



EARTH AS WEALTH RESOURCE IN THE CRISUL REPEDE BASIN

M.S. Mancia^{a,*}, Aurora Mancia^b

^b University of Oradea, Faculty of Civil Engineering, Cadastre and Architecture, Cadastre and Architecture Department, Romania

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ABSTRACT:

From the entire globe surface which is over 13.5 billion ha, the agricultural area represents more than one quarter (means 3.4 billion ha). The cultivated areas cover approximately 1.5 billion ha, which means 8% of the total lands, to each inhabitant of the planet assuming the 0.25 ha. The most agricultural space is located in the temperate zone (about 2 billion ha), which represents 55% of agricultural space world and also here lies mostly in the sown area of the planet (830 thousand ha, 59%).

1. INTRODUCTION

The concept of "land" looked through the real estate evaluation is closely linked and also influenced by geographical, legal, social and economic factors. All these factors form the basis after which the evaluations are realized (Ilies et al., 2007). The property is composed of physical property value and property rights which accompany it, coexisting in this way in society today as a whole (Dona, 2000).

In theory the land evaluation is a major source of wealth to quantify in cash or exchange value. The contemporary society reflects through drafted laws the governmental attitude, economic and cultural policy towards Earth as wealth resource and object of hoarding (Cunha, 1998). In recent years the market value of agricultural land in the Crisul Repede Basin summarized a significant growth.

Earth is one of the resources which determine life; it is inexhaustible as long as it is properly exploited as a tool of production. Earth is a resource and object of current geopolitical analysis; it is essential for life and

society; Earth represents all the natural elements of a wealth nation.

"R. Kjellen, the founder of Geopolitics makes distinguish between geographical location and geopolitical position. The first one is fixed, but the two one is constantly changing" (Castells, 2012).

"The primary resource's geopolitics refers to strategies and policies for storage and use of the primary resources that make both, the area and the essential life condition on earth" (Claval, 1994).

"The existing pressures [...] come from within human society and are one of the most terrible threats. Life was formed on earth as a result of conditions and resources from here [...], and if it is exhausted it means that life on Earth will disappears" (Claval, 1994).

In Romania the agricultural area is 0.45 ha per capita, in Russia and the US 0.3 ha per capita, 0.2 ha in Germany, 0.1 ha in the Netherlands, which places our

* Corresponding author: e-mail: mancia.mircea@medi.com.ro

country in a very good position then other. And yet, for example, a farmer from Denmark produces goods for 120 people, in Germany for 20 people and the US for 10. A particularly aspect which highlights the importance of knowing of the agricultural land fund is its relief structure (Dume, 2009).

From the total agricultural surface of Romania: 50% are sloping grounds of which:

- 8.25% with over 50% slope;
- 7.35% with slope between 35-50%;
- 9.37% with slope between 20-25%.

2. MATERIAL AND METHOD

It should be noted that in Romania the arable surface can be used in a rate of 95,98% compared to Russia, 64% and the US ,51%.

In essence, here are some of the issues that concern the world community regarding the implications of the agricultural lands problem (Haidu, 1993) and their global exploitation:

1) In the global economy we are witnessing at a diminishing share production of a total world agricultural production (Golopentia, 1940). Even in absolute amounts, agricultural production increased, it can not fully satisfy the population's food needs for two reasons:

- The growth rate of agricultural production is lower than the growth rate of population worldwide, which leading to an insufficiency of food resources in relation to food needs.
- The agricultural production increased is unevenly, which leading to a higher growth in developed countries, with more efficient economies, while population growth is more significant in developing countries.

2) The constant relatively support of Earth's agricultural resources caused needed for a greater efficiency in agriculture. That is why today the developed countries (Ilies, 1999) are the largest producing countries for agricultural products (which, thanks to the introduction of technological progress in agriculture, the ability to obtain higher yields in agriculture), and least developing and underdeveloped countries (which, despite their agrarian orientation has not possibility of practicing agriculture of a highly productive).

3) The agricultural production is marked by some social phenomena and also trends. Thus, starting with the 21st mid-century, we are witnessing the migration of rural population to urban areas doubled in underdeveloped countries by a decline of a living standard of the farming population, so that a new issue of agriculture represents even the labor shortages specialized in certain regions. It is backed up by technical means in developed countries (whose population needed in agriculture is about 5%), but it is a problem in developing countries and underdeveloped countries (where the farming population may exceed 50% from the employed population).

4) The farming activity organizing is based on new principles. Thus, it appears that the most effective agricultures are those where atomization of it is disappeared. The concept of large modern farm designates that form of agricultural organization (e.g. approx. 12% of farms with more than 50 ha account for over 80% of the farming land).

5) The emergence of a strong international competition in agriculture domain, following the appearance of large food corporations, transnational companies which have as sphere of activity agricultural products production and marketing (Nestle, Cargill, etc.).

The utilized agricultural area of Romania dropped nearly with one million hectares compared to 2002, according to a study of National Institute of Statistics. Romania's agricultural surface is the most fragmented and with most agricultural exploitations from the European Union (Ilies, 2006). The agricultural surface was decreased with 875.000 ha in 2013 compared to 2002, according to the same study.

In the period 2007-2012, the agricultural surfaces exploited by units with legal personality increased. At national level 55.7% of the land which belongs to unincorporated farms (after National Statistics Institute). In Bihor County, and according to next table (table 1), 71.93% of these areas have this status.

Legal status of surfaces	Agricultural surface (ha)	Arable surface (ha)	%
Farms without legal personality	257.241,67	190.525,19	71,93
Farms with legal personality	221.247,33	91.810.18	41,49
Total	488.489	282.335,37	57,79

Table 1. Agricultural and arable land area after their legal status, in 2012, Bihor County (source: Directorate for Agriculture Bihor)

The media of farms without legal personality is 2,02 ha and the average size of a farm is 3.6 ha instead 14.2 ha in the EU (Ilies et al., 2009). Bihor County's agricultural surface decreased from 496.907 ha in 2008 to 488,489 ha in 2012 (table 2).

Year	2008	2010	2012
Agricultural surface, Bihor County) (ha)	496.907	491.124	488.489
Unworked land (ha)	104.350	126.598	108.073
Land owned by foreigners (ha)	9.922	8.605	11.851
Total county's land (ha)	754.427	754.427	754.427

Table 2. Agricultural Lands, Bihor County
(source: Directorate for Agriculture Bihor)

The cause of this situation is pulling out from the agricultural circuit and introduction of numerous surfaces into the administrative unit's intravillan, deforestation and passing of these areas in other categories of use, parceling pastures and turning of them into land for construction.

From the total agricultural areas a large percent of lands is unused table 2). Thus, in 2008 was 20.99% unused, in 2010, 25.77% and in 2012, 22.12%. The rural population is aging, the youth migrated towards cities and, from the economic point of view, the poverty and economic crisis have prevented many landowners to work the land (figure 1).

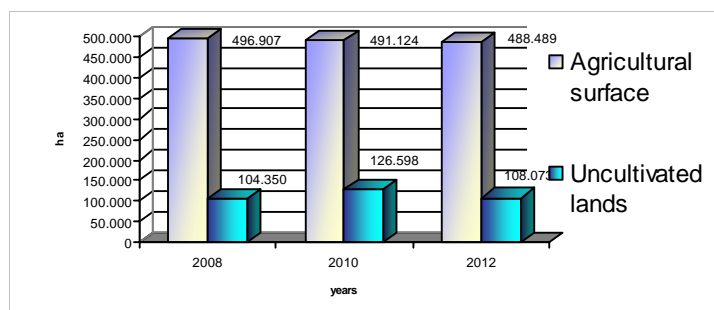


Figure 1. Agricultural lands, Bihor County (ha)

The geographical location of farmland from Crisul Repede Basin, the quality lands like black earth and humus types, which has sufficient thickness for development of cultures made this region to become attractive to foreigners (Josan, 2002). In such

conditions, the area of land purchased by foreigners increased with 302% in 2013 compared to 2008 (figure 2).

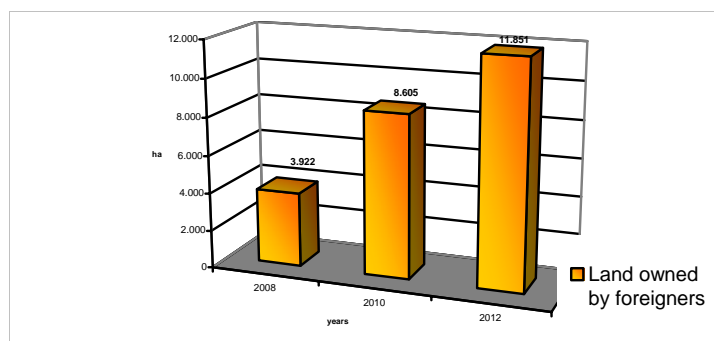


Figure 2. Land owned by foreigners, Bihor County (ha)

3. RESULTS

3.1. The market value of land in the Crisul Repede Basin

The foreign investors owned in Romania approximately one million arable land hectares of arable, which mean 10% from the available total.

On the local land market, foreigners hold 2.5% from the agricultural land in Bihor County (table 3).

Locality	2000	2005	2008	2010	2014
Șuncuiuș	500	800	1.200	600	2.500
Borod	500	1.000	1.800	1.000	2.100
Lugașu de Jos	1.000	1.500	2.500	1.800	3.500
Tețchea	700	1.300	1.900	1.000	2.800
Tileagd	1.300	1.700	2.200	1.500	3.800
Ineu de Criș	800	1.300	1.700	1.000	3.000
Oșorhei	1.200	1.600	2.000	1.800	4.000

Table 3. Value of farmland within 2000-2014 euro / ha
(source: Bihor Notaries Public Grilles)

Through Romania's admission in the EU increased the interest of foreigners for farmland. The average sales price in 2002-2012 increased with 25 times, with an annual appreciation rate by 40% (after Dorian's Evaluation Company). Into West Plain the market prices for agricultural lands are 2000-2500 euro / ha for small plots from one hectare to 10 hectares and 3500-4500 euro / ha for that's ones with surfaces between 50-100 hectares.

Also, according to the Bihor Public Notaries Grid, the price for agricultural land has increased a steady growth in the range 2008-2010 except when they fell due to the economic crisis. At Oșorhei Plain, Sântandrei, the selling price is 4,000 euro / ha, as the same with that localities which have lost their land by hydrotechnics: i.e. Tileagd, 4,000 euro / ha, Lugașu de Jos, 3,500 euros / ha.

According to Bihor Directorate for Agriculture site, the market value of agricultural land in the sector study is between 2100-4000 lei / ha.

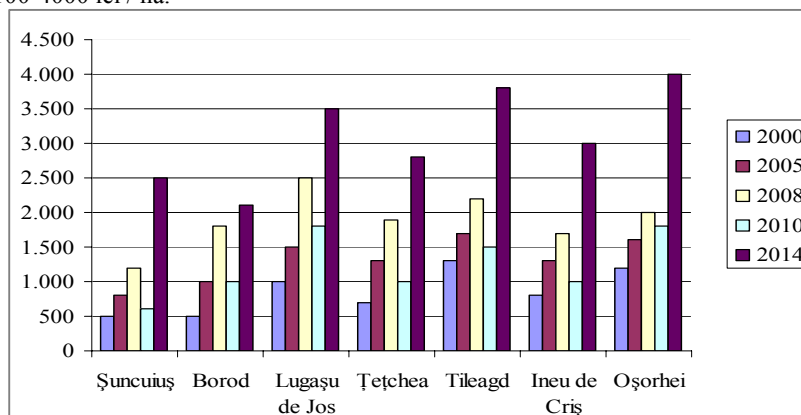


Figure 3. The value of agricultural land, 2000-2014

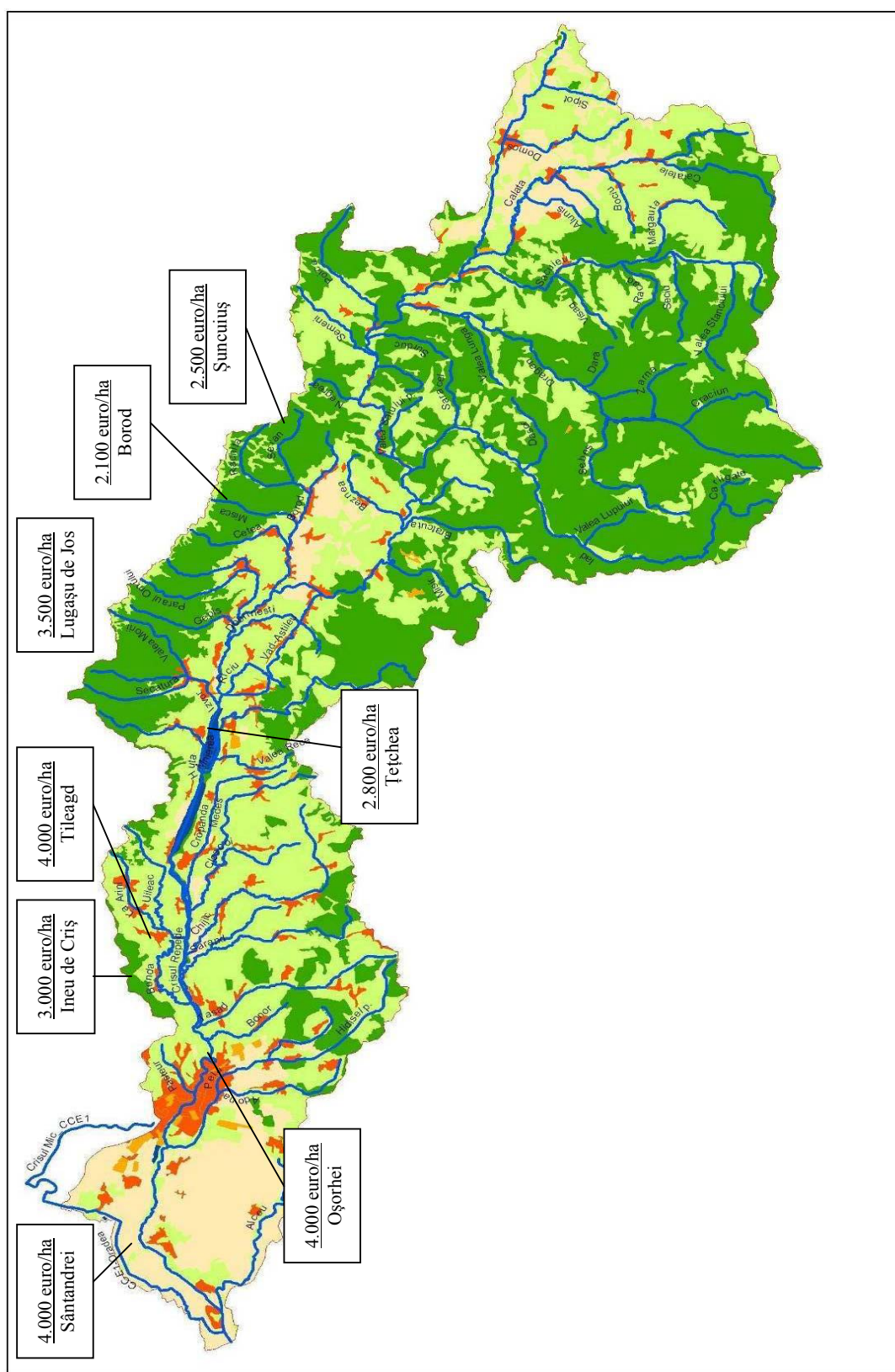


Figure 4. Map of the average prices for land in the Crisul Repede Catchment, 2014

Into the global geopolitical context, the agricultural land represents a major goal for investors, because U.E.'s lands have a much higher market value (table 4).

Country	Price/euro/ha
Romania	6.150
Bulgaria	6.400
Slovakia	12.900
Poland	14.200
Italy	15.200
France	25.000
Belgium	25.200
Germany	33.000
Holland	35.500

Table 4. The land prices in Romania compared to the Western countries (source: Black Sea Agriculture - report for investors)

The potential of fertility, the location near by the Western border, the possibility of irrigation, all are determinant elements to buy agricultural land in a time when the food crisis is starting to become a threat for the entire globe.

4. CONCLUSIONS

The grounds from the Crisul Repede Basin have natural fertility, included artificial fertility from complex engineering works.

The sale prices are relatively low compared to European real estate market.

The value of land is higher in the plains and, also, in the municipalities which were lost their land - 1,500 hectares - by executing of the Lugasu de Jos and Tileagd dams.

Foreign investors bought farmland in the Crisul Repede Basin. The percentage growth of agricultural land increased with 302% in 2013 compared to 2008.

The market studies related by general conditions of supply, demand, market value, proving that in Crisul Repede Catchment's area and Bihor County, the agricultural land is increasingly sought. Although the dimensions of agricultural exploitations are relatively small, it does begin to be increasingly demand for

lease or sale. There are still areas of fertile land which are still being not cultivated.

The presence of foreign investors who wants to buy agricultural land in studying area is more visible. Increasing the market value of these lands it is representative in the context of increasing demand for agricultural land and food supply in Europe and worldwide level.

The low price for agricultural land compared to other European countries such Netherlands, Finland, France, Italy, makes it attractive for E.U. citizens.

The market value of agricultural land has growth prospects for the future; at a higher growing demand they can be profitable investments for both the owner and for Romania (Otiman et al., 2006), exceeding actual stage and leading to the establishment of markets characterized by the full use of the land with profit rates comparable to Western EU countries.

5. REFERENCES

- Castells Manuel, 2010, *The Power of identity* – Second Edition with a new preface Oxford: Wiley – Blackwel, p.102.
- Claval P., 1994, *Geopolitique et Geostrategie. La pense politique, L'espace et le Territoire au XX^e siecle*, Nathan, Paris.
- Cunha A., 1998, *Systems et terroire: valeurs, concepts et indicateurs pour un autre developpement*, Rev. L'Espace géographique, 3.
- Dona I., 2000, *Economie rurală* (Rural economy), Editura Economică, București.
- Dume D., 2009, *Amenajările hidrotehnice din bazinul Crișul Repede și impactul lor asupra scurgerii lichide* (Crisul Repede Basin hydrotechnical projects and their impact on leakage), Teză de doctorat, Universitatea din Oradea.
- Golopenția A., 1940, *Geopolitica* (Geopolitics), Editura Ramuri, Craiova.
- Haidu I., 1993, *Evaluarea potențialului hidroenergetic natural al râurilor mici* (Assessment of hydropower natural potential of small rivers), Editura Gloria, Cluj.
- Ilieș Al., 1999, *Elemente de geografie politică* (Elements of political geography) (curs universitar) (university course), Editura Universității din Oradea, Oradea.
- Ilieș Al., 2006, *Elemente de geografie politică. Spațiul European* (Elements of political geography. European area) (Note de curs) (Course notes), Oradea.

Ilieş Al., Ilieş Dorina, Grama V., 2007, *European Political Borders Typology according to the Natural Background Particularities*, în *Revista Română de Geografie Politică*, IX, 2.

Ilieş Al., Grama V., Wendt, J., Bodocan, V., 2009, *Geographical management of a Borderless Area at the internal/external border of NATO and EU. Romanian Case (I)*, în *Revista Romana de Geografie Politică*, XI (2), pp. 166-175.

Josan, N. 2002, *Destinul geografic al poporului roman* (The Geographic destiny of the Romanian people), Editura Universităţii din Oradea, Oradea.

Otiman, P.I., Mateoc-Sârb, Nicoleta, Man, E.T. and colab. 2006, *Dezvoltarea rurală durabilă în România* (Sustainable Rural Development in Romania), Editura Academiei Române, Bucureşti.

*** (2012), *Raport statistic pe comune cu situaţia fondului funciar la 31.12.2012*, Direcţia pentru Agricultură a Judeţului Bihor (Statistical Report on common land situation at 31.12.2012, Bihor County Department of Agriculture).

*** (2014), *Resensământul general agricol 2010* (General Agricultural Census 2010).

Evaluarea proprietăţii imobiliare (Real Property), Appraisal Institute, 2011.

www.crisulrepede.com, viewed at 01.11.2015.

www.infoeuropa.ro, 2003, viewed at 20.10.2015.