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## THE LAND UTILIZATION IN ALPINE REGION OF BOHINJ

The land utilization in the Alpine mountainous regions is affected in the first place by the specific physical-geographical features of the mountainous space, with all its, for economy unfavourable, characteristics (intensive relief, mountainous climate, big differences in the altitude, scarce flat surfaces). In addition to the natural factors, the land utilization reflects the whole historical heritage of the economic development achieved by the population in order to satisfy the existential need in the particular area.

The markedly Alpine basin-shaped region of Bohinj can serve as an example to illustrate the use of land as is characteristic of the entire Slovene Alpine territory, at least as regarding the natural conditions! and at the same time this small example allows us to trace the social-economic process of the development going on with specific differences according to the micro-regions of the area under consideration.

The population which has grown in number during the last centuries in this closed-in Alpine basin has relied predominantly on agriculture. The lack of non-agrarian activities has entailed the fact that until very recently the structure of the population has remained almost wholly agrarian. The growth of the population was causing only a social differentiation: within the frame of the agrarian population we get beside smaller farms also peasant cottages. In the agrarian land we get an increasing inclusion of less favourable surfaces, mostly those where forest was cut out in the higher slopes. The process of land parcelling is also under way.

In 1820, there was in this mountainous basin which comprises 304 square kilometres 2,3 % of fields, 11,1 % of meadows, 33,6 % of pastures, 40,9 % of forest and 12,8 % of unproductive land. Most of this land, i. e. 81,5 % of it, was in the hands of gentry: particularly forest, pastures, and the unproductive land; the land belonging to the local authorities comprised similar categories and took up 4,9 % of the total. Tillable land belonged for the most part to private landowners. The total of tillable land was 13,5 % of the entire surface, and 98,8 % of the tillable land, for the most part fields and meadows, was owned by altogether 691 landowners who represented different land-ownership groups. A good third of them owned up to 3 hectares of land, half of them 3 — 5 hectares, and a weak fifth of them represented a very strong group, owning more than

10 hectares. The average farmhold in this last group owned an average of 13,5 hectares of land. Since the land was strongly parcelled up between individual owners, it could not offer an existential minimum to large families; for this reason the peasants made common use of the pastures owned by the gentry and also enjoyed the right to cut wood in the forest and to use forest as pasture-ground. A special type of farming economy has emerged and this type is characteristic of the entire Alpine territory — the highlands economy. The essence of this economy is the organic connection of the cultivated surfaces in the valleys with the highlands pastures high up in the mountains into one economic unit. The peasants send their livestock during the summer into the mountains for pastures, while the grass is made into hay in the valley and kept as fodder for the winter months. And the flat surfaces in the valleys are used as fields for growing food crops, so that farmers can successfully produce everything they need. This was the economic rule in every farmstead, irrespective of its size.

In the past century this area underwent changes in the ownership of land which effected the landownership structure. The farmers received individual lots of forest in exchange for the obligation to use a given amount of wood. This has meant an increase in the size of the average farmstead: from 5,8 hectares to 9 hectares, and in the highest landownership group up to 18,4 hectares. At the beginning of the present century, farmsteads had grown in number through the division of so far commonly owned village pastures. All these changes, however, in no way affected the manner how farming was run; farming economy continues to be based on the one hand on the poly-crop self-sufficient agriculture including in the production every flat surface, no matter how parcelled up and dispersed, and on the other hand on breeding livestock in the highlands, using all grass land from the meadows and common pastures and in the valleys to the slopes and pastures high up in the mountains, thus producing meat and milk products. Such combined farming requires a lot of farmhands.

The railway which opened traffic through this mountainous valley launched emigration out of this agrarian over-populated area. The post-war social economic changes caused a social differentiation of the population: the population of this out-of-the-way places has now come within the gravitation area of the industrial centre of Jesenice.

Occupational changes in the population gave rise to de-agrarization processes which have varying consequences in the micro-regions of Bohinj and are reflected also in the land use. The parcelling of land started at the end of last century, continued; by 1961 the number of landowners rose for 25%, to a total of 864. Land categories as well had undergone strong changes. The total size of field surfaces had decreased by 19,6%, of meadows by 13%, of pastures by 33,6%; the size of forest surfaces did not change significantly, but a more precise definition of the unproductive land in the mountainous area led to as much as a 62% increase of this category. The individual land categories today occupy the following sizes in percentage: fields — 1,9%, meadows — 10,1%, pastures — 27,5%, forest — 42,9%, and unproductive land — 22%.

The present-day agrarian utilization has remained to a very large degree self-sufficient. No essential changes were brought into the manner

of land cultivation, as the mountainous relief and the overparcelling of land make mechanization impossible, and consequently very rare. The shortage of labour has brought about worsely felt consequences: fields, particularly those of poorer quality of less closely at hand are being abandoned. In the highlands all of the fields have now been abandoned, and the same thing is happening to fields in the valleys which are not near the village of which are situated on slopes.

The settlements lying from 900 to 1000 metres above sea level — Koprivnik, Gorjuše, Podjelje, all them not easily accessible by traffic — are now under a process of depopulation, hence the shortage of labour and the abandoning of fields. In spite of everything, the old population sticks to the poly-crop agricultural orientation with all kinds of cereals. But because the territory lies high up, we do not come across maize. A significant feature here is the fact that some fields are left as meadow for 5 to 8 years, after which they are ploughed and used for a couple of years again as fields.

The upper valley of Bohinj, the present agrarian nucleus of Bohinj, is suffering from the same processes, yet labour, although daily migrating to work in industry, stays at home. In the agriculture we witness a moderate poly-crop-system, but some cereals have been left out, while barley and maize are gaining prominence in the 4-year rotation: first year — cereals (barley), second year — clover, third ear — maize, fourth year — potatoes. Yet we notice here a number of abandoned fields, particularly in the first highlands. The upper valley has firmly stuck, on the other hand, to the highlands economy, traditionally broken up over numerous small highlands with a mixed structure of livestock and the production of cheese.

The lower valley of Bohinj is most strongly affected by the industrialization outside Bohinj; as it is most easily accessible by road or railway, the deagrarization is at its strongest. Abandoned fields are by now a phenomenon common to the whole of Bohinj. The number of food plants has here become even smaller, the growing of barley is on the decrease, and maize is disappearing. It is only potatoes, vegetables and fodder plants that come into the foreground. This is the typical agricultural orientation of Bohinjska Bistrica, the settlement which is most deagrarized and which has its production adapted to the needs of the mixed family. The growing of fodder plants has risen especially.

A marked retrogression in the valley is to be noticed in the highlands economy that is changing into the stables economy. The agricultural orientation of the whole of Bohinj can be illustrated by the data for 1960: 25 % of the fields sown with cereals, 26 % with clover, and 41 % with either potatoes or maize. The population spontaneously tends to sow more and more of the fodder plants — this being imperative in view of the shortage of labour. The process is being oriented towards a system of meadows and pastures which is — with appropriate intensification — the most successful system in the mountainous regions. With such a system the percentage of fodder plants might rise to 50 % of field surfaces.

The fodder basis continues to be the weak point of the Bohinj farmers; hence in the past the changing of pastures into meadows. Today it is in this very category that we can observe the characteristic effects of the deagrarization processes. Cleared land high up in the mountains (2 to

3 hours of walking from home) can no longer be intensively utilized, so this land is getting overgrown, with grass unmown. This is a typical social geographical indicator, for we can see that individual grass surfaces, although poorer, continue to be well-utilized if in the hands of a stable agricultural family. Unmown clear land is mostly that which is owned by deagrarized or old family.

The highlands breeding of livestock, the traditional economic basis of the Bohinj farmers, is likewise undergoing large changes related to the degree of deagrarization. At one time in the past, 90% of all livestock went during summer into the highlands; in 1963 only 50%. In the Upper valley the corresponding figure is 62,3% or 30% in the Lower valley, respectively. This brings very well out the difference between the Upper and the Lower valley. The number of heads of livestock has not significantly changed in the recent years. The Lower valley has acquired new fodder basis on the abandoned fields, with growing of clover, and has accordingly partly changed over to stables economy. This was made imperative also by the administrative measures of the foresters who have forbidden to use forests of pastures and to grow cattle on some of the highlands immediately below the forest boundary. But these were minor and not particularly good highlands. The problem of people working in the highlands is becoming an urgent one. In the Upper valley the fodder basis could not be expanded in the valley; pastures in the highlands are here of essential significance and this is why the highlands system remains intact, which at the same time means not rationalized: everything is done as it was long ago. On the one side it is threatened by the problem of herdsmen, on the other by the low profitability of the cheese-producing units, maintained by the Farmers' Co-operative. In the past, Bohinj as a whole had 46 highlands, now it has only 29; cheese is produced only on 19 of them, of these in the Lower valley only in two. By building a central cheese-dairy at Srednja vas, the producing of cheese in individual highlands has been given up, milk is now brought down into the valley.

The whole of the agrarian utilization in Bohinj shows no particular signs of modernization or specialization; the impediment for this being the parcelling of land additionally the deagrarization. On the other hand, the farming continues to bear the stamp of tradition and owing to its inability to make investments sticks to the old manner of farming economy.