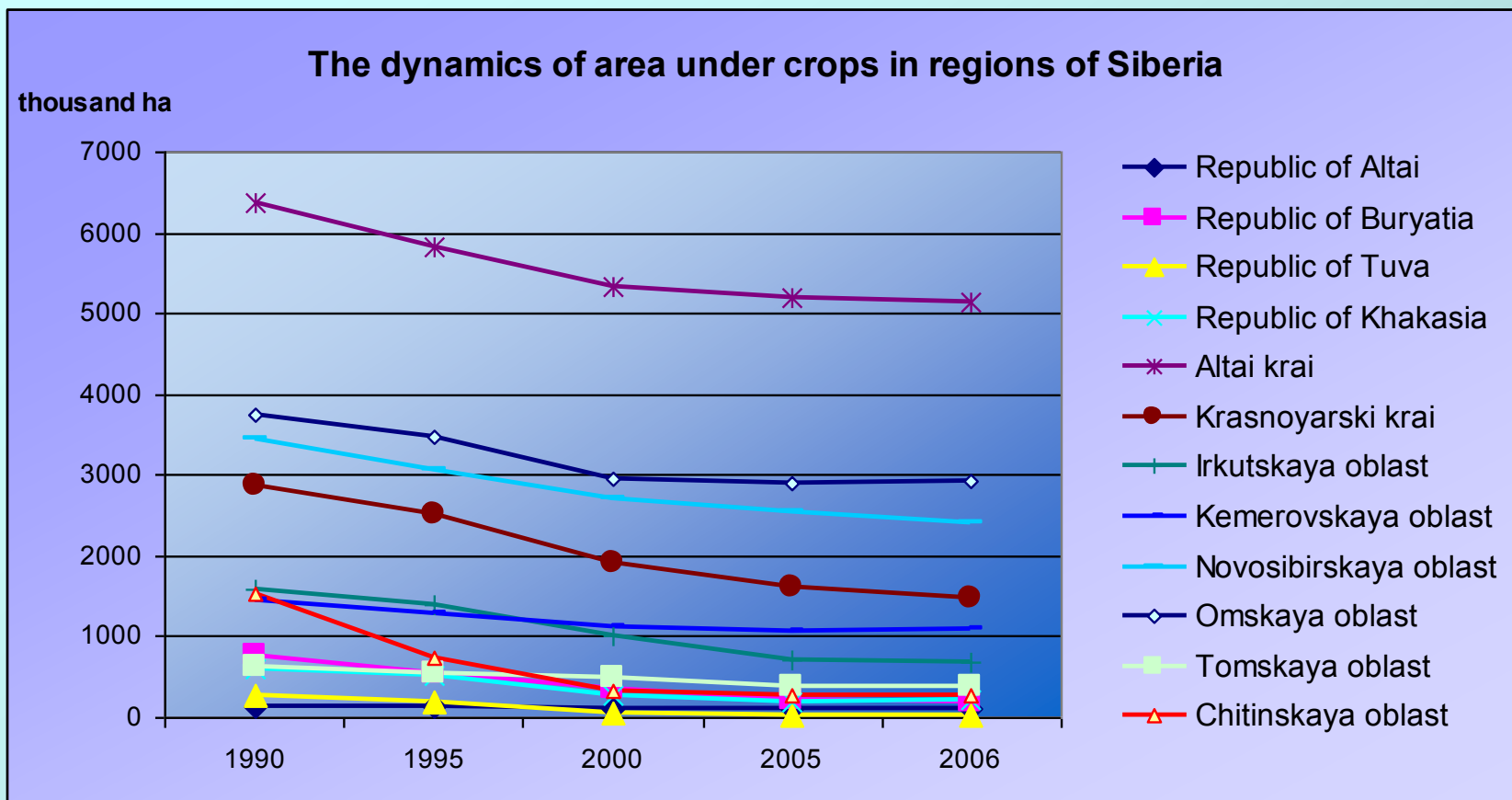
The reduction of farming lands



The share of an area under crops from the arable lands

	1990	2006
Siberian federal district	86 %	75 %
Republic of Altai	98	99
Republic of Buryatia	80	42
Republic of Tuva	65	44
Republic of Khakasia	82	78
Altai krai	90	85
Krasnoyarski krai	88	57
Irkutskaya oblast	86	65
Kemerovskaya oblast	91	85
Novosibirskaya oblast	88	72
Omskaya oblast	86	78
Tomskaya oblast	92	88
Chitinskaya oblast	69	51

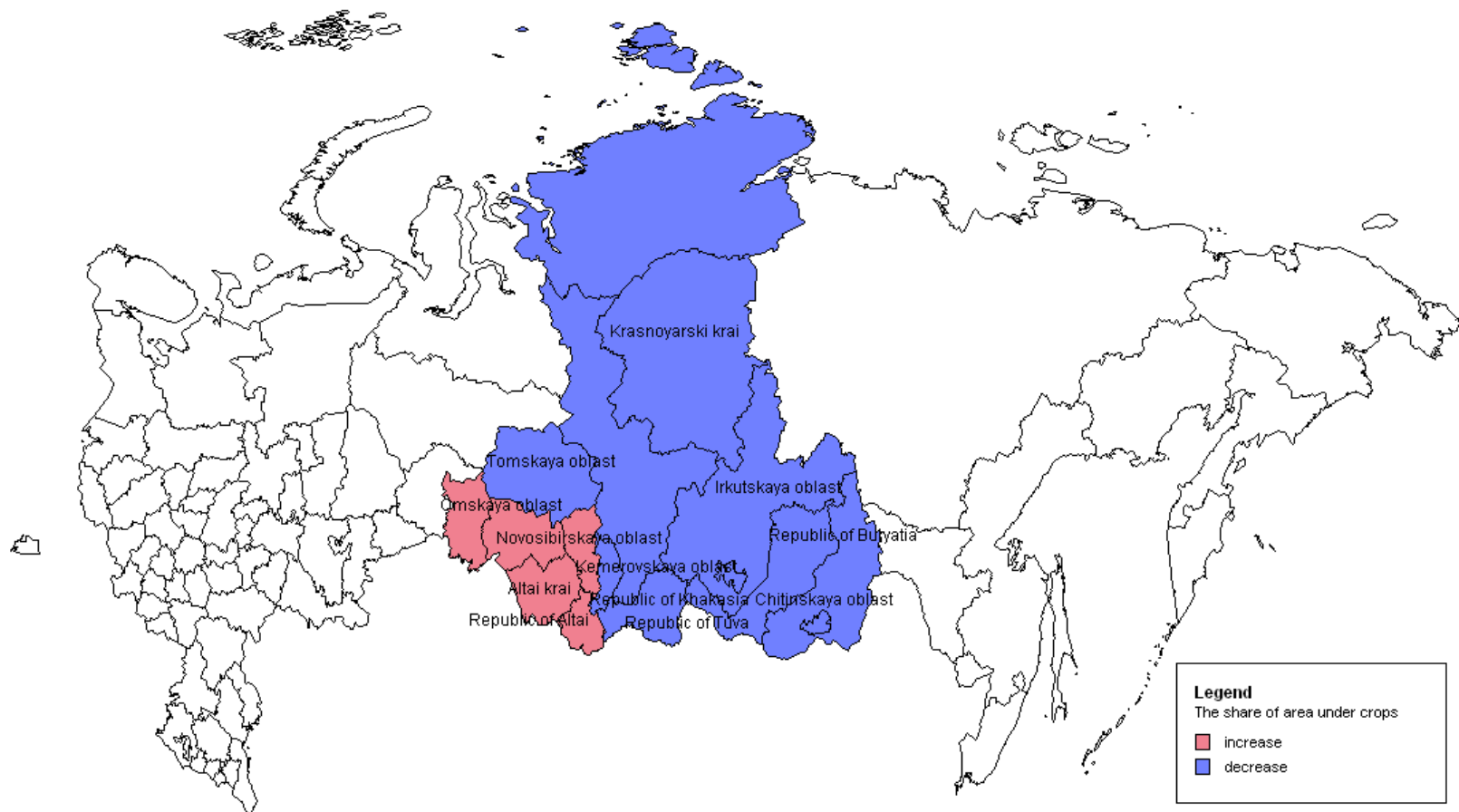
In the 1990-2006th the share of unused arable lands has increased practically in all regions of Siberia and in some it compile about 50 %, for example, in Tuva, Buryatiya, Krasnoyarsk krai the area under crops share is equal 44, 42 and 57 % from the arable land area, accordingly.



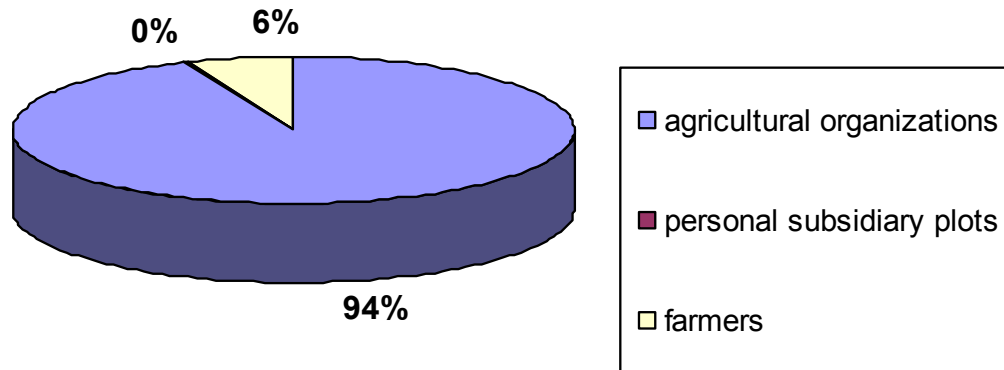
There were changes in structure of areas under crops. As a whole in Siberia the areas of grain, sugar-beet were reduced, crops of sunflower, long-fibred flax, potato and vegetables (in comparison with 1990) have increased.

With reduction of absolute values of areas under crops their shares from the all-Siberian indicators in southern agricultural regions of Siberia (Altai Krai, Omsk, Novosibirsk, Kemerovo Oblasts, Republic of Altai) have increased.

**The dynamics of share of area under crops in regions from area under crops in Siberia
(1990-2006)**

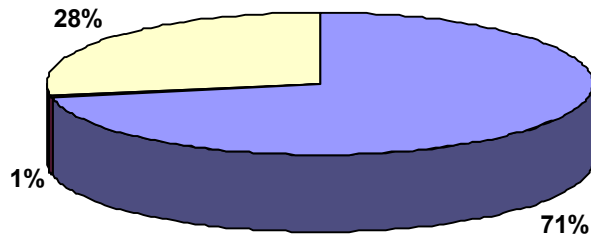


**Structure of grain's production in farm's categories in
Siberia in 1995**

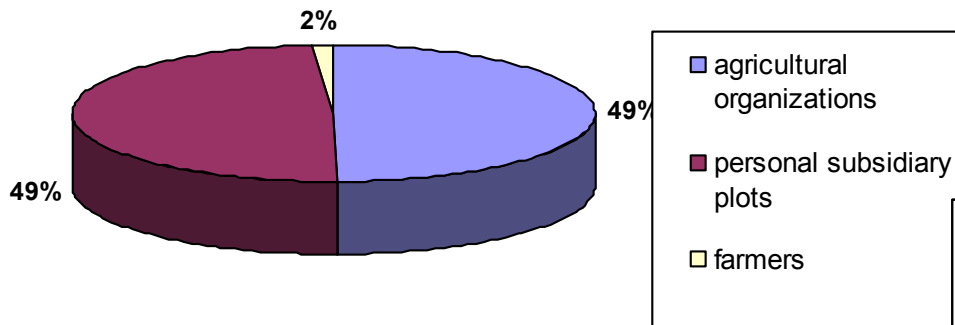


In 1990th years there were considerable changes in agricultural production on categories of farms: the role of farmers and personal subsidiary plots has increased, the importance of the agricultural organizations has decreased.

2007

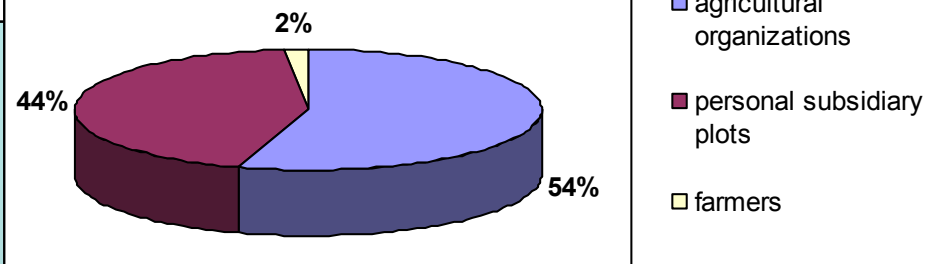


Structure of cattle and chicken farming for slaughter in Siberia in 1995

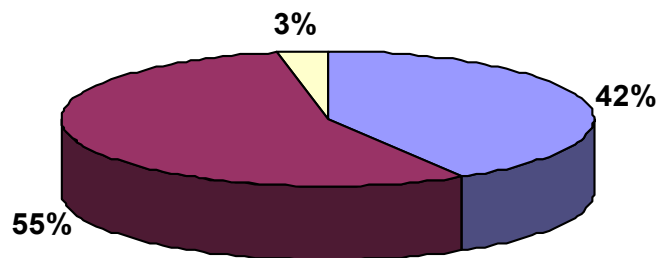


Cattle-breeding production for years of reorganization was displaced in personal subsidiary plots.

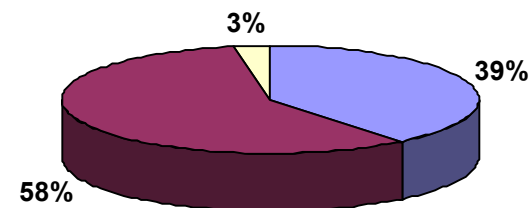
Structure of milk production in Siberia in 1995



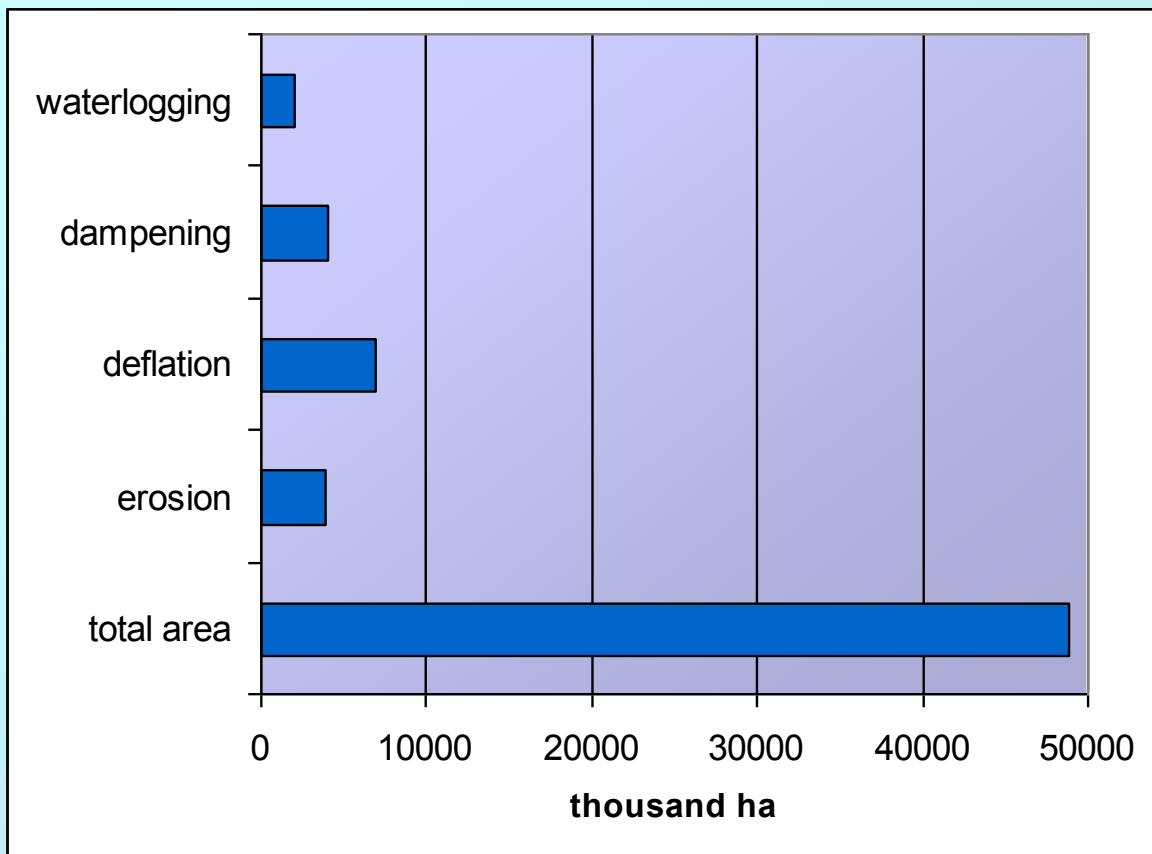
2007



2007



Qualitative state of farming lands in Siberia in 2006th



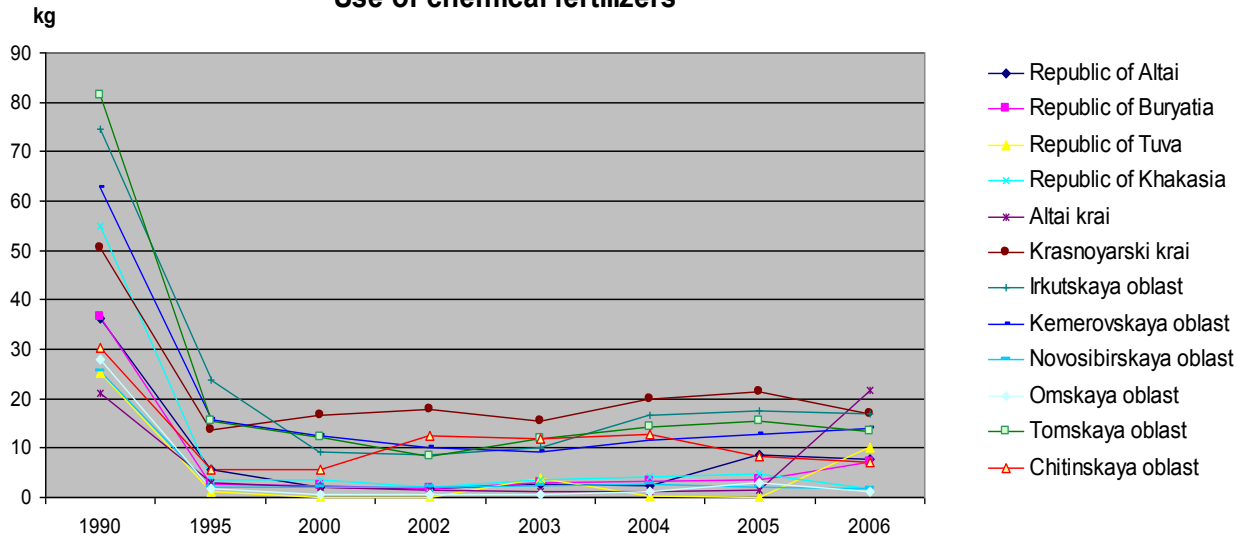
Along with reduction of the areas worsen the qualitative state of lands owing to decrease in volume of agrochemical works: the share eroded, deflation lands have increased, and processes of salinization of soil, a bush have amplified.



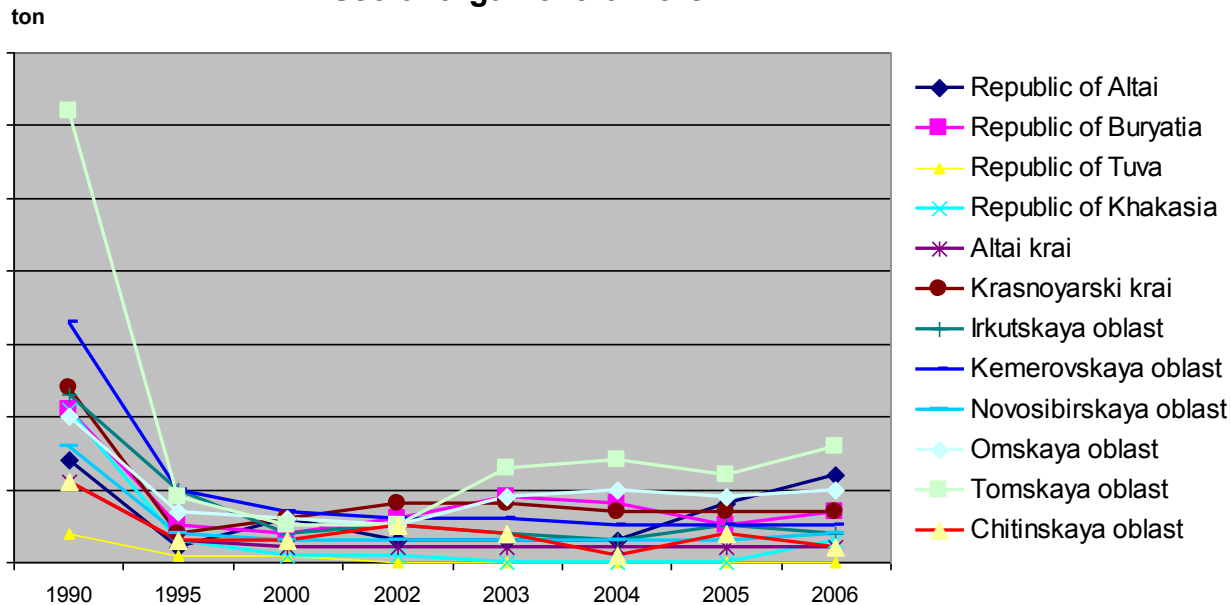
Degradation processes of lands in Altai krai



Use of chemical fertilizers

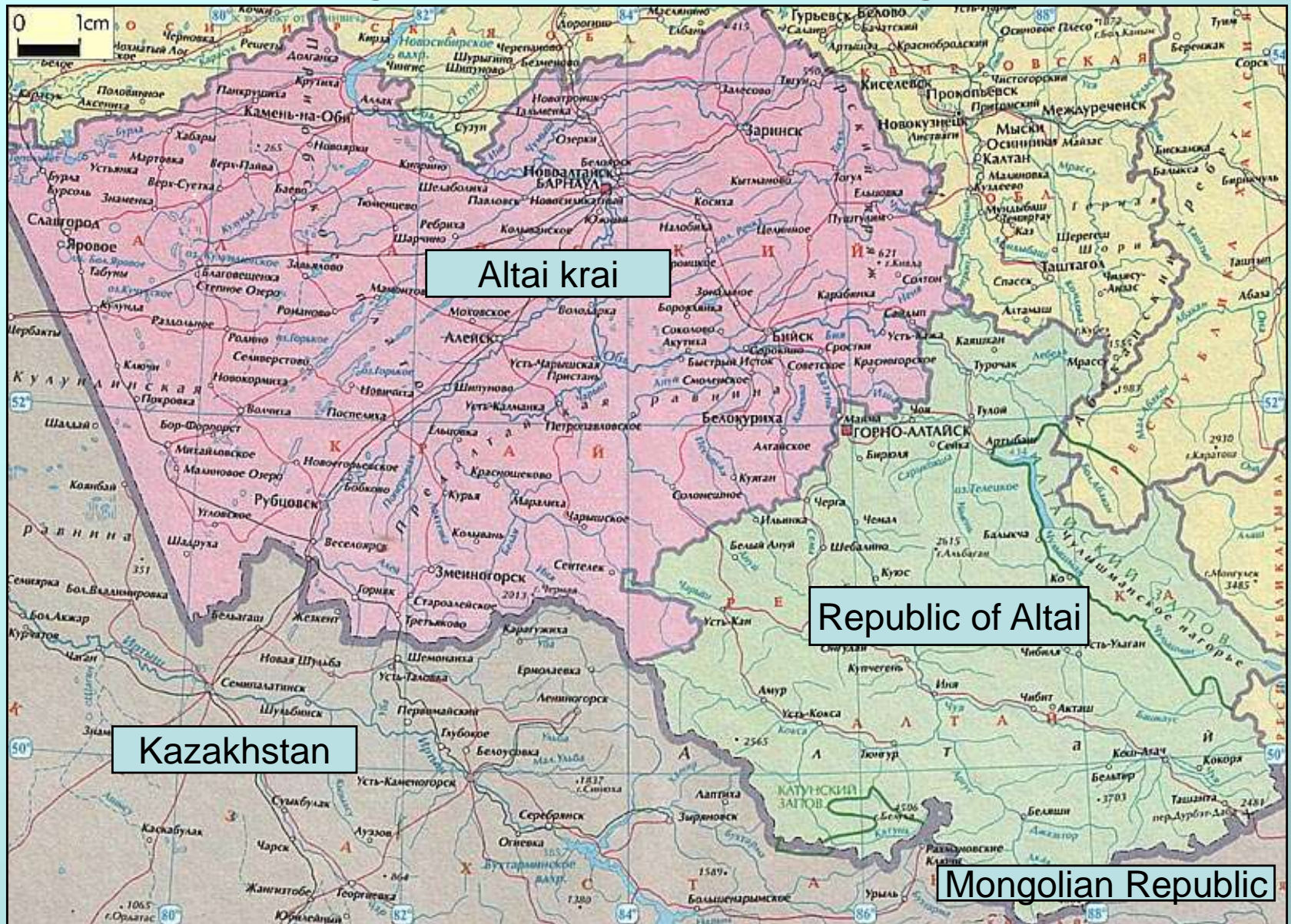


Use of organic fertilizers

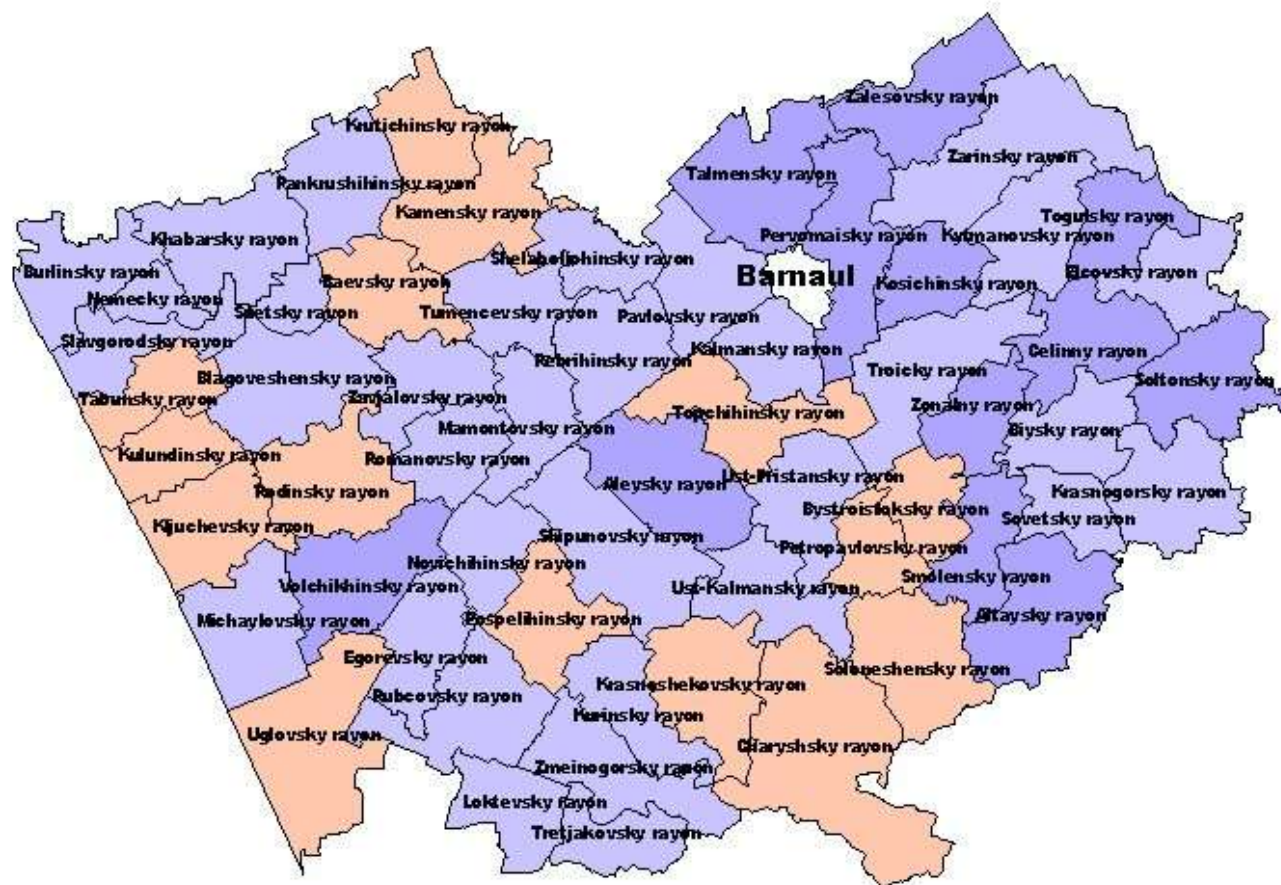


For 1990th years application of fertilizers has considerably decreased. So, entering of chemical fertilizers into 2006 does not exceed 10 % of level of 1990 in Republic Khakasia, Novosibirsk, Omsk Oblasts, and in other regions of Siberia – no more than 40 %. The same situation and with entering of organic fertilizers.

Geographical location of Altai regions



The change of farming lands area in Altai krai

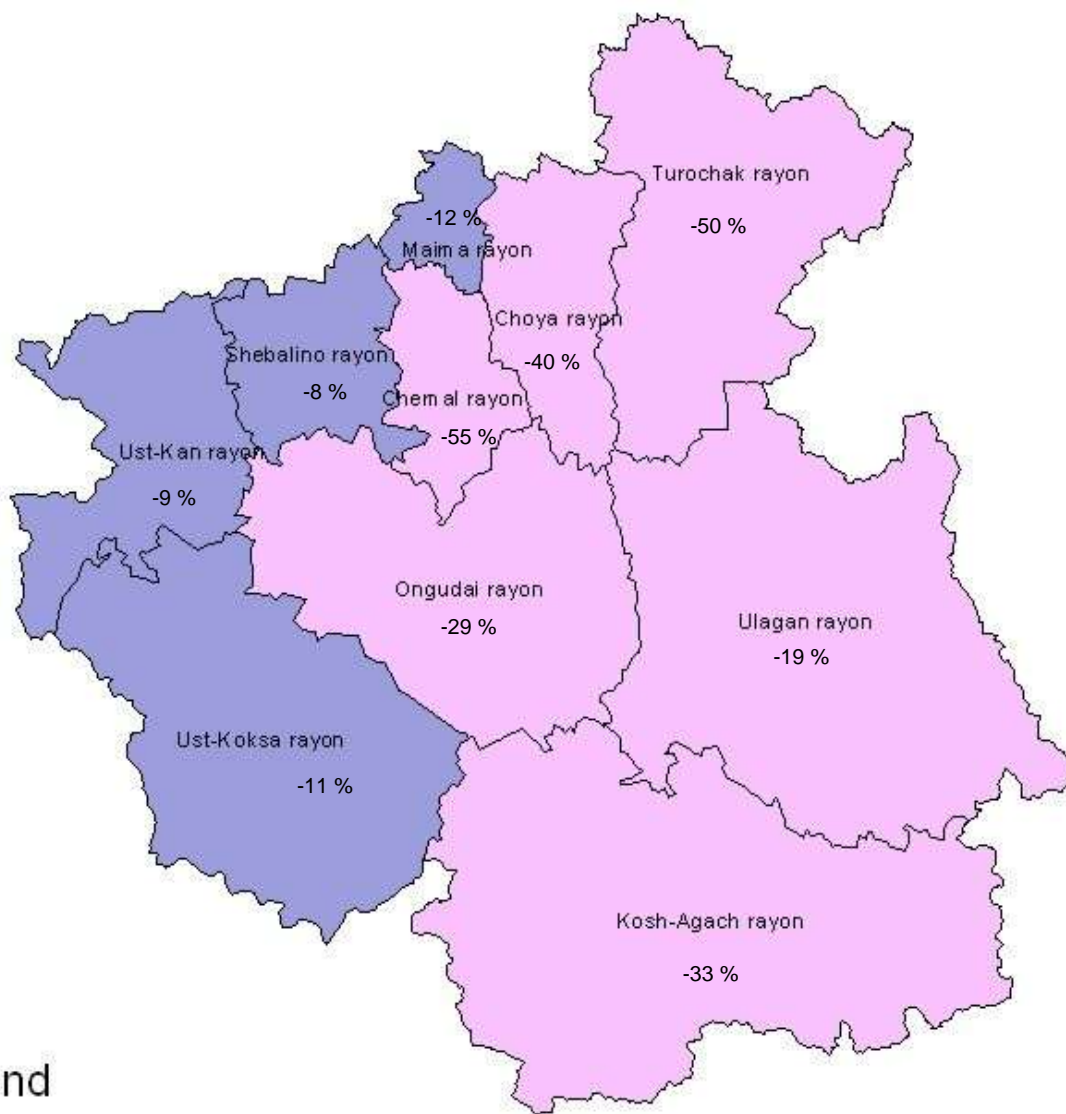


Legend

- increase of farming lands
- reduction of farming lands
- the greatest reduction of farming lands

During 1990-2007 processes of change of structure of land use passed in areas of Altai Krai not equally. In the majority of districts there was a reduction of the area of farmland, the greatest – in districts of a forest-steppe zone of Krai. In 15 districts the area of farmland has increased: basically it is districts of a steppe zone of Krai. But the greatest increase (more than 5 thousand in hectare) was observed in foothill and mountain districts.

The reduction of farming lands in Republic of Altai

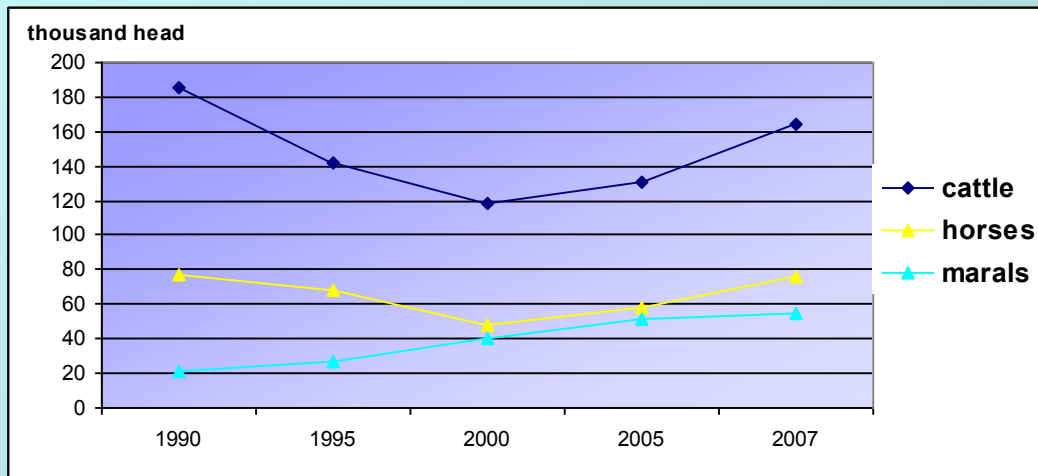
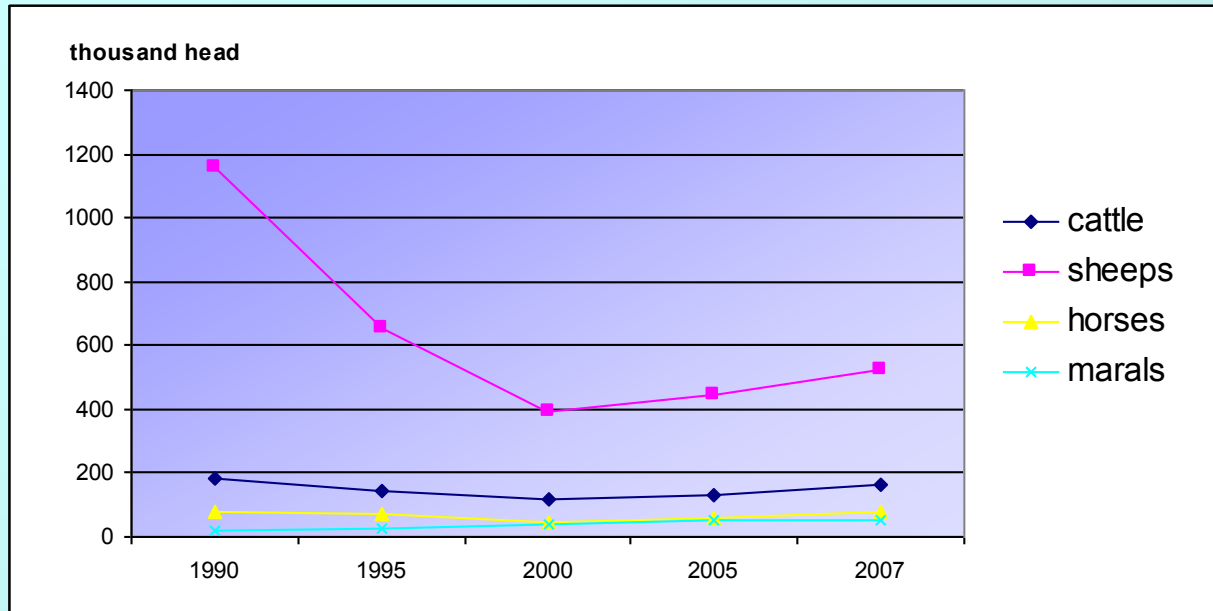


Legend

 the greatest reduction of farming lands

1990th years in Republic of Altai are characterized by disorder economically not effective from positions of mountain territories of branches and methods of managing, basically it is connected with liquidation of the large agricultural enterprises, reduction of a livestock of cattle, mainly, sheep and goats, and production of forages. The area of farming lands was reduced for 1990-2007 to 408 thousand in hectare, croplands – on 22 thousand in hectare. Reduction of farming land has occurred in all districts of Republic Altai, the greatest – in 6 districts, it is less reduction in north-western districts of republic (Majminsky, Ust-Koksinsky, Ust-Kansky, Shebalinsky), more suitable for agricultural development.

Dynamics of a cattle head in Republic of Altai



Livestock population in economy of all categories was reduced for 1990-2007 to 21 thousand head – the livestock of sheep and goats was especially hardly reduced to 634,2 thousand head (in 2,2 times). The livestock of marals, on the contrary, has increased: in 2,6 times – 54,4 thousand goals. There is an integration and formation of new parks for the contents of marals. Also it is completely not positive tendency. In many areas the situation is close to an upper limit on size of ecological loads of cattle.

Special economic zone of tourist type in Republic of Altai «Altai valley»



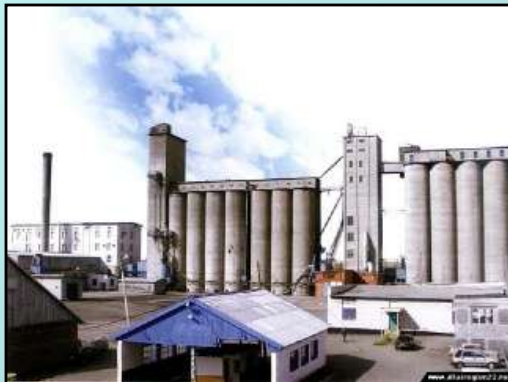
Special economic zone of tourist type in Altai krai «Birysovaya Katun»



Mountain Altai



Steppe Altai



Thanks for attention!

