

## STUDIES ON THE NATURAL POTENTIAL OF SUSTAINABLE RURAL DEVELOPMENT PRAHOVA COUNTY

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### **Abstract**

*Economic and social development of an area depends on natural resources that it offers for use in accordance with the requirements imposed by the development, evidenced by general policies, local and regional area. Evaluation natural heritage area study highlights opportunities to support the sustainable development. In this regard, basic element that generates complex environmental factors is the site area, characterized in that the Prahova County covers an area of 4716 km, i.e. 1.98% of the area of Romania, being located in the central-northern part of Wallachia, in catchment areas of Teleajen Prahova river, at the intersection of parallel of latitude 45° 26' east longitude meridian, being bounded on the north of the Bucegi Mountains, Baiu, detritus, and Tataru Ciucaş. For the amount of resources capable of producing diversification and restructuring the economy by promoting policies differentiated into zones, taking into account the amount and degree of recovery of potential natural, economic, social and reabilitare problems, environmental protection and conservation are proposed specific measures of technical and economic.*

Keywords: primary natural potential, sustainable rural development, soil, climate conditions, agricultural performance

### **1. INTRODUCTION**

Economic and social development of an area depends on natural resources that it offers for use in accordance with the requirements imposed by the development, evidenced by general policies, local and regional area.

Natural potential of a territory defined by the set of resources that consists environment can be analyzed by the magnitude and specificity of each component separately.

Natural potential primary consists of the basic factors determining the formation and evolution of the natural environment and a potential secondary, derived from natural potential Primarily composed of exploitable resources of the natural environment.

### **2. PRIMARILY NATURAL POTENTIAL FOR RURAL DEVELOPMENT OF PRAHOVA COUNTY**

Evaluation of potential natural area study highlights the natural potential to support sustainable development.

The basic element that generates complex environmental factors is the site area, characterized in that the Prahova County covers an area of 4716 km, ie 1.98% of the area of Romania, being located in the central-northern part of Wallachia, in catchment areas of Teleajen Prahova river, at the intersection of parallel 45 ° north latitude and 26 ° east longitude meridian, being bounded on the north of the Bucegi Mountains, Baiu, detritus, and Tataru Ciucaş.

Prahova County is part, according to the territorial organization - management of the territory of Romania, South-Muntenia Region No.3 alongside Calarasi, Arges, Dambovita, Giurgiu, Ialomita and Teleorman.

As a result of the site topography Prahova County is willing to succeed three major steps from NW to the SE, the difference in level of 2433m, the Omu Peak (2505m) and Plain Gherghiţei (72m).

Share main morphological units of the total area of the county is as follows: Plain - 1744km<sup>2</sup>, ie 37%, Sub-Carpathian hills - 1700 km<sup>2</sup>, ie 36%, mountains - 1288 km<sup>2</sup>, ie 28%.

Following and hydrology relief is appropriate variables.

Length of water courses cadastral Prahova County is 1786km with a summed area of the river basin of 3350 km<sup>2</sup>. The average density of river network is 0.40 km / km<sup>2</sup> with large differences according to the form of relief: 0.70 km / km<sup>2</sup> in the mountains, 0,30-0,50 km / km<sup>2</sup> in Plain Gherghiței and 0.10 kilometers / km<sup>2</sup> dejecție cone surface of Prahova.

Theoretical reserve of water in the county amounts to a volume of 664milioane m<sup>3</sup>, of which 68.8% is surface water and groundwater 31.2%. Compared to the total volume, usable water resources is 377milioane m<sup>3</sup> (226 million m<sup>3</sup> of surface water and groundwater 151 million m<sup>3</sup> in canvas); 79% of the surface of this county is the sub-Prahova - Teleajen (3738km<sup>2</sup>) basin belonging Ialomita-Buzau. [1]

Along the network of rivers, a series of lakes located mainly in the plain complete hydrographic picture of Prahova County. The largest lakes are found in plains, left Ialomiței: Pond Lady, Rainbow and Sărăcineanca, forming the natural by crossing with silt of small tributaries of the Ialomita.

Natural conditions have led in time to form a variety of soils, the brown podzolic and podzolic soils, the soils in the mountain area brown brown podzolic, brown acid and in the Carpathian foothills pseudorendzine plus chernozems bill, chernozems argiloaluvionale, brown podzolic chernozems reddish and moist phreatic river valleys.

Depending on their fertility and category of land use, soils in Prahova fall-dominant classes II and III of the arable land in classes IV-A and ava to pasture and meadow, in classes of-III, to IV, II to vineyards and grade-III and-IV in orchards.

The primary elements of the natural heritage are most climate variability is determined by geographical position of Romania in the continent Europe and relief distribution in steps whose rate decrease from north to south over 2400m. To these are added by the three valleys fracmentarea relief Princip of (Prahova Doftana Telejenul) which is true color routing draft. About 80% of the county,

the plain and is characterized by continental climate Subcarpathians and 20%, the mountain area has a moderate continental climate.[2]

Characterization of the plains climate, economic importance to the farming activity in the cultural field can be made by calculating the balance index (Ib = -60), hydroclimatic index (HI = 91%) and aridity index (Ia = 30.7) .

In interpreting the values obtained shows that they correspond subexcedentare area, low grade agricultural land with poor water supply from precipitation. This means that an efficient farming, sustainable nature of fitting teriroriului requires both to cover the deficit of water by irrigation and for discharge of excess water by drainage. [3]

This characterization suggests that the general climate and agriculture rain may cause some beneficial effects, limited, but the dynamics of the report precipitation / water consumption, the increasingly unstable in relation to the needs of crops. Climate features determined by the relationship of interdependence between radiation solar general circulation of the atmosphere and surface characteristics generate regionarea climate of the territory. From this point of view belongs Prahova mountain region (sub Southern Carpathians), area of hills and plateaus (sub Subcarpathians of Getic Plateau) and plain region ( sub Romanian Plain).

### 3. RESULTS AND DISCUSSION

Primarily natural potential presented above is that agriculture is an important sector in the county economy. Favorable climatic conditions provide opportunities for the growing cerealiere, viticulture, fruit growing, industrial crops, vegetable growing and livestock. In addition to the south of the county with the dominant profile of cereal and animal husbandry in the county longer post some pools shaped by:

- Fruit production in areas within the Băicoi by Voila, Magurele, Valley Călugărească with the Plopu;

concentrated in the famous wine-production vineyard Dealu Great Basins: Valley

Călugărească with the Seciu - Boldești Scaieni - Urlați, Ceptura, Tohani-mouth Vad;  
-production of vegetables in field crops (Filipești Fair, Târgșorul Old Blejoi, Bucov) crops in greenhouses (Puchenii Greater Pond Lady, Râfov) and industrial crops in a greenhouse type (Bărcănești, Tatarani).

It is noteworthy that the fund of the county agricultural land has decreased since 1990 from 280,287 ha to 274,381 in 2008, to the reduction in arable areas and those occupied by vineyards and orchards. He grew up but the area occupied by pastures and meadows.

Reported in the area with agricultural potential of the county, 61% of agricultural land have potential for field crops, 28% for stock raising, 6% to 5% for fruit growing and viticulture. This structure shows that the production indicative of Prahova County agricultural area has favorable natural conditions for all categories of agricultural activities, conditions to be emphasized by the action of anthropogenic factor.

Of the total agricultural area of the county Prahova of 274,381 ha, 46,183 ha are strong and powerful land affected by erosion of surface and can be used for agriculture only after specific planning work.

Moderately weak and eroded land in the area of 25,909 ha, is suitable for vine crops and fruit trees, accommodation and expenses minime. Eroziunea surface of various degrees affects the district on the following areas: poor eroded - 11481ha, moderately eroded - 14,429 ha, heavily eroded - 17,354 ha, very strongly eroded - 28,830 ha.

Great variability of climatic conditions characteristic of Prahova County, resulted in favorability different crops.

Soil quality is reflected in the notes of creditworthiness natural evedeându the Suitability improve them through capital investment in agriculture. There is a certain group of agricultural production areas where the crop with the highest favorability, thereby creating a tendency agricultural production area for industrial crops (Cioran, Drăgănești, Puchenii Greater Poenarii Burchi), maize

(Mizil Cioran), for fruit trees (Urlați, Ploiesti, Campina).

Agricultural yields obtained in Prahova county highlighted issues such as: grain cereals have a average production reported period are well dominant share in the structure of agricultural crops;

below biological potențilul varieties grown as the potential fertility of the soil: 2217 kg / ha for wheat and 3303 kg / ha for grain maize;

yields obtained from technical cultures are highly variable from year to year due to the use of traditional technologies, characteristic agriculture storm.

We believe that declining harvests after 1998 is due to several factors, such as: increasing the share subsistence and semi-subsistence farms, the practice of traditional agricultural technologies, agriculture characteristic rain with a low potential vegetation factors, the production of extreme weather conditions , etc..

Fruit-growing plantations in areas with tradition in this field contributed to a product characteristic variables of volume wine, unsteady.

Based favorabilității organic cropping and pomo-growing plantations, agricultural production has developed zoning for the 11 areas of agricultural production. It notes the diversity of cultures with high favorability and their overlap on the same areas, which creates great opportunities for multiplication of complementary activities in rural areas respectively.

#### 4. CONCLUSIONS

For the amount of resources capable of producing diversification and restructuring the economy by promoting policies differentiated into zones, taking into account the amount and degree of recovery of potential natural, economic, social and rabiliatare problems, environmental protection and conservation are proposed specific actions:

- increase the productive potential of agricultural land fund the rehabilitation and full of potential irrigable planning and draining;

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- development of small and medium industry, focusing mainly on the exploitation of agricultural products;  
- infrastructure rehabilitation of inter-role communications;

- rehabilitation and extension works to combat erosion on the development of fruit growing and viticulture;  
- inclusion in the category of areas within disadvantaged areas affected by restructuring.

## 5. REFERENCES

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