

ASPECTS OF SUSTAINABLE DEVELOPMENT IN THE RURAL AREA. CASE STUDY

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Abstract

In order to analyze the inhabitants' perception in the rural area on aspects of sustainable development, starting from the realities of the socio-economical and technical-urban analysis of the rural area in Călărași county, 3 specific research methods were used: the dynamical, deductive and quantitative economic analysis; SWOT analysis; the economic survey or participatory research involves collecting information from the territory using as research techniques "the questionnaire" and "the interview". The research recorded the population opinions and attitudes in 10 communes of Călărași county, regarding: the respondents awareness on the concept of sustainable development; cleanliness and care of the communes; prioritization of urgent investments in the studied area; the perception of changes and development potential of the area; assessing the social position of the respondents family; assessments on the quality of life in the rural area. The questionnaire, containing 13 questions, was applied on a total of 595 respondents from the 10 communes included in the study. The starting point in elaborating the questionnaire was the analysis of the social, economic and institutional situations which led to the identification of the key issues facing the localities and the potential for development. All 10 communes have common points on the population interest for the development of the local business sector; the local business sector accessed funds from various sources; there is a large available workforce, and potential for the socio economic development of the communes.

Key words: questionnaire, commune, sustainable development, rural area, potential

INTRODUCTION

By its role and functions, the agriculture is a major user of natural resources, long-term sustainability depends on the existing sustainable, renewable resources, particularly water and soil. The future projections show that all regions will be affected by the climate change, the regional differences in the evolution of the natural resources and the combined effects of the extreme phenomena are becoming more and more obvious. [9] Our country is already facing current environmental stresses, including increased vulnerability in intensity and frequency of the climate extremes (drought, floods, heat, frost, pests and diseases, etc.), which produce important losses in all economic sectors, especially in agriculture, sector dependent on weather evolution [10].

The concept of sustainable development means all forms and methods of socio-

economic development whose foundation is to ensure the balance between socio-economic systems and natural potential [6]

The most known definition of the sustainable development is given by the World Commission on Environment and Development (WCEF) in the report "Our Common Future", also known as the "Report Brundtland": "the sustainable development is the development that aims to meet the needs of the present without compromising the ability of future generations to meet their own needs"[10]

Based on these considerations we conducted a study on the inhabitants perception in the rural communities on the elements of sustainable development of this environment. It is important to establish resources, needs, opportunities, threats, competitive advantage. Without a strategy, the coherence is missing in the use of funds, resources are wasted, especially time, time passing in the detriment

of the population living in rural area [3].

MATERIALS AND METHODS

In order to analyze the inhabitants perception in the rural area on some aspects of sustainable development, starting from the realities of the socio-economical and technical-urban analysis of the rural area in Călărași county, 3 three specific research methods were used: dynamic economic, deductive and quantitative analysis; SWOT analysis; the economic survey or participatory research involve collecting information from the territory using as research techniques the “questionnaire” and “interview”.

When analysing the aspects of sustainable development in the 10 communes subject to survey, the following sources of data and instruments for getting information about the current state and about the identification of local needs were used:

1. Research on documents. We analyzed the documents provided by town halls of the 10 localities, by Călărași County Council, the Department for Agriculture and Rural Development and other public county institutions, **in order to achieve the diagnostic analysis of the communes**, which included: data about the commune location, about the physical and geographical characteristics; statistics and censuses carried out at local level in the fields: demography, laborforce employment, economic environment, education and culture, environment protection; General Urban Plan (GUP).

2. On site research. On site quantitative research was achieved in the period October 2016 - January 2017 based on a semi-standardized questionnaire, applied face to face, to the respondents domicile and by interviewing the factors with administrative responsibilities. The research recorded the population opinions and attitudes in 10 communes in Călărași county regarding the awareness of the 595 persons questioned on the concept of sustainable development; cleanliness and care of communes; prioritization of urgent investments in the studied areas; the perception changes and

potential of commune development; assessment of the social position of the respondents family: assessment on the life quality in the rural area.

The questionnaire containing 13 questions was applied on a total of 595 respondents from the 10 communes included in the study. The sample was selected with a statistic step of sampling based on electoral lists and on the Registry of Agriculture from the town halls in order to provide a representative sample in terms of age groups and income.

RESULTS AND DISCUSSIONS

Information is very important, it is considered the first step in making development, so in Table 1, we analyzed and presented the awareness of the 595 persons questioned on the concept of sustainable development: 72.3% of all respondents are familiar with the term of sustainable development; only 10.1% said they do not know the significance of this concept.

Table 1. Analysis of respondents awareness on the concept of sustainable development of the rural area

Specification	Total	
	no	%
Yes	430	72.3
	100	x
No	105	17.6
	100	x
I do not know	60	10.1
	100	x
Total	595	100.0

The rural waste differs in composition and quantity from the urban waste. The lack of public sanitation services in the rural area makes impossible to draw up a statistics of the rural waste, so that they can be assessed only approximately. The amount of rural waste is about 0.3 kg/inhabitant/day [1].

For the period 2016 - 2020 the prognosis of the quantity of waste generated by the rural area show that household waste will increase and uncollected and generated household waste will decrease from 2016 to 2020. It can be seen from this prognosis the concern for

waste management in the rural area. In all urban and rural localities, places are designated for waste disposal, but they have no measure to protect the environment and population health. Their location is, in most cases, inadequate, thus jeopardizing the sources of drinking water supply of the localities and landscape. In most rural communities that were studied waste collection is not done systematically, the study noting that waste is carried individually by the citizens in places under the administration of the town halls, where storage is tolerated. However, usually, in order to avoid transport, a large amount of waste is thrown at random, producing a diffuse pollution in the localities, with negative repercussions on groundwater and surface water, soil and air, and with negative effects on sustainable development of the localities and on the living conditions of the population. [7]

Cleanliness and care of the communes is an important aspect for sustainable development and a good developing for improving the living conditions of the inhabitants. Further on, in Table 2 we analyzed the respondents appreciation on this aspect.

Table 2. Appreciation on cleanliness and care of the locality depending on the respondents age

Age	UM	Appreciation on cleanliness, care of locality			Total	
		dissatisfied	Partially satisfied	Satisfied	no	%
< 40 years	No	67	41	30	138	23.2
41-50 years	No	52	37	36	125	21.0
51-60 years	No	29	32	49	110	18.5
61-70 years	No	21	34	60	115	19.3
>70 years	No	11	22	74	107	18.0
Total	No	180	166	249	595	100.00
	%	30.3	27.9	41.8	100	X

Noting that dissatisfaction with the cleanliness and care of the commune decreases from the age <40 years at the age > 70 years. However,

the share is held by the responses of those who are satisfied with the administration of the commune on cleaning and housekeeping, respectively, 41.8% of the respondents are satisfied and 30.3 are dissatisfied with these aspects.

However, when we requested a comparison of the commune in which the respondents live and the communes around 57.98% of those questioned stated that is cleaner than the neighboring communes, only 14.29% considering it is less clean, as shown in Table 3.

Table 3. Comparison made by the questioned persons between the commune they live in and the neighbouring communes

Specification	Total	
	nr	%
cleaner	345	57.98
As clean as	165	27.73
Not ad clean as	85	14.29
Total	595	100.00

Table 4. Prioritization of the urgent investments in the studied localities

Specification	Total	
	no	%
Roads	475	79.83
Cultural center	160	26.89
School	200	33.61
Sewerage	545	91.60
Water	375	63.03
Gas	505	84.87
Respondents	595	100.0

The prioritization of the urgent investments is presented in Table 4: 91.6% of those questioned believe that the most urgent investment is sewerage; Gas investment is supported by 84.9% of the respondents; nearly 80% of those 595 questioned believe that an emergency is represented also by investment in roads; with a smaller proportion are those who support investment in water 63%, 33.6% school renovation and 27% cultural center.

The welfare of a community can be estimated by one dimensional measures such as: poverty rate, the rate of relative deprivation,

unemployment rate, infant mortality rate, life expectancy at birth [5] etc. We used besides these methods, also the respondents own vision and measurement of family welfare and social positioning in the community. In Table 5, we analyzed the respondents appreciation of the social position of their family, and we found out that the majority consider they can be included in the middle class, giving marks between 4 and 7, 62.2% in 1990, 79.8% in 2007 and 81.3% of the total in 2016. We see an increase in the percentages, quite important, over the 26 years. Extremes, with mark 1 to 3, the poorest decreased in percentage from 1990 to 2016, reaching to just 10.08% of the total and with mark 9 to 10, the wealthiest rose by 40 persons, respectively, from 0.84% to 7.56% .

Table 5. Evolution of appreciation of social position of the respondents family on a given scale (1 to 10), for the period 1990-2016

Specification	1990		2007		2016	
	No	%	no	%	no	%
1 to 3	160	26.89	115	19.33	60	10.08
	100.0		71.9		37.5	
4 to 6	295	49.58	340	59.67	340	59.67
	100.0		120.3		120.3	
7 to 8	135	22.69	120	20.17	135	22.69
	100.0		88.9		100.0	
9 to 10	5	0.84	5	0.84	45	7.56
	100.0		100.0		900.0	
Total	595	100	595	100	595	100

In table 6, we followed the social aspects that can directly or indirectly influence the respondents personal development, farms and finally the rural area.

At 4 of 6 aspects, a majority of those that are satisfied, namely (49.58% on house, 46.22% on occupation, 70.59% family life and 58.82% relations with neighbors);

In terms of health, 52.94% are partially satisfied, underlining the statements below regarding the health system. As it was expected, the income are those that cause the most complaints, 28.57% and 12.61% on the occupation.

Table 6. Structure of respondents appreciation on their own situation, regarding various social aspects

Specification	UM	dissatisfied	Partially satisfied	Satisfied	Total responded
Health	no	35	315	245	595
	%	5.88	52.94	41.18	100.0
House	no	25	275	295	595
	%	4.2	46.22	49.58	100.0
Occupation	no	75	245	275	595
	%	12.61	41.18	46.22	100.0
Income	no	170	290	135	595
	%	28.57	48.74	22.69	100.0
Family life	no	15	160	420	595
	%	2.52	26.89	70.59	100.0
Relations with neighbours	no	35	210	350	595
	%	5.88	35.29	58.82	100.0

Regarding self-appreciation of some qualities of those questioned (Table 7), an overwhelming percent have those who appreciate the mentioned aspect. Confidence in their powers and skills demonstrate a great potential for development and highlights that the rural development process is not due to a lack of values and skills of the inhabitants, but rather the lack of support from the community, of the state and lower income, of poor health system as a whole remove the possibility of development of the rural area.

Table 7. Self-assessment, by marks, of the respondents characteristics and competences

Mark	Appreciation by marks (minimum- mark 1, maximum- mark 5)							
	1 and 2		3 and 4		5		Total	
	no	%	No	%	no	%	no	%
UM	5	0.8	175	29.5	415	69.7	595	100
Initiative spirit	5	0.8	180	30.3	410	68.9	595	100
Welfare	-	-	194	31.9	401	68.1	595	100
discipline	5	0.8	175	29.5	415	69.7	595	100
Health	5	0.8	125	20.9	465	78.2	595	100
Family	-	-	155	26.1	440	73.9	595	100
Skill	5	0.8	150	25.3	440	73.9	595	100
Work	15	2.5	140	25.2	430	72.3	595	100
Ambition	5	0.8	180	30.3	410	68.9	595	100
Receptivity to new	5	0.8	115	19.4	475	79.8	595	100
Honesty	15	2.5	90	15.1	490	82.4	595	100
diligent	10	1.68	140	23.5	445	74.8	595	100
Realism	-	-	130	21.8	465	78.2	595	100
Courage, self confidence	-	-	150	25.2	445	74.8	595	100
Saving	-	-	150	25.2	445	74.8	595	100

Development can occur after various steps to improve the quality of life and the living conditions in each locality. The following

table presents some aspects, components of sustainable development, on which respondents were asked to assess.

Table 8. Respondents appreciation on various development characteristics of the locality

Specification	Dissatisfied		Partially satisfied		Satisfied		Total
	no	%	no	%	no	%	
About your locality, in general	85	14.4	165	27.7	345	57.9	595
Cleanliness, care of locality	180	30.9	166	27.9	249	41.8	595
Public order in locality	152	25.5	138	23.2	305	51.3	595
healthcare	110	18.5	205	34.5	280	47.0	595
School, kindergarten	175	29.4	235	39.5	185	31.1	595
Transports in the area	318	53.4	228	38.3	49	8.3	595
Road in locality	287	48.2	257	43.2	51	8.6	595
Locality supply	145	24.4	216	36.3	234	39.3	595
Cultural life, possibilities to entertainment	308	51.8	216	36.3	71	11.9	595
Locality priest	76	12.7	134	22.5	385	64.8	595
Major	166	27.9	197	33.1	232	30.0	595

Regarding the aspects that are fundamental to the community development, measuring the respondents answers we see in Table 8: 30% are satisfied by the major, 41.8% of cleanliness and locality in general, 51.3% of public order, and 47% of healthcare and 64.8% of the locality priest; almost half of all those questioned are partially satisfied at the following categories: transport in the area of the locality supply, locality roads and cultural life; those who are dissatisfied, are ranging from 76 persons to the priest of the locality, to 318 persons to the local roads.

Culture always followed maintaining and feeding the soul and spirit evolution of each era.

Once was agriculture, which the Romans called it "colere-cultus". It was about growth and keeping the needs of life. What we need today is also an "agriculture", of soul and spirit.

What is needed to maintain life, the spiritual food is represented by values to be cultivated. From the existential perspective culture is understood also as the cultivation of values[8]. Once this cultivation of values, the development of intellect, man, space occur.

[3].

Table 9. Appreciation of questioned persons on the importance of commune development aspects

Specification	APPRECIATION WITH MARKS					
	Mark 1 and 2		Mark 3 and 4		Mark 5	
	no	%	No	%	no	%
Support from the budget	-	0	140	23.5	455	76.5
Reforms, privatization acceleration	52	8.8	123	20.6	420	70.6
Intensive development of agriculture	17	2.9	70	11.8	508	85.3
Achieving local autonomy	35	5.8	158	26.6	402	67.6
Development of culture institutions	70	11.7	123	20.7	402	67.6
Own effort of local communities	37	5.9	121	20.6	437	73.5
Development of non-agricultural sectors	37	5.9	206	34.9	437	73.5
Tourism promotion	105	17.6	121	20.6	368	61.8
Infrastructure development	70	11.7	140	23.4	385	64.7
Improvement of healthcare	72	11.8	121	20.6	402	67.6
Elaboration of projects adequate for locality development	52	8.8	88	14.7	455	76.5
Capital attracting	17	2.9	70	11.8	508	85.3
EU grants	17	2.9	88	14.7	490	82.4

With maximum importance (mark 5) were appreciated by most people all the characteristics, but depending on the obtained percentages, the most important were considered: support from the budget (76%), infrastructure development (65%) own effort of the community and development and non-agricultural sectors, with 67%, the intensive development of agriculture (85%) and EU grants (82%).

Less important for development (marks 3 and 4) were nominated: achieving local autonomy and development of cultural institutions (20.7%), improving healthcare.

The tourism promotion is the least appreciated way for development, it obtained 17.6% in mark 1 minimal importance.

The responds structure shows a certain homogeneity, concluding that the respondents consider all the ways listed above very important for the commune development.

CONCLUSIONS

By the questionnaire process of the 595 inhabitants of the communes, we consider that the active and continuous involvement of the

inhabitants in the socio-economic development of the communes will gradually increase, once with the awareness that every inhabitant must be actively involved in the community development of the locality where they live.

All the 10 communes have points in common, namely: the population is interested in local business sector development; local business sector accessed funds from various sources; there is a large available workforce; various funds can be accessed based on staff experience in the local administration; the existence of waste platforms; good electricity and telecommunications networks, the continued development of real estate; the existence of numerous companies in vegetable, livestock sector and agriculture services and sales; high share of private ownership of arable land; favorable natural potential for tourism development; existence of various educational and cultural buildings (schools, library, cultural center) [6].

The interested groups that could contribute to the development of the rural communities directly are local authorities, companies in the locality interested in promoting activities and in particular the manufactured products, interested in local economic development by promoting electronic commerce, providing financial and technical assistance for the adoption of innovative solutions in the private sector, teachers, students wishing to return to the commune after graduation, the committees of initiative established under the projects implemented over the last years in the locality and investors attracted by the facilities provided (infrastructure, the potential of young population, spaces, possibility to gas network connection in the near future, urban land available for construction of houses and for investments) [4].

In a hierarchy of the way in which local public services are operating, the sewerage system, gas, roads in the commune together with the drinking water network, are the main areas where the inhabitants feel the need for urgent and substantial improvements.

We appreciate as main opportunities: internal

and cross-border cooperation development; SME sector development and services; increase of tourism potential and improvement of quality of tourist services; diversification of agricultural production; improvement of the education system; regeneration of the rural communities [7].

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