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SUSTAINABLE RURAL DEVELOPMENT: THAT DISTINGUISHED STRANGER (A REVIEW).

El desarrollo rural sustentable: ese ilustre desconocido (una revisión).

Lisette Bustillo García¹, Juan Pablo Martínez Dávila² and Felipe Gallardo López²

¹Departamento Socioeconómico, Facultad de Ciencias Veterinarias, Universidad del Zulia. Maracaibo, Estado Zulia, Venezuela. E-mail: lbustillo@yahoo.com ²Colegio de Postgraduados. Campus Veracruz. Programa de Agroecosistemas Tropicales. Apartado Postal 421. CP 91700. Veracruz, Ver. Tel: (52)-(229)-9207257. E-mail: jpmartin@colpos.mx

ABSTRACT

To analyze the importance of Sustainable Rural Development (SRD), the literature was reviewed for philosophical and theoretical elements of global experiences. The final objective was to construct a conceptual and operational model of SRD which could be evaluated using interactive approximations. This proposal is based on the democratic participation of targeted communities and management of their environment to achieve balanced and sustainable development. Environmental management thus combines the objectives of political and economic democracy with social and cultural ones through a process of economic and political decentralization. It is guided by principles of ecological organization surrounding production activities, ethnic and biological diversity in the environment, and productive self-management of the communities. The proposed concept of SRD, being a mental abstraction and a time involved process with different socio-economic and environmental contexts, cannot be constructed as a general statement. Instead, it is likely that its design would be more useful at providing general insights for others communities.

Key words: Sustainable rural development; sustainability, concepts.

RESUMEN

Con el propósito de analizar la importancia del Desarrollo Rural Sustentable (DRS) se presenta una revisión bibliográfica que explora, con base en elementos filosóficos y teóricos, un grupo de experiencias mundiales, que busca finalmente construir un modelo conceptual de DRS, el cual se pueda operacionalizar y

evaluar en aproximaciones iterativas. Esta propuesta está basada en la participación democrática de los pueblos y en el manejo de su ambiente para alcanzar un desarrollo igualitario, sustentable y sostenido. El manejo ambiental que se propone, conjuga así los objetivos de la democracia política y económica, con la social y cultural a través de un proceso de descentralización económica y política, guiado por los principios del ordenamiento ecológico de las actividades productivas, de la diversidad étnica y biológica del ambiente y de la autogestión productiva de las comunidades. La concepción del DRS planteada, por el hecho de ser una abstracción mental y por ser un proceso contenido en tiempos, contextos socio-económicos y ambientales diferentes, no puede construirse como un enunciado generalizador. Aunque, es probable que líneas de su diseño pudieran extrapolarse hacia ámbitos generales de otras comunidades.

Palabras clave: Desarrollo rural sustentable, sustentabilidad, conceptos.

INTRODUCTION

A society of information in the dynamics of a globalized world, swallows without digesting a large amount of knowledge, leading to the simplification of concepts potentially valuable for life in a globalized society. Concepts such as diagnosis, strategy, planning, sustainability, rural development, and others, have fallen in value, permitting them to be fashionably abused. Strategies to achieve sustainable rural development are being confused with procedures, which have led to cases of devaluation. Therefore, the objective of this paper is to explore theoretical and philosophical elements, for construction of a conceptual and operational model of Sustainable Rural Development (SRD) that can be evaluated with recurrent approximations.

Rural development is complex, often going beyond technical order, such that there is no discipline or simple methodological approach which might define or articulate the physico-biological, cultural, political, and economic processes leading towards states of development [1]. Thus, since 1950, different attitudes towards rural development have been found worldwide, ranging from community development, intensive agricultural development, integrated rural development, sustainable approaches, and a variety of participation paradigms [9]. These attitudes are the instruments for development and have been applied in Latin America where they are based on programs of structural adjustment [2, 23] that serve for foundations economic growth. Nevertheless, given the changes and indicators shown by the different Latin American rural societies [4], the processes demand changes in the eyes of urban and rural observers, even if many of the former continue perceiving the issues using past biases.

The concept of Rural Development has been used in Mexico since 1985, but was expanded in 2000 by adding the concept of sustainability, resulting in a new law. Presently it is not possible to generally define what SRD is, or its relationship with other kinds of development such as urban industrial or regional economic. More importantly, who will do the developing and what will be the results? The steps from which to operate and how these steps should take place must be determined. All the steps are basically conceptualized to clarify the information to communicate or to specify the operation of ideas, projects, programs, and action plans.

The best-developed conceptions of the topic have been aphoristical and atheoretical [22], are found in the structural-functional literature, and are limited to the interpretation of problems considered as dysfunctions whose solutions do not follow from the typical conflicts and contradictions of modern society. The conventional theory of development tries to find solutions only in structural market changes, providing vague responses to the contradictions of the possibility of unlimited growth with accumulative and growing environmental changes [3].

Hegel [13] stated that the history of human progress is founded on a series of conflictive events between two positions (fact and contradiction), and as synthesis of a solution to a societal struggle to achieve better living conditions. SRD likely has a more realistic perspective of solution than has been conceptualized to date or can be viewed in context with other approaches having this intrinsic philosophy. Vilorio [25] thinks that most initiatives for change fail despite the many resources and people dedicated to the process. Yet, limiting forces should not be considered as obstacles, but instead treated as challenges to overcome, conceiving the sustained change in a more biological than mechanistic way, as it occurs in nature.

In addition to the intrinsic complexity of SRD, capitalism is the driver that must not be overlooked [27]. This pattern of domination, exploitation and conflict, articulated around the

mercantilist capital-work axis, integrates all forms of work historically known. The inhabitants of such domination space are integral to the inequality and conflict, with respect to controlling production resources, institutions, mechanisms for authority and violence. Democracy in the distribution of resources and institutions, thus is often seen as relative and limited [18].

Given the complicating but not limiting records thus described, the world makes an incursion into the interior of SRD, beginning the process with internalization, contextualization, and conceptualization of sustainability as an integral part of rural development and a base for the protection of the environment and its natural resources. This primacy has been taken to exist, even without clarity, in most of the political and scientific debates around the world. García [11] argues that integration of the sustainability concept by developing countries demonstrates acceptance that the neoliberal and globalizing model of development had substantive defects in recognizing limits which, when ignored, could endanger resource supplies that maintain the expansion of western civilization.

The phrase “sustainable development” has been spread and accepted world-wide, likely because of its own theoretical and political ambiguity. The phrase has even been adopted by the World Commission of Environment and Development of the United Nations Organization (UNO) and maintains that “the present needs must be satisfied without compromising those of future generations”. An interpretation could be that the world economy must grow in a sustainable way, over a base that indefinitely supports the natural resources in use. Such a definition is not justifiable, because if sustained economic growth maintains its focus on the use of fossil fuels, global warming will continue while fossil fuel supplies are exhausted.

The conceptual ambiguity of sustainability is in its measurement, for which a great many different and contradictory indices have been generated. A typical example was given at the Economic Meeting of Davós in 2001, where a group named the Global Leaders of Tomorrow (GLT) presented a ranking of 122 countries *via* an Environmental Sustainability Index (ESI). Months later, the journal “The Ecologist” published a sustainability index, different from the previous one, utilizing the same data, but selecting the variables of the indicator in a different way, and yielded opposite results [26]. The results showed that some highly industrialized societies (Germany, France, U.S.A., Japan, and South Korea) in the ranking of Davós appeared as most sustainable, while in the other classification they were among the least sustainable countries. The best-positioned country according to the ranking of GLT was Finland, while according to “The Ecologist” the Central African Republic was most sustainable. The ambiguity of such indicators depends on the criteria for selecting the variables and the weighting of their components.

The paradigm of sustainability may be grouped into three models of interpretation: an analytic view, a holistic view, or a model governed by strict rules [14]. The first approach results

from the principle of rational resource management with their respective indicators of cause-state-effect reaction. The holistic point of view, because of the intrinsic uncertainty of the ecosystems, arrives at the principle of precaution in the management of resources, defining indicators such as system load capacity. The normative model defines objectives and indicators in a complex situation through consensus on the side of the affected and interested members. Science provides instruments of monitoring, but by regulation of the concept, and sustainability finishes by being an objective of policy reduced to ethics of responsibility.

How can we grow economically *ad infinitum* while maintaining the base of natural resources for future generations to enjoy at the same sustainability level that we possess today? Leff [15] argues that economy with its production-oriented dynamics appears as an entropy process that affects environmental structure, while life is a permanent process of complex reorganization and differentiation. Democratic transition, from the perspective of an ecological culture, implies passage from homogenization of the world, from radical opposition among political blocks, from the dilemma between conservation and economic growth, to spaces of political plurality and to the complementation of alternate development projects.

Berger [5] agrees with the political plurality proposed by Leff [15], but expresses the importance of accounting for two additional types of complexity, that make it difficult to identify suitable political options and to implement corrective policies. On one hand, there are the complex environmental and economic interactions, affecting availability and quality of natural resources and the decisions on how to use these resources. On the other hand, there are complex social interactions among economically and culturally diverse groups, often with competing interests and conflictive power relations.

Beyond quantitative indicators, development takes forms in which qualitative factors are influential, with expected and unexpected consequences [21] that need to be analyzed. The negotiation process is placed under conflict [16], generating results that often lead to the construction of an alternate paradigm, creating a new principle of productivity. This productivity has been called "eco-technological", generated by the articulation of ecological productivity of natural resources, technological productivity of the transformation processes, and social productivity of the organized communities. The environmental management proposed thus combines political and economic objectives with social and cultural democracy through a process of economic and political decentralization. This process is guided by principles of ecological organization of production from ethnic and natural biological diversity in the communities with productive self-management as the base of this proposal.

After a phase of introducing the topic from an epistemological scientific perspective, where science is an instrument of contribution to SRD and not an end in itself, the present paper discusses three forms of Rural Development without concep-

tual construction, and contrasted with one another, where a concept will be methodologically designed and made operational. Finally, a group of reflections is presented as a synthesis of the discussion.

MATERIALS AND METHODS

A comparative critical analysis was performed on the SRD program concepts that have been used to achieve SRD. The operative and conceptual antecedents of SRD in México, Peru, and the European Union showing the different view points and starting points for Latin America and near Europe are focused. Upon it was organized this discussion to formulate this proposal.

The methodology proposed is from a local level including the nationally existing relations for all SRD dimensions. The structural dimensions to be included are political, economical, social and cultural. However, they are not disconnected because in all phases of strategies to reach SRD, the dimensions are included in each component and its effectiveness will depend on combined action between people and government.

This proposal is based on methodological rules for conceptual construction [6, 12], whereas the components definition and phases and indicators for SRD strategies were obtained by group construction in planned workshops with students. The analysis was based on SRD antecedents, the participant experience, and the evaluation of applied diagnostics. Finally interactive approximations and a discussion process were used to reach a consensus on a SRD concept and model.

OPERATING AND CONCEPTUAL RECORDS OF SRD

In this section, experiences with SRD in México, Peru and the European Union are examined that represent experiences in Latin America and Europe.

The Program of Rural Development in Mexico

Concept and operation to achieve Integrated Rural Development (IRD) in Mexico, began with implementation of the National Program of Integrated Rural Development (PRONARDRI) during 1985-1988. In the National Development Plan 83-88, the policies of IRD and of an integrated agrarian reform were defined as strategic pillars for national development. During this phase, even though the construction of the IRD concept had not begun, there was an attempt expressing "*the integrality of rural development*". In short, integrality of rural development includes economic, social, and political aspects, with a definite absence of environmental ones [20].

The Law of Sustainable Rural Development (LSRD) passed in Mexico in 2001 because of world-wide concern about global warming. The LSRD introduces the concept of sustainability, although still somewhat ambiguous. Article 3

stated: "...SRD is the integral improvement of social welfare of the population and the economic activities in the area outside the nuclei considered urban, according to the applicable regulations, guaranteeing the permanent conservation of natural resources, biodiversity, and environmental services of this area". The concept is based only on the objectives of SRD (structural and functional concepts being absent) and its relationship with the conceptual systems in which it is inserted. The concept does not match with the general content of the Law itself, and the absence of conceptual synthesis limits the achievement of its objectives.

Experience "Plan Sierra de Peru"

The case of the "Plan Sierra de Peru" based on the understanding of Dourojeannie [8], of the natural resources section of the Latin American and Caribbean Institute of Economic and Social Planning (ILPES), a subsidiary of the UNO, will now be discussed. Dourojeannie [8] claims that the greatest obstacles are found in the lack of conceptual consensus and therefore in the multiple interpretations of the concepts of sustainable development, equity, and environmental sustainability. This implies that each country or region needs to specify what each term means for the participants in the management process.

Finally, the ILPES and Dourojeannie [8] do not propose any conceptualization of SRD, although they advise that it should be developed for each situation independently. They argue that an important obstacle is the lack of indicators for measuring sustainable development. They state that none of the three objectives of sustainable development (economic, environmental, and social) is at present measured with compatible parameters, and that the indicators employed to quantify each objective do not have a common denominator or universal conversion formula.

In order to explore the real situation, the objectives of the Special Plan Sierra de Perú Project were: 1) to increase crop productivity and prioritized breeding; 2) to increase the income of Andean producers, and 3) to reduce or stabilize migratory flows. These objectives, if they reflect what the multiple actors involved want, give evidence that only technical aspects were assessed, which is immediately limiting. Plaza [17] focused on what Plan Sierra failed to do, including before being tested. However, he does not mention the importance of not using conceptual statements, or of people that are not made aware of their absence.

"LEADER" experience in the European Union

Rural development in Europe has been promoted in consecutive increments since 1991 through the LEADER Project

(Liaisons Entre Activités de Développement de l'Économie Rural: Relations among Development Activities of Rural Economy) [19]. The Only European Agreement was enacted as a territorial instrument to contribute to the correction of regional imbalance using a process of participation in the development and structural adjustment of the less developed regions and the restructuring of industrial regions in decline [7]. To date, the three phases operated by the LEADER Project have been so successful, that they were instituted throughout the European Union over the last several years.

De Los Rios [7] mentions that as a consequence of the Brundtland Report the LEADER project agrees with the concept of sustainable development, and adopts the second conceptual Brundtland proposal, which ¹states: *The needs of ethics of sustainability based on the respect of the limits imposed by the natural systems using the advances of progress and technology.* Even though Rural Development was regarded, its construction is still general and of little use for designing SRD¹ plans and appears more as a statement of regional politics. However, the approach of the LEADER project has been territorially beneficial with optimal planning and operation of the administrative machinery of the European Union. It is remarkable that without defining orthodox concepts, the theoretical foundation is solid and coherent, and corresponds with territorial, endogenous, integrated, and sustainable development [24].

It should be noted that the LEADER Project, though operated rurally, is designed to achieve economic development, and all the implementation and operational capacity is directed towards such a purpose. The difference between projects in Latin America and Spain (and Europe) is that in the latter the component elements of rural development are: quality of life (health, housing, food, clothing, community services) and human development (education, training, leadership, management, negotiation). Efforts were then directed to consolidate their organization for economic development, with the unlimited support of the European Union, national and local governments. The degree of negative impact on the environment must still be evaluated, effects generated by economic rural activity. One evaluation states that only 279 of the interviewed people in and around Madrid expressed the opinion that LEADER provided influence in finding a solution to the present environmental problems [7].

The Concept of SRD: An Operating Local Mexican Experience

To explore a set of procedures to achieve Sustainable Municipal Rural Development, the Colegio de Postgraduados has been granting diplomas using this approach, and offering

1 At present in the European Union, Rural Development is understood as the balanced and self-sustainable process of revitalizing the rural world, based on its economic, social, and environmental potential by means of regional politics and an integrated application of means with a territorial base on the part of participant organizations [19].

programs with a high academic impact that had not been foreseen in student training and is reflected in their professional activities.

The program uses the following steps: 1) general records of SRD, 2) concept group building of SRD, 3) concept operationalization of indicators and variables, 4) diagnosis of the variables generated in a Municipality under study, 5) design of objectives, phases, and strategic actions in order to solve problems found in the diagnosis to rationally exploit the potential which the Municipality might possess, and to attend to the demands expressed by the rural population, and 6) implementation and operation of an evaluation program for carrying out monitoring of strategy efficiency to achieve defined objectives.

The general proposal starts from the idea that it is necessary to fulfill methodological rules in conceptual construction [6]. First, the concepts are not reality, but abstractions of man expressed to present a model of this reality to be communicated on the level closest to this reality [6, 12]. The proximity of comprehension of this reality through the concept will depend on the capacity of the concept builders to abstract the elements of this reality.

The abovementioned authors advise that the formulation of the concept be made through consecutive partial abstractions which permit highlighting of the properties and common links of a group of similar processes. The result is the synthesis of these particular abstractions in a general statement, the concept. De Gortari [6] alerts to the frequent situation when concepts are built and abandoned in books and articles, without conceptual construction being contrasted with reality by research to provide improvements, reductions, or rejections. This is the process that historically has filtered out important knowledge, permitting the advance of science and its use in solving societal problems.

The exploration process begins with an analysis of the principal components of the SRD concept. Subsequently, a set of proposals is outlined, focusing on clarity, importance, and priorities. In TABLE I, a group of indicators and variables is outlined (SRD components), which in this phase of the document helps to define the objective of SRD. Equation (1) shows

that within SRD, the quality of life of the rural population depends mostly on the level of their own capacity for improving self-organization and of better management and production methods.

$$QL = (HD, AD) \dots \dots \dots (1)$$

$$AD = (HD) \dots \dots \dots (2)$$

This simple reasoning is backed by Equation (2), which shows that agricultural development will only be obtained through improved human development of the rural population and by extension of SRD. The principal element and priority is to achieve human development of the rural population so that it may reach the objectives of SRD. This proposal includes the capacity of agricultural producers to handle, negotiate, and direct conflict situations to achieve their own development and eventually that of wider regions. In this sense, the historical progress of humanity has been the result of their capacity to struggle for its realization [13].

Based on the proposals of the previous section, fundamental abstractions are expressed and considered in the construction of the concept of SRD:

- a) SRD is a process related to Urban Industrial Development (UID).
- b) The processes of SRD and UID make up the process of Regional Economic Development.
- c) SRD is essentially a process of sustainable change in rural populations.
- d) SRD is a process based on changes of attitude and behavior of rural peoples, in the development of their abilities, and quality of life in regional agricultural development.
- e) SRD is a process supported by changes in socio-economic attitude and behavior (public and private institutions).
- f) SRD has the following fundamental objectives: To produce sustainable food, raw materials, and environmental benefits required by society; to maintain adequate states

TABLE I
COMPONENTS OF SUSTAINABLE RURAL DEVELOPMENT/COMPONENTES DEL DESARROLLO RURAL SUSTENTABLE

SRD	Quality of Life (QL)	Human Development (HD)	Agricultural Development (AD)	External Support (ES)
	Health	Education	Management of Production Factors*	Credit
	Food	Training	Adequate production and quality	Insurance
	Housing	Management	Organization for production	Saving
	Clothing	Negotiation		Subsidies
	Services	Leadership		Consultancy

*Land, work, and capital.

of welfare for rural populations, and to rationally sustain the base of natural resources so that the future generations may enjoy them.

- g) In Mexico, based on the Law for SRD, the processes must be promoted and regulated by the Municipality Councils for Sustainable Rural Development (COMUDER), passed by the assembly composed of public and private institutions, and regulated by the Law and representatives of the Municipal civil society [10].

After a group discussion process among the students and in presence of the assistant professors, through steps of consecutive approximations, a consensus of a general concept of SRD was generated and can be expressed as:

“Sustainable Rural Development is a regional process interrelated with urban-industrial activity and services. Its dynamics are based on changes in attitude and behavior of people and their rural context. The emphasis is on management capacity and handling, optimal conservation and recovery of natural, economic, and social resources, with the purpose of achieving economic improvement and welfare in the country, and satisfying their own needs and those of society. This concept

is based on the participation of public and private programs and is designed, managed, operated, and evaluated by the District and Municipality Councils, which the Law regulates for these purposes”.

Based on the abovementioned fundamental abstractions and on the conceptual statement in TABLE II, the steps and general indicators of performance are provided. There is a definite purpose for each step of the SRD strategy. The indicators of the first step regulate the working order of the Municipal Councils for the SRD and initiate the support programs of those who attend the Council. The second and third steps improve the capacity of the rural population in terms of technology and awareness of their rights and obligations to guide their development processes. Step four starts the processes of sustainable resource management, producing what society needs. Once initiated, the strategies of relating to urban-industrial dynamics promote resource management leading to the integration of rural development into regional economic dynamics.

In FIG. 1, the operating methods for the plan are shown. Given a set of theoretical approaches, the concept of SRD was

TABLE II
STEPS AND GENERAL INDICATORS OF THE SRD STRATEGY/FASES E INDICADORES GENERALES
DE LA ESTRATEGIA PARA EL DRS

Steps	Indicators
Design efficiency, implementation, operation and regulation of SRD in the Municipal Council.	Quantity, type and efficiency of participating support for SRD.
Changes in attitude and behavior of rural populations and their territorial context towards SRD.	
Changes in capacity of management, negotiation and leadership of rural populations to achieve SRD.	
Satisfying needs for food, raw materials and environmental services, required by society.	Economic improvement and welfare of the country people, Improvement in management, optimal conservation and recovery of natural, economic, and social resources.
Direct Rural - Urban Industrial Relation.	
Regional economic dynamics, where Urban-Industrial and Rural features are integrated	

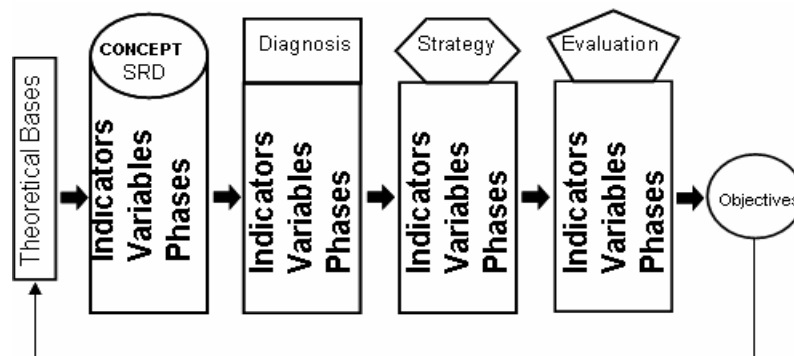


FIGURE 1. OPERATION OF THE PLAN FOR SUSTAINABLE RURAL DEVELOPMENT/OPERACIÓN DEL PLAN
PARA EL DESARROLLO RURAL SUSTENTABLE.

constructed and made operational for the respective indicators and variables for each step of the Plan. Each of the specific variables can be subsequently diagnosed to understand its present problematic situation. Once the problems for each variable have been identified, a strategy to reduce them is designed, and an evaluation program is implemented to monitor the efficiency of the solution strategy.

In the practice of development planning, it is unavoidable that each solved problem and each finished plan may generate new problems which lead to the design of new plans until the dynamics of rural development is integrated into the dynamics of rural society and the processes related to it.

FINAL REFLECTIONS

The conception of SRD, because it is a mental abstraction and a process involved in time and differing socio-economic and environmental contexts, cannot be constructed as a general statement. However, aspects of its design could be extrapolated nation-wide.

This proposal is flexible, because processes are managed as in real life. The medical doctor diagnoses the patient's health problems, designs a strategy to solve them, and initiates an evaluation program to learn if the designed strategy (treatment) has solved the patient's health problems. If real life for individuals and social groups is handled using operating plans, why is SRD not designed based on conceptual processes and operated using planning criteria? Presently no clear answer is available, but we think that it can be attempted.

Admittedly, the concept of sustainability is still not very clear. Nevertheless, even if the diffuse state of the concept could be manipulated by the world's political and economic hegemonies to utilize the achievement of SRD in their favor, the world-wide search for better management of the natural resources is inevitable. The world needs more equity in the distribution of riches and justice; the improvement of human capacities leads to more rational use of resources and to increasing awareness of man's role in the conservation of the planet. This change, with respect for regional cultures in their own homogenization process, is a priority promoted by globalization. This work will contribute elements to the discussion of philosophical, theoretical, conceptual, and methodological instruments necessary for improving the socio-economic conditions in rural areas of Latin America.

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