MODEL AND METHODOLOGY OF PROJECTING A STRATEGY FOR SUSTAINABLE DEVELOPMENT OF HUMAN SETTLEMENT SYSTEMS (CASE STUDY BACĂU DISTRICT)

STOICA MARICICA

Academy of Economic Studies

Abstract: The model and methodology of projecting a development strategy are designed by starting from the concept of sustainable reconstruction resulted as a follow to identification, investigation and diagnosis of ecosystems and projected and built up systems on the territory of Bacău district.

Keywords: strategy, model, methodology, objectives, policies, programmes, projects.

1. INTRODUCTION

Projection of sustainable development imposes to find those development alternatives which are ecologically sustainable, economically viable, socially acceptable.

This supposes the following: assurance of life quality, assurance of food safety and security, utilization rate of regenerable resources must be under their regeneration rate, rate of utilization of non-regenerable resources should be under their replacement rate, preservation of diversity (biological, cultural, ecological, ethnical, of language) reduction of anthropical pressure of projected and built up systems upon ecosystems.

2. MODEL

The model shows in a logical succession the phases which have to be gone through in elaborating the strategy (Fig.1).

3. METHODOLOGY

3.1. Elaboration of strategic objectives

The concept of sustainable reconstruction imposes attaining following strategic objectives:

1. reconstruction of natural environment: air and climate, water, soil, biodiversity, forests;
2. economical-social reconstruction: infrastructure, human settlements, institutions, industry;
3. integration of economical-social reconstruction into the natural environment.

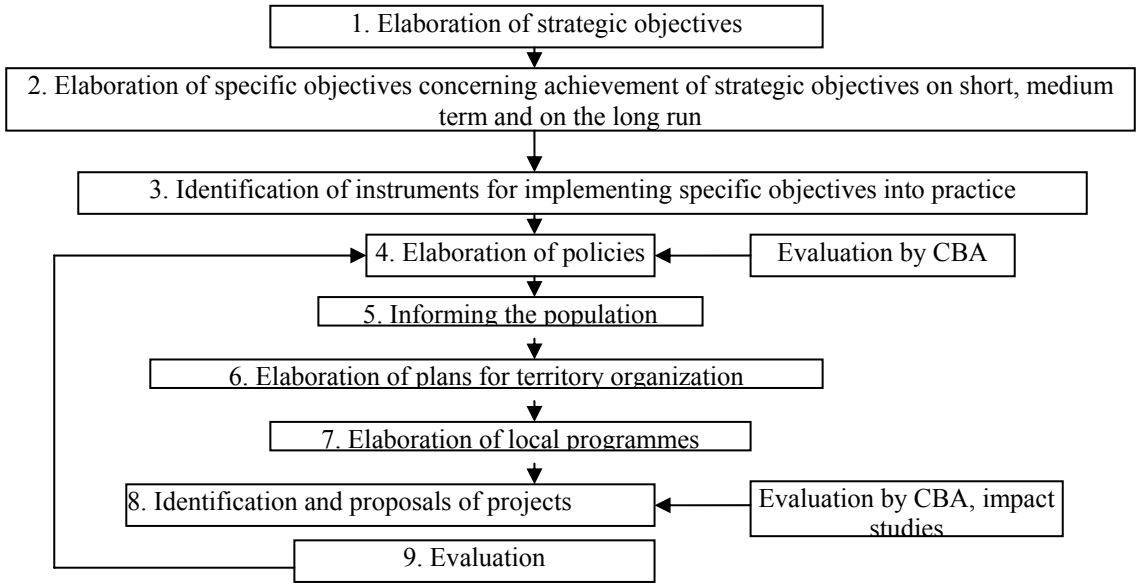

Fig. 1: Phases of strategy elaboration

3.2 Elaboration of specific objectives aimed at attaining strategic objectives

Specific objectives are revealed after investigation and diagnosis of ecosystems, analysis of territorial balance.

Concretely, it is mandatory to attain following specific objectives:

- Restoration of ecological integrity and structural and functional preservation of ecosystems supposes both an increase in stocks of critical natural capital (natural and seminatural ecosystems) up to a level which should assure a recycling capacity corresponding to the degree and type of pollution registered at the level of district, and the restoration and maintenance of natural capital (natural, seminatural and anthropized ecosystems) in order to maintain/increase their production capacity and support of natural capital which constitutes the matter of life.
- Increase in metabolism of projected and built up systems consists of reduction of energetic consumptions and natural resources by adopting technologies able to contribute to the decrease in flows of waste "flowing" from projected and built up systems towards natural capital, through recycling and reutilization.
- Recalibration of projected and built up systems according to the capacity of production and support of natural capital imposes planning of natural resources utilization in physical terms, that is a sustainable administration of resources. This means that, for critical regenerable and non-regenerable resources the exploitation rate should be limited by decoupling from these resources and for regenerable resources it is imposed to maintain the exploitation rate under the regeneration rate. It is also intended to identify some alternatives for economic growth/development by attracting into the economic circuit new available resources and the efficient use of anthropic capital.
- Assurance of life quality imposes the administration of following aspects: living conditions, ambiental natural and anthropic comfort, physical and mental health, food safety and security, level of education and culture, natural and anthropic hazards.
- Preservation of cultural and moral educational patrimony imposes revitalization of zones with a rich architecture patrimony of hystorical-cultural interest, bringing back in the individuals' attention local customs and traditions and traditional production and consumption models.

- Preparation of human resource imposes the following:
  - adaptation of school and university curricula in order to implement sustainable reconstruction;
  - preparation of decision makers and of state institutions staff in a holistic system to administrate sustainable reconstruction;
  - creation of educational units with a profile and a research-development sector for the valorizing of local available resources;
  - creation of the own technological policy which should valorize the experience and knowledge of specialists, encouraging initiatives which have "local roots" and prove to be viable;
  - creation by education of a thinking model, creating intelligence and formation of a new local, competitive management, according to the principle „management makes the difference".

3.3. Identification of instruments to put the specific objectives into practice

The whole process of conception and implementation of the development strategy imposes the utilization of a variety of instruments of economical, technical, managerial, financial nature and of provisions dressed under different forms: STAS standards, norms, laws, local norms, regulations.

In this respect, each specialist shall use and recommend the appropriate instruments aimed at attaining the specific objectives that he/she proposes.

3.4. Elaboration of environment, economical and social policies

Policies have to follow step by step the achieving of specific objectives proposed by specialists, by using possible instruments during reasonable periods.

Policies have to aim at going through a few phases and tracing possible routes by participation of all specialists.

Formulation of sectoral policies shall be made by a global approach to reconstruction of the whole district in order to assure a balanced development, calibrated on the capacity of supportability of the critical natural capital of the district.

Because all needs at the level of district are manifested simultaneously and even in opposition one to another and financial resources are limited, it is imposed, during the planning process of policy implementation, to use the Cost-Benefit Analysis which allows the conciliation of interests on short term with those on the long run. During policies elaboration and planning process, the aspirations and general or particular interests both of the population, as well as those of the economic agents shall be seen, both on short term and on the long run.

3.5. Informing the population

The aim of this phase is to gain coherence and participation of the district population in the implementation of the strategy. Participation of population which has to define and assume its future is of a vital importance in the implementation of the strategy, because population has to be aware that it is its strategy and the one of future generations and that political parties are only called to implement it, turn by turn, thus insuring continuity and efficiency in allocating resources.

3.6. Elaboration of plans for territory organization

The plans of district territory organization represent a spatial transposition of district development strategy, being the only way to coordinate the transformation, restructuring and remodelling of district territory according to the strategic objectives, with the existing situation.

Organization of territory based on plans (maps) allows the approach to the related problems in an integrated system, from general to particular, from the level of district to the level of urban and rural localities, organization of agricultural-forestal territory, waters, communication ways, lands on usage categories.

Execution in an unitary conception and mutual interdependence, territory organization assures a systemic development of urban and rural network, complex equipment of territory, valorization of natural and human resources, protection of ecosystems in accordance with the strategy provisions for the district development.

3.7. Elaboration of local programmes

Decentralization and autonomy of localities and institutions impose to have programmes based on the elaborated policies for reconstruction on institutions and localities, to settle deadlines, measures, actions, instruments and actors responsible for their achievement.

3.8. Identification and proposal of projects

Scope of projects is to solve local programmes on a concrete basis. There may be projects for rehabilitation of human habitations infrastructure, ecological reconstruction of ecosystems, investments etc.

Projection activity is a creative activity and synergy transfer between projection phases is only realised when specialists collaborate starting from product conception, technologies, constructions including from elaboration of solutions concerning reintroduction into the economic circuit of wastes and auxiliary materials resulted from production process, from recycling used products and construction materials when their shell life expired, identification and reduction of negative externalities induced by investment objects over the environment, until induced effects through their demolishments, disaffection or dismantling become internalities.

This type of projection - integrated projection imposes new professional ethics based on promotion of inter-disciplinary research and replacement of fragmented action taken by specialists with an attitude based on the holistic approach to the projection process.

Integrated projection imposes the study of the relations whole from the inter-disciplinary prospective of environment and the integration of ecological, socio-economical criteria specific to human settlements, in conception and execution of projects. Projection thus becomes an instrument which reduces and solves unbalances generated by the aggression of human activities upon natural environment, thus coming to support energetic and prime materials.

Evaluation of investment projects imposes the obligatory utilization of cost-benefit analysis or impact studies, as the case requires.

3.9. Evaluation

Systematic evaluation has as a goal the follow up of the results based on monitoring data supplied by the decentralized institutions of the district achieved from implementation of policies, programmes and projects.

4. CONCLUSIONS

The model and the proposed methodology integrates social and economic environment objectives into one and only strategic frame in which recommendations, goals and actions are to be found, same as included in Local Agenda 21 in the way it was formulated in Rio de Janeiro in 1992, at the UN Millenium Summit from 2000 and completed in Johannesburg in 2002. The full success in applying the strategy in Bacău district depends though on the implementation of development strategies in the other districts of the region and in the country.

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