

## **SUSTAINABLE DEVELOPMENT OF NORTH-EAST REGION DURING 2007-2013 - REFLECTIONS ON REGIONAL DEVELOPMENT STRATEGY IMPLEMENTATION**

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### **Abstract**

*The present paper aims to emphasize the evolution of sustainable development during the 2007-2013 period in the North-East region of Romania, as against the strategic objectives established by the Regional Development Strategy. The sustainable development at regional level can be measured by a group of indicators, established by Eurostat and collected by the National Institute of Statistics, which cover the economic, social and environmental specific dimensions. The paper employed a qualitative analysis of strategic objectives and a quantitative analysis of the main strategic result indicators in order to assess the evolution of the North-East region towards sustainable development. The results revealed the inefficiency of strategic measures and the low impact on the sustainable development of the region.*

**Key words:** *strategic objectives, sustainable development, economic, social and environmental dimensions*

### **INTRODUCTION**

“Sustainable development is development which aims to meet the needs of the present without compromising the ability of future generations to meet their own needs” [10] represents the guiding line which stands on actual policies and strategies. The sustainable development represents a priority at global and European level, the implementation of durable national strategies being assumed by over 145 countries since the ‘90s. These strategies had the purpose to mobilize and concentrate the society achievements towards sustainable development [2], by creating frameworks for a durable future and frameworks for consensus and construction for institutional capacity [6].

Agenda 21 of the European Union established that these kinds of strategies need to incorporate economic, social and environmental sectorial policies and plans and in the meanwhile, to protect the resources for the benefits of a future generation [11].

In addition, there must be pointed out the necessity to establish and collect specific indicators which can measure the

implementation of strategic objectives (sustainable development indicators) that can be included in progress reports [9].

Despite the objectives of Agenda 21, the national strategies regarding sustainability didn’t have obvious implications on production or consumption patterns [8].

Only in 2009, the European Council demanded a review of the European Sustainable Development Strategy (SDS, from 2006) [3] and an improvement of implementation, evaluation and monitoring mechanisms [5].

After the Agenda 21 and SDS implementation, the European countries are considered to be the first in the formulation and implementation of SDS [12].

At present, through the 2020 Strategy [4], the European Commission integrated the sustainable development in one vision under the idea of smart, sustainable and inclusive growth.

Romania has an approved strategy since 2008 (Sustainable Development Strategy 2013-2020-2030), but according to the European Network for Sustainable Development

(ESDN) it doesn't respect the key objectives of European SDS.

However, this remains the main strategic document which integrates the sustainable development objectives of Romania.

## MATERIALS AND METHODS

The main objective of the Regional Development Strategy of the North-East set for 2007-2013 was: "reducing disparities compared to other regions and reducing interregional disparities".

The strategy set out five key priorities which contribute to an increased competitiveness and attractiveness of the region [7]: infrastructure and environment; business support; tourism; rural development; development of human resources and social services.

Our qualitative analysis revealed that the strategy doesn't propose concrete and measurable actions (projects, time, funds, etc.) which gives a confusing picture of the measures that were actually pursued during the implementation.

In these conditions the efforts were focused on the quantitative analysis, but the lack of result indicators (progress monitoring) leads us to adapt the sustainability indicators to each strategic objective and to identify measurable outcome indicators capable to assess the implementation of these policy measures at the regional level. The sustainable indicators time series for 2007-2013 were analyzed by using:

- the annual average rate of dynamic

$$\bar{i} = \sqrt[n-1]{\prod I_{t/t-1}} = \sqrt[n-1]{I_{t/1}} \quad (1)$$

$$\bar{R} = (\bar{i} - 1) \times 100 \quad (2)$$

where:  $I_{t/t-1}$  – partial average rates of dynamic;  
 $n$  – the number of years;

- the linear trend equation (to estimate the trend for the 2007-2013 period based on a three year moving average evolution of indicator during the 2000-2006 period):

$$Y = a + bt$$

(3)

where:  $Y$  – the projected value for a selected value of  $t$ ;  $a$  – estimated value when  $t=0$ ;  $b$  – the slope in the line;  $t$  – value of time (coded).

## RESULTS AND DISCUSSIONS

### Economic dimension of sustainability

#### Gross Domestic Product per capita

(RON/capita) had lower dynamics during the 2007-2013 period (20.2%) as against the 2000-2006 period (35.2%) due to the financial crisis (Fig. 1). In this way, the region didn't succeed to continue the previous rising trend and the disparity reached 37.9% toward the average national real GDP/capita.

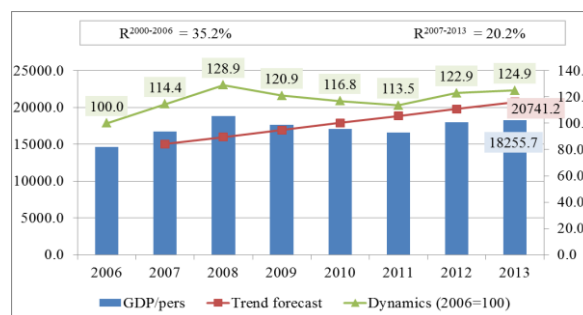


Fig.1. Real GDP per capita, 2006-2013 periods

#### The number of active entrepreneurs to 1000 persons

reveals a contraction of the business environment. In 2013 there were 13.6 enterprises/ 1000 persons, with almost 5% less than in 2006 (Fig. 2). Also, the strategic objectives for increasing the active firms in the processing industry failed, this sector having the highest decrease.

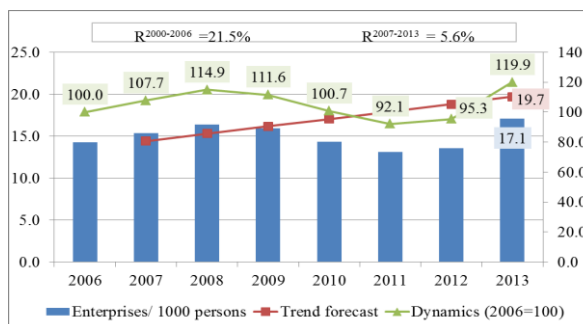


Fig.2. Number of active entrepreneurs to 1000 persons, the 2006-2013 period.

The economic crisis also affected the touristic sector, where, even the touristic accommodation capacity increased, the **Index of net using the touristic accommodation**

capacity in function decreased from 28.9% in 2006, to a value of 21.4% in 2013 (Fig. 3). The support of the business environment by transfers of innovation and new technologies was also very low.

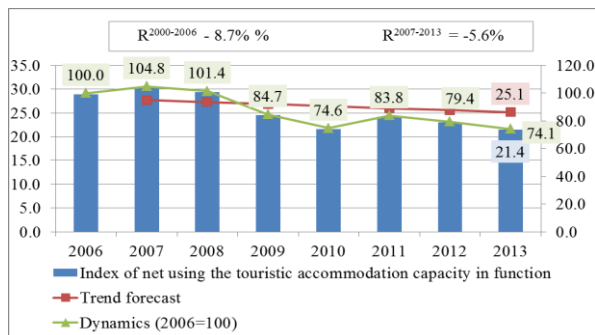


Fig.3. Index of net using the touristic accommodation capacity in function, 2006-2013 periods

After the restructuring from 2005-2006, the research and development activities showed a slow increase, but they represented only 0.38% from the GDP in 2012 (Fig. 4). In this way the sector fails to become an “engine” sector of the regional economy and a real contributor to the regional turnover [11].

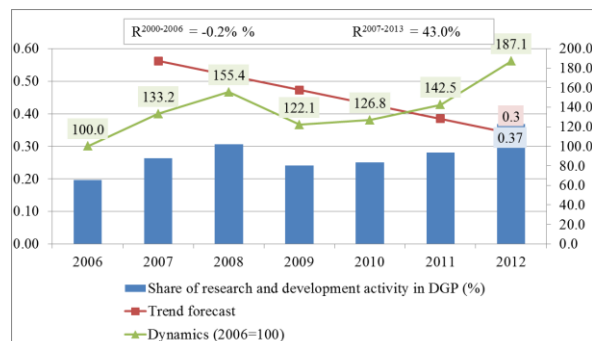


Fig.4. Share of research-development activity in GDP (%), 2006-2012 periods

**Social dimension of sustainability**

**Living conditions – Roads infrastructure**

**The degree of public roads modernization (county and municipal) (%)** – During the 2007-2013 period, the public roads increased with an annual average rate of dynamic of 3.6%.

On the other hand, the degree of modernization increased annually with over 34%, but in 2013 only 20.5% of roads were modernized (Fig. 5).

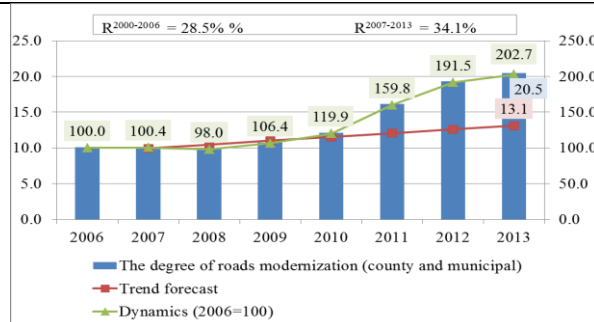


Fig.5. The degree of public roads modernization (%), the 2006-2013 period.

**Living conditions – drinking water system**

**The length of the drinking water distribution network (km)**

The volume of water supplied decreased at an annual rate of 29% in 2000-2006 and with 14.9% in 2007-2013 due to the population reduction and to the closure of many industrial sectors. Therefore, in 2013, only 40% of population had access to the drinking water distribution network. However, the length of the network increased with 35,5%, with an annual rate of 16-18% (Fig. 6).

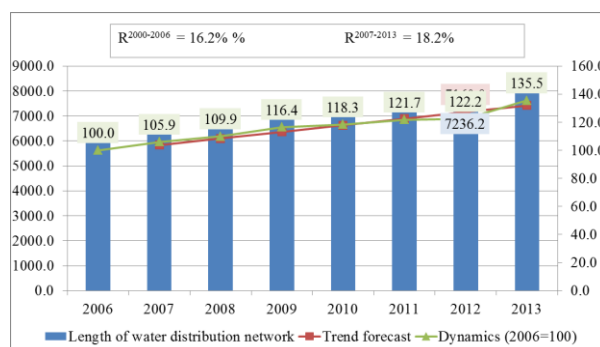


Fig.6. The length of the drinking water distribution network (km), the 2006-2013 period

**Living conditions – sewerage system**

**The length of the sewerage network**

This network increased by 25.4% as compared to 2006, the annual growth rate during the 2007-2013 period being 12.4% compared to only 3.6% in the 2000-2006 period. (Fig. 7)

**Living conditions – Health services**

**Death rate due to chronic diseases**

The rate increased during the 2007-2013 period by 4.1% to 1124.0 deaths per 100,000 persons.

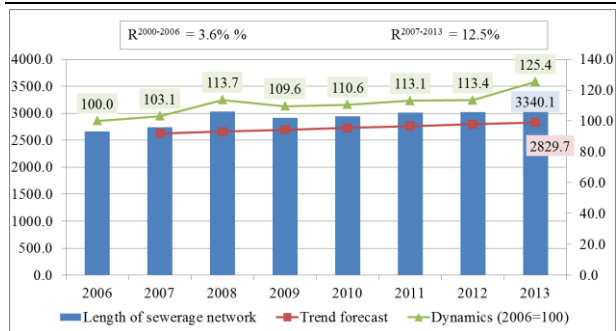


Fig.7. The length of sewerage network (km), the 2006-2013 period

Our analysis revealed a worsening health of the population, even in the same period the number of doctors increased (Fig. 8).

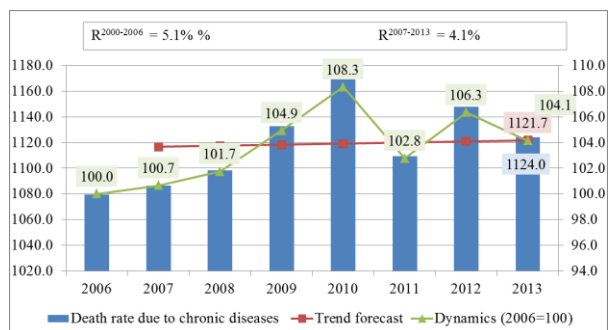


Fig.8. Death rate due to chronic diseases (%), the 2006-2013 period

### Employment and social inclusion

**Poverty rate (%)** – In the North-East region, in 2012, over 52% of population (1,935.0 thousand persons) were at risk of poverty or social exclusion and almost 34% were living in poverty (Fig. 9)

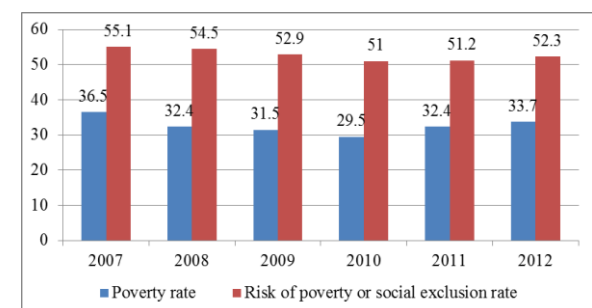


Fig.9. Poverty rate (%) and Risk of poverty or social exclusion rate (%), the 2006-2012 period

### Environment dimension of sustainability

**Area of forestry fund (thou ha)** - One of the strategic objectives for the 2007-2013 period, was to increase the forestry fund through afforestation activities.

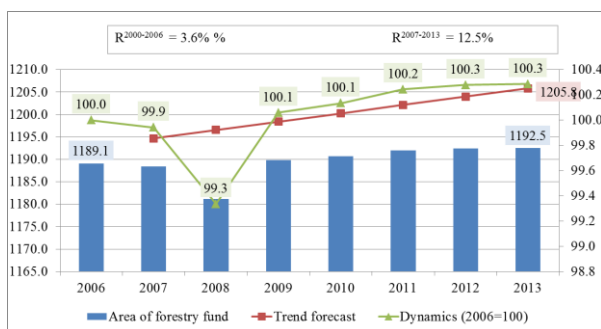


Fig.10. Area of forestry fund (thou ha), the 2006-2013 period

But during this period, the forestry area increased with only 0.3% (3400 ha) while harvested wood mass increased with over 34% (Fig 10).

## CONCLUSIONS

An assessment of the sustainable development indicators for 2007-2013 allowed us to extract the following conclusions for the North East region: a slight economic growth, accompanied by an increase in the employment rate and a reduction in unemployment; the business sector remains underdeveloped; road infrastructure developed too slow; water and sewage networks have expanded, but the number of connected villages is still very low; the health of the population has declined while the number of medical personnel increased; over 30% of the population is in poverty and over 52% of the population is at risk of poverty or social exclusion; R&D sector remained at about 0.38% of GDP, while the number of employees was decreasing.

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