



CONCEPTS AND ISSUES OF SUSTAINABILITY IN COUNTRIES IN TRANSITION - AN INSTITUTIONAL CONCEPT OF SUSTAINABILITY AS A BASIS FOR THE NETWORK

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INTRODUCTION - THE BASIC IDEA OF SUSTAINABILITY

The concept of sustainability is a wide approach everybody is talking about in a period when environmental problems caused by various human activities are requiring serious solutions. As it is well known, the concept found its roots in the United Nations' 1987 Brundtland Commission Report *"Our Common Future"* and even earlier in the 1980's World Conservation Strategy. Starting from a 'pure' ecologically based concept in the 1970s and in the World Conservation Strategy, it transformed very quickly into a more comprehensive socio-economic approach. The definition in the Brundtland Report of the World Commission on Environment and Development (WCED 1987, p. 43) is as follows:

"... development that meets the needs of the present without compromising the ability of future generations to meet their own needs".

"... In essence, sustainable development is a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development and institutional change are all in harmony and enhance both current and future potential to meet human needs and aspirations" (ibid., p. 46).

Within the Brundtland Report, the aspect of *"development"*, to be distinguished from *"growth"* (which also is not questioned in the concept as such) increased in importance focussing on getting *"better" rather than getting "bigger"*. The idea was to have a "qualitative concept incorporating ideas about improvement and progress and including cultural, social and economic dimensions" (Abrahamson 1997, p. 31).

To understand what the concept of sustainability means for the work within the network, we have to look on the characteristics of this paradigm. Two main characteristics are (ibid.):

1. "Sustainable development is *people-centred* in that it aims to improve the quality of human life and it is *conservation-based* in that it is conditioned by the need to respect nature's ability to provide resources and life-support services. In this perspective, sustainable development means *improving the quality of human life*

while living within the carrying capacity of supporting ecosystems."

2. "Sustainable development is a *normative concept* that embodies standards of judgement and behaviour to be respected as the human community 'the society' seeks to satisfy its needs of survival and well-being" (emphasised in original).

To arrive at a more operational concept of sustainability necessary for recommendations regarding daily life the detailed consequences of this first and very general definitions have to be understood.

TOWARDS A MORE CONCRETE CONCEPT OF SUSTAINABILITY

A people-centred concept being conservation-based means to have a close interaction between both:

"...sustainability is a *relationship* between dynamic human economic systems and dynamic, but slower, ecological systems, in which: (a) human *life* can develop indefinitely; (b) human *individuals* can flourish; (c) human *culture* can develop and (d) effects of human *activities* remain within bounds so as not to destroy the diversity, complexity and functioning of the ecological life-support system" (Costanza 1992, quoted in Abrahamson 1997, p. 31, emphasized in original).

Improving the quality of human life within the carrying capacity of ecosystems therefore means to "maximize simultaneously the *biological* system goals (genetic diversity, resistance, biological productivity), *economic* system goals (satisfaction of basic needs, enhancement of equity, increasing useful goods and services) and *social* system goals (cultural diversity, institutional sustainability, social justice, participation)" (Barbier 1987, quoted in Abrahamson 1997, p. 31). The idea is to promote a balance between these three interrelated systems and to maintain capital stocks, i.e. *natural capital stocks* as well as *social capital stocks*.

If we look for resulting recommendations on activities, e.g. in the context of Agenda 21 (Rio Summit 1992), we find a set of measures which shows that neither totally new production methods nor completely new political instruments have to be introduced. Therefore it is also not a question of individual decisions on innovative concepts to implement, for instance, sustainable agriculture. It is rather a question of a holistic approach to "emphasize explicitly the durable cross-linking of economic production and social compensation processes with the load-bearing capacity of the ecological systems. This strategy of total cross-linking was described by the Council of Experts for Environmental Problems in Germany (SRU 1994) as the 'reticulate principle' (taken from the Latin *rete=net*)" (Kolloge 1997, p. 11).

Robinson and Tinker underline this aspect of the principle as follows: "Addressing any one of the three imperatives in isolation, without also satisfying the other two, virtually guarantees failure, first because each is independently crucial, second because the satisfaction of each is urgently necessary to remove elements of gross unsustainability from human society and third because the three imperatives (like the three prime systems) are intimately connected" (Robinson and Tinker 1995, p. 19). In other words, it is

indispensable to harmonize the needs and interests of these three systems and to avoid antagonism between them.

SUSTAINABILITY AND THE ROLE OF AGRICULTURE

What does this mean for the agricultural sector as one sector of human activities that is much closer related to *nature* and *natural resources* than many others in a modern society? The Food and Agriculture Organization of the United Nations (FAO) tried to answer this question elaborating the concept of *sustainable agriculture* which superseded the paradigm of the "green revolution". The FAO working definition later on influenced also the concept of the Agenda 1:

"Sustainable development is the management and conservation of the natural resource base and the orientation of technological and institutional change in such a manner as to ensure the attainment and continued satisfaction of human needs for present and future generations. Such sustainable development (in the agriculture, forestry and fishery sectors) conserves land, preserves water, plant and animal genetic resources, is environmentally non-degrading, technically appropriate, economically viable and socially acceptable." (FAO 1994):

According to Lynam and Herdt (1989), sustainability in agriculture has to be defined with respect to systems (in our case agrarian systems) rather than doing singular analyses of inputs and outputs, because "crop varieties and inputs produce nothing in isolation. Only when combined as components of a system do they produce output" (Lynam and Herdt 1989, quoted in Herdt and Steiner 1995, p. 5). As they understand sustainability as a "result of the relationship between technologies, inputs and management used on a particular resource base within a given socio-economic context", three aspects of systems - *spatial level*, *time* and the different *dimensions* have to be taken into account.

1. Spatial level: Systems exist within a large range of spaces: global, regional, farm, field, individual plants and microscopic. Figure 1 illustrates the different systems, showing that the number of types of systems is increasing. Herdt and Steiner argue that this shows one of the major difficulties of the concept of sustainability and "reinforces the need to define carefully the spatial dimension. The number of levels and their interconnections are part of the problem of determining when sustainability is an inherent property of a given system and when sustainability is so dependent on external forces that it can be most usefully examined at a higher-level system" (Lynam and Herdt 1989 quoted in Herdt and Steiner 1995, p. 5).

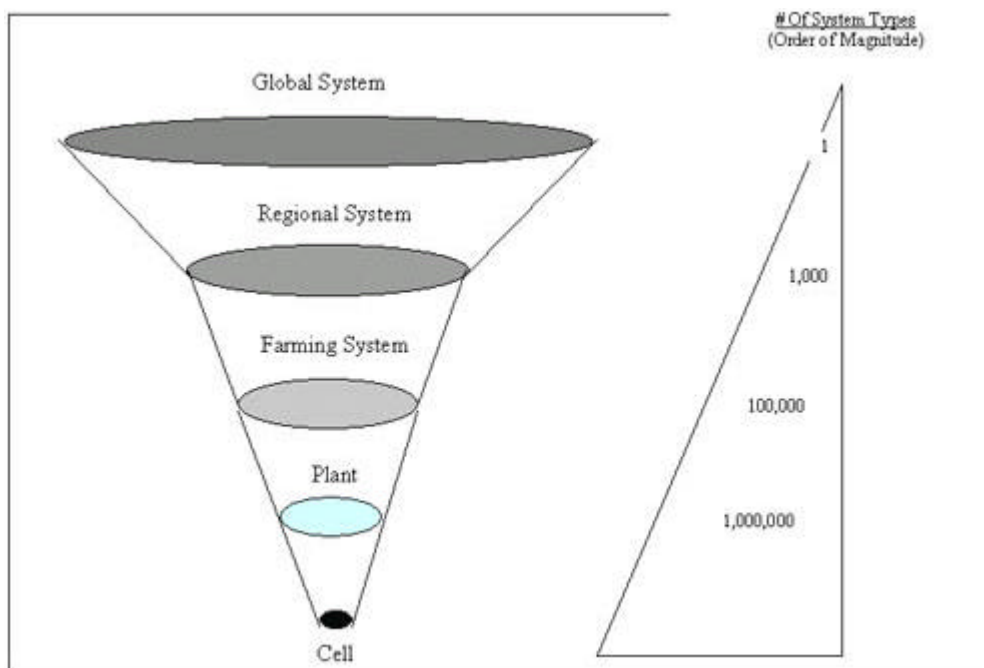
2. Time: The idea of sustainability can only be seen in relation to a certain time period. Taking into account the time dimension is getting difficult considering that, e.g., "the real world agricultural production systems are constantly changing.... Experience shows that in most cases the important trends affecting the sustainability of a system usually become apparent in the first 20-40 years" (Herdt and Steiner 1995, p. 7).

3. Dimensions: These are the different dimensions within which thinking about human conditions takes place. Usually, three dimensions are mentioned, the *biological/physical*, the *economic* and the *social dimensions*. But as seen in

chapter 2, there are even more of them. The following points are of major importance for specifying the concept:

- ≪ *Ethic dimension*: inter-generation fairness as an ethical concept for the future;
- ≪ *Ecological dimension*: protection of natural resources, maintenance of the basis of production, reduction and avoidance of environmental degradation, conservation of biodiversity, minimization of damages to the ecological system caused by agricultural production;
- ≪ *Economic dimension*: saving the economic basis of livelihood, safeguarding and improving of employment in agriculture, food security and food quality, contribution to the productivity of the whole economy;
- ≪ *Social dimension*: development of rural social structures and social cohesion, participation of rural population, improvement of quality of life in rural areas, among the agricultural population in particular, social infrastructure, social security systems;
- ≪ *Global dimension*: responsibility for avoidance and solution of global environmental problems, international fairness in distribution of and access to natural resources, food security in the global context, accession to international agreements as the Agenda 21, Climate Convention etc.;
- ≪ *Dimension of the reticulate principle*: lasting cross-linking of economic production and social compensation processes with the carrying capacity of the ecological systems (see Chapter 2).

Figure 1: Spatial levels and associated number of systems

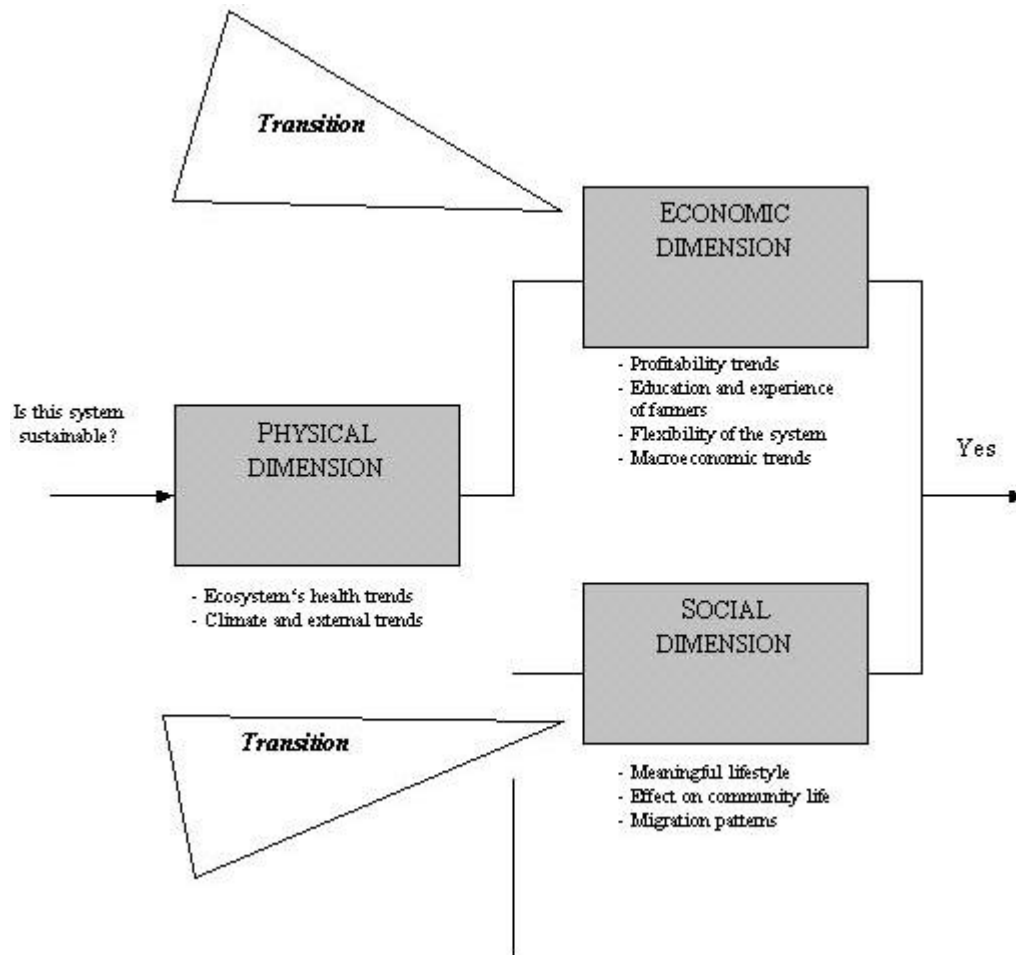


Source: Herdt and Steiner 1995, p. 6

Considering only the three "main" dimensions, the interrelations between them

is shown in Figure 2. The Scheme also outlines the links between the process of transition to a market economy as it takes place in Central and Eastern Europe and the concept of sustainable development.

Figure 2: Questions within the three dimensions of sustainable agriculture and transition



Source: Adapted from Herdt and Steiner 1995

SUSTAINABILITY, INSTITUTIONS AND LEARNING SOCIETIES

The Enquete Commission of the German Bundestag: "Protection of Man and the Environment" has recently published two books on the institutional interpretation of sustainability. In its works published before, the Commission had mainly concentrated on the question: "what" is sustainable development. Objectives of environmental quality and activities were defined, for example for the area of soil protection and management rules as well as policy instruments for the implementation of sustainable development were developed. However, sustainable development has to be conceived of as a comprehensive process of searching, learning and gaining experience. For that reason, it is not only the question of "what" might be sustainable development but also the question of "how" and by means of what organizational principles applied to a learning processes in society sustainable development can be achieved. As a consequence, environmental goals and their implementation by means of policy instruments is not the only task. In addition, sustainable development has to be interpreted as a "regulative idea" which requires adequate institutions to become

effective in the various areas of society.

For this purpose, the Commission has defined four basic strategies:

1. *Strategies to improve reflexivity*: These strategies reinforce the sensitivity of all actors regarding the ecological, economic and social site effects of their behaviour. Such strategies can be seen as an answer to the increasing complexity and differentiation of societal and political processes. Strategies of reflexivity have to be implemented at all levels and in all phases of the political processes. In many cases they serve as a starting point and a basis for further institutional reforms of the processes of consensus building and policy making.

2. *Strategies to reinforce self-organization and participation*: These strategies can be considered as a response to the fact that political processes are increasingly isolated and separated from the citizens and the people concerned. Accordingly, self-organization and participation are supposed to have an integrative impact by which politics are embedded again into society. People and groups concerned by political decisions are supposed to become political actors again, and poorly organized groups which are not able to express their interests in the political sphere, e.g. many social and ecological interests, may use such strategies to get a hearing in the political process.

3. *Strategies for interest harmonization and conflict regulation*: These strategies aim at balancing inequalities of power and control over resources. They may lead to constructive solutions regarding conflicts between different interests and conflicting values, for example between ecological, economic and social aspects of sustainability. Particularly in the agricultural sectors, ecologically motivated restrictions on property rights and new environmental policies cause winners and losers. Feasibility of such concepts may be lacking if mechanisms to deal with conflicts of distribution are underdeveloped.

4. *Strategies for innovation*: These strategies create new options and capacities for action in society, which may be societal, political, economic or technical in nature. They provide possibilities for creative processes of searching and learning in society during the process of achieving sustainable development. In this way, they may help to reduce or even to avoid conflicts between the different objectives which constitute sustainability. Cooperative approaches to cope with environmental problems on the regional level could be an example for such innovations.

The Commission stresses the point that the actors in a society should learn to interpret their position as a member of a network (Enquete-Kommission 1998). They are supposed to take into account the framework conditions of other actors and the determinants and constraints guiding the development of society as a whole, and they are expected to include these aspects in their own decision making. A better understanding of mutual dependencies enables each actor to integrate long-term societal conditions into his reasoning and helps him to

contribute to sustainable development.

In this way, society is moving towards a "learning organization". Sustainability as a regulative idea requires such processes of searching within society because the design of institutions and of policy instruments cannot immediately be derived from this basic principle. As a consequence, discourses play a central role in this process of learning. Organising such discourses requires "learning organizations" which both provide signals for learning processes to society and receive such signals from society. Learning organizations as well as the learning society as a whole can be conceived of as being both pre-requisites and results of the processes of discourse.

SUSTAINABILITY AND TRANSFORMATION IN CENTRAL AND EASTERN EUROPEAN COUNTRIES

How these strategies can be applied to agriculture in transition countries will be one of the most important research topics of CEESA. In addition, transition to a market economy in the agricultural sector as it takes place in the Central and Eastern European countries, affects other institutions and instruments influencing the use and management of natural resources. In a comprehensive approach, the following groups of mechanisms are relevant:

1. *Fundamental formal and informal institutions*: property rights on nature and social and ecological values in the agrarian culture adapted to the overall society;
2. *Institutions of the learning society*: strategies for reflexivity, interest harmonization and conflict regulation, reinforcement of self-organization, participation and innovation;
3. *Instruments of public policy*: environmental, agricultural and regional policies including policies for rural development and their federal structures;
4. *International policy instruments and institutional arrangements*: EU regulations, international agreements, European ecological concepts and supranational movements.

In the present stage of transformation, the impact of privatization of property rights should receive major attention. This seems to be important for the following reasons:

- ⚡ The (re)distribution of property rights on the various components of natural resources is one of the key issues regarding the use and overuse of such resources. (Hanna and Munashinghe 1995). One question arising is how these rights should be distributed to the stakeholders involved. Often opposite priorities of land use and protection of natural resources compete with each other. In Poland, for instance, the privatization and utilization of protected areas for agricultural purposes is debated. Other countries like Bulgaria exhibit the problem of contamination of agricultural land to be privatized leading to the question of compensation payments for the former (pre-war) owners.
- ⚡ Well-defined property rights on soil and water play a significant role in

how to use these resources for agricultural practises, i.e. to determine the degree of conservation of soil productivity or exploitation and non-reversible damages to soil structure and water resources. However, it is not only important whether or not the structure of rights has been designed in a useful way, but also whether they can be enforced. The capacity of property rights arrangements to safeguard the natural environment always depends on the reliability of the state and its authorities.

Within the transition process, the whole system of values, including economic values as well as tangible values, undergoes a sharp change resulting, among others, in different expectations of the future use of natural resources. These values are intensively influenced by the experiences of people during the first decade of transformation. This can be illustrated by the following interpretation of the relationship between agricultural production and environmental pollution in the countries in transition, referring to a pattern of development more or less applicable to each of the countries (see Lütteken and Hagedorn, 1998). It contains four periods: first, the period of the centrally planned economy as it had existed before the radical political changes occurred; secondly, the time of political upheavals; thirdly, the period of transition and finally the period of an established market economy as the main political objective in Central and Eastern Europe.

The first phase of centrally planned economies was characterized by state and collective farming and centrally controlled agricultural production. As consumer prices were supposed to be low, inputs had to be subsidized resulting in a high level of input use and an environmentally harmful application of inputs. This method of production, together with improper agricultural practises, produced a high level of environmental damages.

The second period of political upheavals was accompanied by the destruction of marketing channels, both for inputs and outputs, of legislation and of structures needed for any economic activity. After the political upheavals and during the transition process new rules had to be institutionalized, norms and property rights had to be redefined. Generally in this phase, institutional change, liberalization, restructuring and inflation caused an atmosphere of uncertainty in agriculture. The abolition of input subsidies and the drop of demand for agricultural products (domestic and external) resulted in an unfavourable input-output ratio. As a consequence, both the use of chemical inputs and the production output were declining. Thus, the political changes in 1989/90 and the collapse of the economy reduced the pressure on the environment both in the general economy as well as in the agricultural sector. It gave nature a "chance to rest" and at the same time it offered the possibility to have a look at the damage to nature of the last 40 years.

The ongoing low level of the use of agrochemicals in agriculture, mainly due to the lack of capital, can be seen as one example for the "third period" and the ongoing resting of nature. The countries in transition to a market economy have to establish new rules for economic activities and to redefine agricultural policies. Environmental considerations have not had a priority status in this process in the past few years but it is obvious that it will play a more important role in the future. In this phase, internal driving forces towards sustainability as a holistic approach are more or less missing, although there may be some pressure from new environmental groups, requirements needed for future EU membership and from international agreements. In particular, the goal of some of the CEE

countries to achieve access to the EU in the near future stimulates the agricultural policy makers to organize this sector in a way that makes it adaptable to CAP. This motivation certainly also affects environmental policies in the agricultural sector. But it has to be expected that the low use of potentially harmful inputs will actually reduce the motivation to implement strong environmental regulations.

In the fourth phase, which is still to come in most of the transformation countries, agriculture will be restructured, agricultural and some environmental policies will be institutionalized, the input-output ratio will be stabilized and agricultural production will be significantly boosted. This will be achieved by a high and efficient level of input use leading again to increased environmental pollution.

In other words, rules for sustainability and corresponding environmental policies appear to be unnecessary in the short run, although they will be urgently needed in the long run. Does the environment find itself in a "transformation trap"? After the period of institutional innovation has passed, it may be very difficult to change the rules again in favour of the environment.

This hypothesis seems to be even more realistic if we look at the next phase of development: When the agricultural sector will have been stabilized in the years to come, it might happen that the use of energy, fertilizer and pesticides will have increased at a higher rate than can observe now without having adequate instruments to limit it, resulting in new damages to natural resources. For this reason, a crucial element of the transition process is the redefining of property rights with regard to the use of natural resources. While in western industrialized countries property rights have been defined over decades and while it seems politically difficult to change some of these rights to obtain fewer environmental changes, such rights could - theoretically - be defined in a more "environmentally sound" way in the transition countries, e.g. prohibiting any contamination of natural resources harmful to future generations. However, redefined property rights alone will not guarantee less contamination unless institutionalized mechanisms for controlling implementation are established.

The hypothesis that there is a transformation trap for the environment in the transformation process may be helpful to identify one major important problem. However, a second serious problem can be identified if we consider the fact that the issues of environmental pollution and resource degradation have increased the consciousness of many people regarding the question of sustainability, but many of them have neglected the fact that questions of sustainable development are always associated with economic, social and political requirements. If sustainability is only demanded for the area of natural resources and environmental protection, this may lead to non-feasible concepts because options to achieve ecological progress may be non-feasible from an economic, social or political point of view or may even be destructive in these areas. Moreover, this implies that ecological objectives cannot be achieved by such a strategy. This leads us again to the integrative approach of sustainability already pointed out in Chapter 2.

As a consequence, the question arises whether the process of transformation to be observed in Central and Eastern European countries aims at this new paradigm for designing society and the economy. This question leads to a second hypothesis: the guiding principle for the transformation of socialist economic

systems is derived from the experience that market-oriented systems have been more competitive in the past than centrally planned economies. Accordingly, if we follow these interpretations without any second thoughts, the traditional principles of market-oriented economies are used as guidelines for transformation in Central and Eastern Europe. This way of reasoning which has been confirmed by many arguments in many studies in the area of transformation analysis suffers from the fact that it is oriented towards the *past*, although it should be oriented to the *future* because remodelling societies and economies represents a long-lasting process which - as a further consequence - should not be oriented towards the principle of growth but follow the paradigm of sustainability. Most economists would agree that well-established market economies have to transform in the sense of sustainable development. There is no reason why the same demand should not equally be valid for the transformation of former centrally planned economies. In this respect, a second transformation trap for the development towards sustainability can be revealed: the prevailing concepts of transformation towards market economies follow empirical evidence and are therefore based on a way of reasoning that refers to the past. Since priority is given to this orientation towards the experiences of market economies, the danger arises that transformation towards sustainability will be neglected for a long time.

This stresses the necessity for finding solutions for incorporating both transition processes and making them compatible - being the main task of the CEESA network.

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