



DE GRUYTER
OPEN

DOI 10.1515/pesd-2015-0026

PESD, VOL. 9, no. 2, 2015

THE USE OF AGRICULTURAL LANDS IN NORTHERN MOLDOVA PLATEAU

Victor Capcelea¹, Valentin Sofroni²

Key words: agricultural lands, arable lands, pastures and meadows, fallow ground

Abstract. This article comprises a study on the development and use of agricultural lands in Northern Moldova Plateau. The spatial aspects of using these categories of lands within the limits of study region are also described. In this article, the research findings are reflected on the basis of presented data by Agency for Land Relations and Cadastre of the Republic of Moldova. Scientific publication also describes some current issues on agricultural lands use in Northern Moldova Plateau.

Introduction

The agricultural lands are generally land areas that are intended for agricultural production. After the way of use, the agricultural lands are classified into the following categories: arable lands, pastures and meadows, perennial plantations.

Due to agro-climatic conditions, the Northern Moldova Plateau has a very high agro potential, favoring in result the cultivation of cereal crops, sugar beet, tobacco, etc. As a result, this territory has become highly valued from agricultural point of view.

The high degree of agricultural use of lands, crisis of surface for other uses, high population density, etc., impose the need to rethink the current agricultural use of land [1].

1. Materials and methods

The agricultural lands use in Northern Moldova Plateau was carried out on the basis of research by Land Cadastre of the Republic of Moldova, which in this case was taken over by the Agency for Land Relations and Cadastre of the Republic of Moldova. This study was carried out for the territory of the Northern Moldova

¹ PhD student, Tiraspol State University victorcapc@mail.ru

² Prof PhD Tiraspol State University

Plateau (1990-2014). The following research methods were used in drawing up this scientific article: statistical method, cartographic method, bibliographical research, analysis and synthesis, etc.

2. Agricultural lands

At present time, the agricultural lands are the main form of use, accounting for 78.2% of the total area of Northern Moldova Plateau. During 01.11.1989 – 01.01.2000, the share of agricultural lands were expended from 72.4% to 79.2%, later their share has been decreased insignificantly to 78.2% (fig. 1).

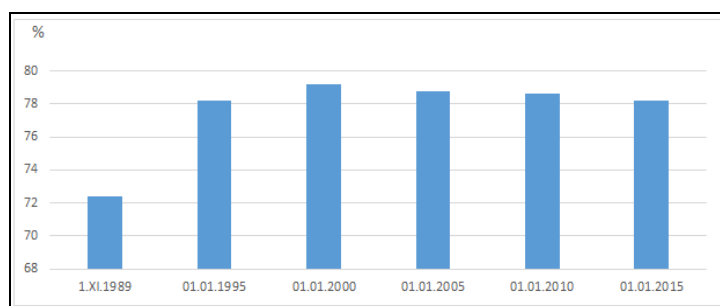


Fig. 1. – Share of agricultural lands in total area of Northern Moldova Plateau [2]

However, the Northern Moldova Plateau currently has a fairly high level of agricultural use of land, but in accordance with the share of agricultural lands in total area, Moldova holds the 2nd place (after Cubolta Plain) [1].

In the structure of agricultural lands in the period of research, the arable lands predominate separately, which hold rather high shares (over 75%), followed by pastures and meadows with insignificant shares (fig. 2).

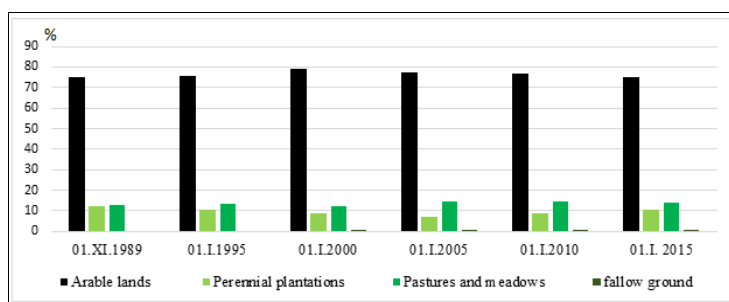


Fig. 2. - The dynamics of the agricultural lands in the Northern Moldova Plateau structure (%) [2]

From spacial point of view a higher degree of agricultural use of land is characteristic for the following villages: Cotelea (Briceni District), Constantinovca, Gaspar (Edinet District), Frasin, Baraboi, Sudarca, Briceni, (Donduseni District), and Zaicani (Rascani District), where agricultural lands have reached 90% share of total area (fig. 3).

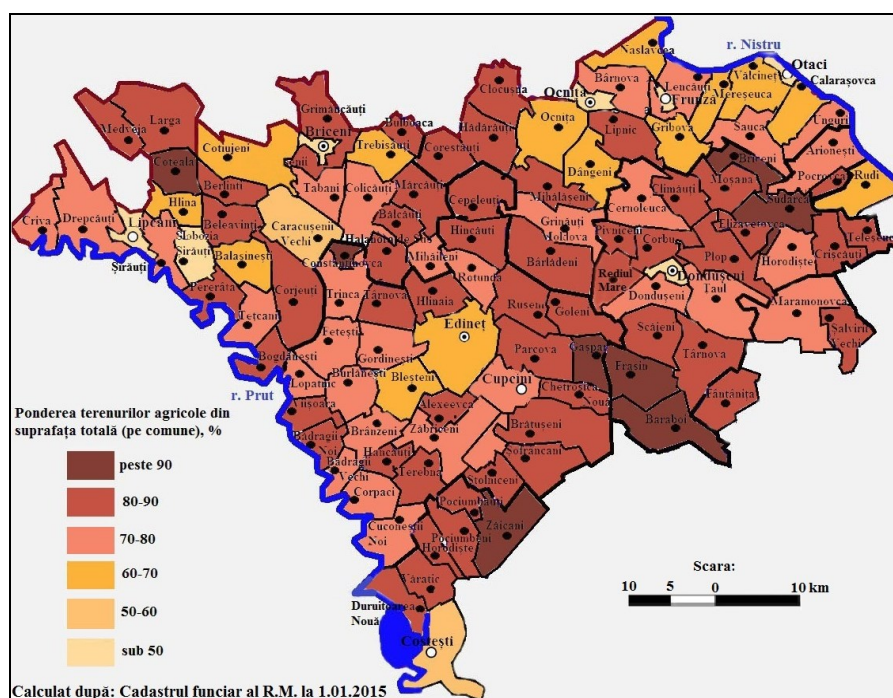


Fig. 3. – Agricultural lands in Northern Moldova Plateau [2]

The most reduced indices of utilization degree on agricultural land are recorded in Donduseni town and in Slobozia District – Sireuti, where the share of agricultural lands is 29.1% and 38.3% of the total area.

3. Arable lands

The arable lands are currently (01.01.2015), the main form of agricultural lands utilization, accounting for 75.3% of the total area of agricultural lands in Northern Moldova Plateau. In comparison with January 1, 2000, the share of arable lands has been decreased by 3.7%, because of extension of lands occupied by perennial plantations (from 8.7% to 10.5%), pastures and meadows (from 12.8% to 14%) (fig. 2).

The dynamics degree of provision of arable lands during the last 25 years has been increased from 0.57 ha/ capita, in 01.11.1989 up to 0.73 ha/capita in 1.0.1.2015 [2, 3].

The high share of arable lands in Northern Moldova Plateau is influenced by agro high potential of this territory. After the share of arable land surface, Northern Moldova Plateau, is ranked No.2 in the Republic of Moldova (after Cubolta Plain) [1].

At the level of villages, the highest percentage of arable lands are recorded in Badragii Vechi and Viisoara (Edinet District) (fig. 4). The high share of arable lands in these areas is stimulated by morphological conditions, the provision of agro-climatic conditions and water resources.

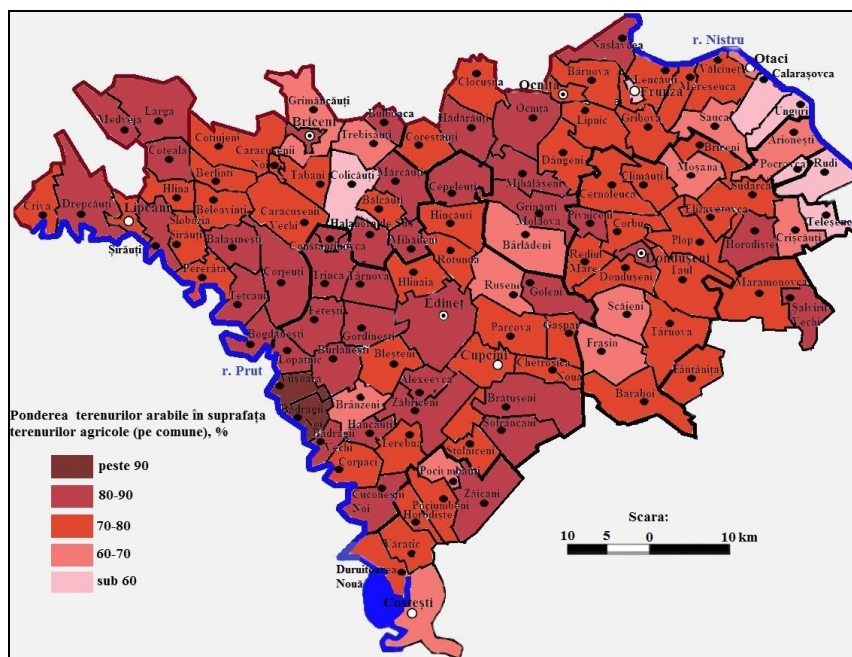


Fig. 4. – Arable lands in Northern Moldova Plateau[2]

The lowest rates concerning the share of arable lands are registered in Rudi (Soroca District) and Calarasovca (Ocnita District), where their share is 12.2% and 23.9% of the agricultural lands.

4. Perennial plantations

Throughout the analyzed period (fig.1), the share of occupied lands by perennial plantations in Northern Moldova Plateau has been decreased from 12.2%

(01.11.1989) to 7.2% (01.01. 2005), and later has been increased to 10.5% (01.01.2015).

The spatial distribution of perennial plantations is very uneven (fig.5), but the highest values are recorded in the eastern part of Northern Moldova Plateau, where at the level of villages, such localities as Rudi (Soroca District) are remarked, accounting for over 70% of perennial plantations of agricultural lands. Also Pocrovca (Donduseni District), Unguri and Calarasovca (Ocnita District) localities are highlighted in the east of the region, where they own more than half of agricultural lands.

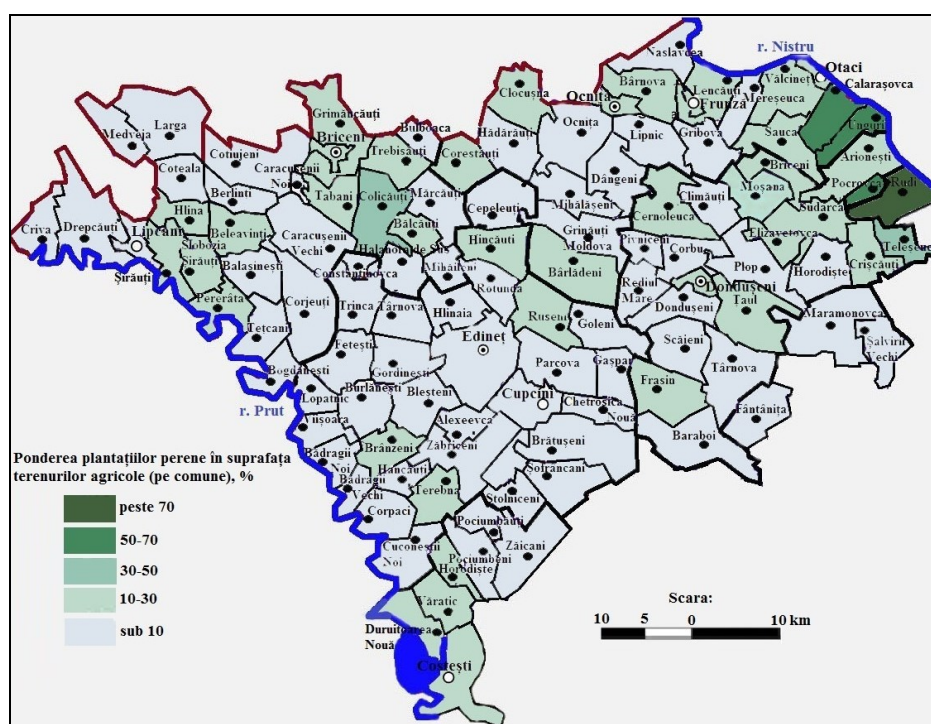


Fig. 5. – Perennial plantations of Northern Moldova Plateau [2]

The lowest indices of perennial plantations are more pronounced in the South East of Northern Moldova Plateau, where such localities as Badragii Noi and Viisoara (Edinet District) are remarked, registering a share of perennial plantations of 0.3% and 0.7% in the area of agricultural lands.

5. Pastures and meadows

During the research period (1990-2014) the share of lands occupied by pastures and meadows has been increased from 12.8% (01.11.1989) to 14% (01.01.2015). The significant expansion of pastures and meadows during the study period, represents a spontaneous and uncontrolled process, by transferring of degraded and fallow lands.

However, the low share of lands occupied by pastures continue to have a negative influence on the environment, primarily causing the intensification of soil erosion and gravity processes.

The areas occupied by pastures were the best preserved in river meadows (Raut), where excess moisture ensures their high productivity.

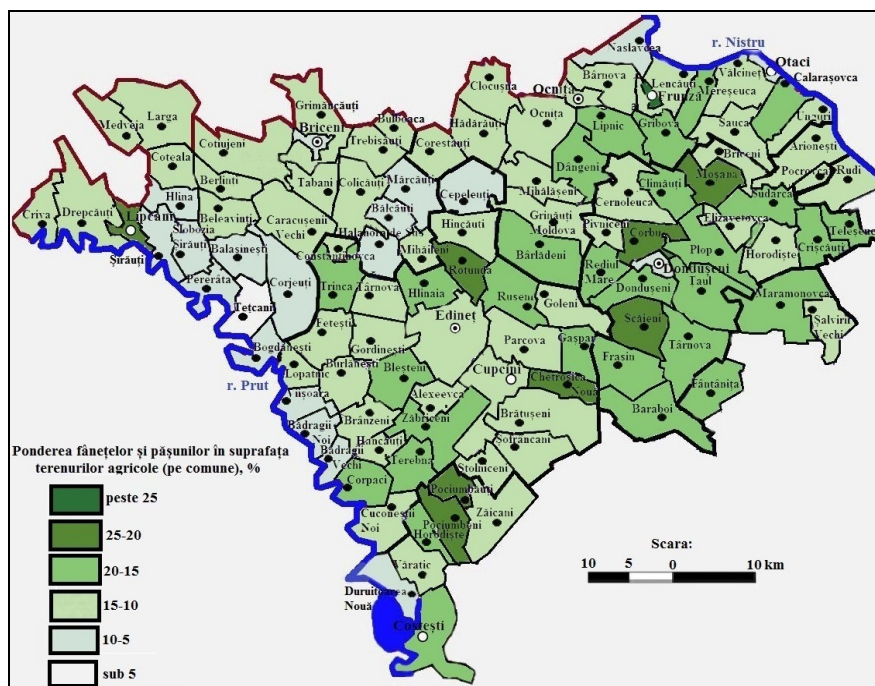


Fig. 6. – Pastures and meadows of Northern Moldova Plateau [2]

At the level of villages (fig.6), the frequency meadows varies in quite large limits, from values near zero up to over 25% in agricultural lands area. The highest indices of lands occupied by pastures and meadows are registered in Frunza town (over 25%) and Mosana, Corbu, Scaieni (Donduseni District) localities, Rotunda,

Chetrosica Noua (Edinet District), Pociumbeni, Pociumbauti (Rascani District) and Lipcani town, where their share of over 20% of agricultural lands.

The lowest indices of pastures and meadows are recorded predominantly in the North East of Northern Moldova Plateau, where Tetcani village is remarked (Briceni District) with a share of less than 5% of pastures and meadows of the total agricultural lands. Also Balcauti, Bogdanesti, Pererata (Briceni District), Naslavcea, Otaci town (Ocnita District), etc., where their share is under 10% of agricultural lands area.

Conclusions

During the analyzed period (1990-2014), the share of arable lands is still unacceptably high (over 75%) of the total area of agricultural lands, which does not permit the maintenance of ecological balance among the natural and human ecosystems and leads to degradation of soil cover and biodiversity.

As a result of establishing a high share of arable lands, the extreme levels of antropization have been reached.

In the future, in order to increase the ecological stability of agricultural lands, it is necessary to reduce the share of arable lands, especially those that are heavily eroded.

The lands occupied by perennial plantations, pastures and meadows during the research did not suffer significant changes.

In the future, it is necessary to expand the occupied land plots by perennial plantations, pastures and meadows, because these categories of agricultural lands have the highest coefficient of ecological stability in comparison with arable lands.

References

- Bejan Iu.** Utilizarea terenurilor în Republica Moldova. Chişinău: ASEM, 2010. 165 p. (1)
- *** **Agenția Relații Funciare și Cadastru a Republicii Moldova.** Cadastrul funciar al Republicii Moldova la 1.11.1989, 1.01.1995, 1.01.2000, 1.01.2005, 1.01.2010, 1.01.2015. (2)
- *** Dările de seamă a Direcțiilor (secțiilor) pentru statistică raionale (Briceni, Ocnita, Edinet, Dondușeni, Râșcani, Soroca, Drochia) privind numărul populației la 1.01.1989, 1.01.2000, 1.01.2005, 1.01.2010, 1.01.2015. (3)

