

ENVIRONMENTAL ECONOMICS AND MODERN ENVIRONMENTAL ISSUES

**Pytuliak M. R., PhD in Science (Geography),
Associate Professor**

**Pytuliak M. V., PhD in Science (Geography),
Associate Professor**

*Ternopil Volodymyr Hnatiuk National
Pedagogical University
Ternopil, Ukraine*

DOI: <https://doi.org/10.30525/978-9934-26-036-0-23>

ECOLOGICAL AND ECONOMICAL ASPECTS OF USE OF LAND RESOURCES POTENTIAL OF TERNOPIL REGION

The land is one of the greatest natural resources that provides human life. It is both part of the natural environment and the subject, tool and means of labor in agricultural production.

As noted by D. Hutsuliak "...from an economic point of view, land resources are a set of land, reflecting the form of land use as a means of production and the nature of employment (economic-target or other function)" [3, p. 52].

The land resources in Ternopil region are the main component of potential of natural resources, and according to Rudenko's data, its share is 75%.

The purpose of the study is the efficiency of land use potential of Ternopil region and its ecological condition.

To analyze the use of land resources both physical indicators and cost indicators are used. The peculiarities of the land usage in different districts of the region are based on its analysis.

Both industry performance of the land usage and resources in total display the two aspects of the land usage – pattern and efficiency.

The criteria which tell the way of using lands in agriculture are: structure and correspondence of agricultural lands, the area of intensively used lands, the structure of cropped lands, and commercial state of the lands [2].

The efficiency of using the potential of land resources shows the agricultural production factor for one citizen in all the categories of farm units.

The basis of land reserves of the region is agricultural lands 1048.2 ha (75.7%), forest and forestry – 2017 thousand ha (14.6%), lands used for building 63.6 thousand ha (4.6%), swamplands – 5.9 thousand ha (0.4%), covered with water 19.3 thousand ha (1.4%), covered with lakes, ponds and artificial lakes – 9.9 thousand ha [4].

As components of agricultural lands the plough lands make 81.8%, which states the high level of ploughness not only of the territory in the region but agricultural lands as well. The area of the plough lands tend to decrease as we are moving towards the west and the north of the region because of the land forms there. In the north of the region this number is lower – 71...77%. The highest number of agricultural land ploughness is in the central and southern parts of the region – more than 80% Maximum number we can see in Chortkiv (87.9%), Husiatyn (87.9%) and Pidvolochysk (87.5%) administrative regions. The lowest point is in Berezhany district (66.0%).

The efficient usage of land is when the maximum quantity of agricultural production is received from the area unit at the lowest rate of labor inputs.

The efficiency of farming system can be shown by physical indicators and cost indicators.

The physical indicators define the efficiency of the particular part of agricultural lands, however cost indicators show the efficiency of the whole area. These groups of indicators may be calculated for one hectare of physical area as well as taking into account the money value of the hectare of the agricultural lands, which shows the economic productivity. The first indicator tells about the actual level of the land usage without taking into account its quality, in the second one the results of farming are estimated objectively [1].

The following indicators are used to analyze the efficiency of land use potential of Ternopil region: production of agricultural products (total amount and per person), production of basic types of agricultural products per person.

In 2015, the region produced agricultural products in all categories of the economy the amount of which is 8145.8 million UAH, which is 3.4% of the total agricultural production in Ukraine. In recent years, there has been a tendency of increasing agricultural production in the region. In 2018, it amounted to 9836.6 million UAH. The part of the region in the total production of agricultural products in 2018 was 3.7%, including crop production – 3.8%, livestock – 3.2% [6]. During the last 10 years, the structure of agricultural production is dominated by crop products (Fig. 1).

The same trend is observed for the production of gross agricultural output per person. In 2010, this figure was 6740 UAH and in 2014 – 8557 UAH. In 2015, it decreased and amounted to 7629 UAH (for comparison in Ukraine – 5589 UAH), in 2016 it amounted to 8023 UAH [6].

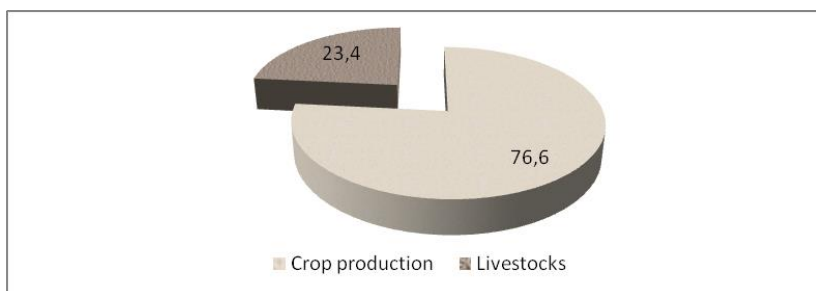


Figure 1. Agricultural output of Ternopil region (%)

The efficiency of land use of the region reflects the production of agricultural products per person. Over the last 10 years, there has been a growing trend. Crop production has almost doubled during this period. The largest growth was in the production of cereal crops, sugar beets, potatoes, vegetables and berries.

In 2015, the region produced agricultural products per person in the amount of 7629 UAH (in Ukraine 5587 UAH), and in 2018 – 9376 UAH (in Ukraine – 6374 UAH). Crop production per person in 2018 in the region was 7186 UAH (in Ukraine – 4700 UAH), and livestock in the region – 2190 UAH, in Ukraine – 1674 UAH, respectively (Fig. 2).

Indicators of assessment of the ecological condition of land resource potential are the indicator of ecological stability, determined by the method of A. Tretyak and the level of agricultural development.

The high level of agricultural development is connected with a large area of agricultural land. The average value of this indicator is 75.7%. The maximum indicators of agricultural development are typical for the central and eastern parts of the region (more than 85%). The indicator of ecological stability of land resources in the region is 0.34 (in Ukraine 0.41). Therefore, the territory of the region according to this indicator can be classified as weakly stable.

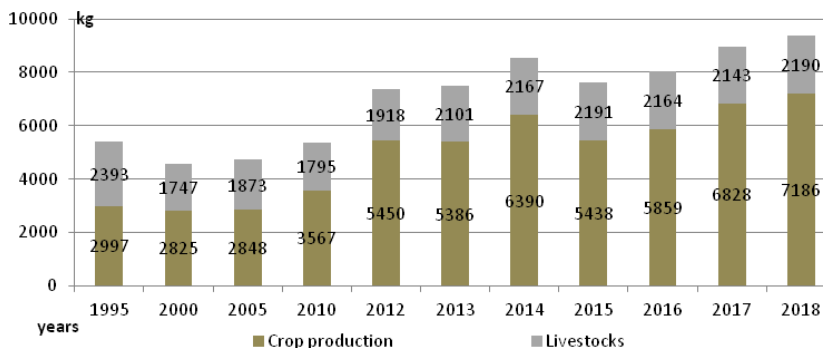


Figure 2. Production of agricultural products per person Ternopil region (UAH) (built for 6)

The ecological condition of the region's land resources indicates the imbalance in the structure of land use and needs to be optimized.

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