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Report of Discussion: Training for the Role of Process Facilitators

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In their paper, Koutsouris and Papadopoulus state that the concept of sustainability of farming systems is difficult to grasp and to define. It is important to note that being difficult to grasp and to define is a common characteristic of a complex and normative phenomenon. The same is true for phenomena such as health, quality of life and democracy. We can describe them in general terms, but when trying to define them in concrete and measurable terms we run into difficulties. This does not mean that they are not important and cannot, or should not, serve as guides for human action. The complexity of these phenomena simply suggests that they cannot be understood and handled as measurable and static state of affairs but must be seen as what they are, namely, *qualities*.

To serve as a guide for action, sustainability must nevertheless be operationalised and translated into concrete terms. This might sound contradictory but is not. First, let us remind ourselves of the character of this quality. It is not a static state of affairs but the outcome of the interaction between a multiplicity of factors including people, social institutions, and the physical and biological environment. In systems language, sustainable development is an emergent property of the ongoing interaction between ecosystems and human activity systems. Sustainability manifests itself in and through complex processes. We cannot describe and control these processes as distinct cause-effect relationships. But we can analyse them and identify conditions that have to be met for a process to comply with sustainability requirements.

Sustainability principles as guides for action

This has been done by Holmberg et al (1995) who have defined and described four socio-ecological principles for sustainability. These principles have been found to be useful in strategic planning in business corporations as well as in municipalities. They have also been specified and operationalised as indicators which can serve as tools in planning and decision-making at various administrative levels and in different sectors of society such as business, manufacturing, transportation and agricultural production. The indicators allow an actor to assess whether a specific action is in accordance with or violates the principles of sustainable development. The four sustainability principles are described by Eriksson (1996) in the following way:

Principle 1: Substances extracted from the lithosphere must not systematically accumulate in the ecosphere.

Elements from the lithosphere must not be spread at a rate which will give rise to a systematic accumulation in the ecosphere. Such an accumulation will occur if the sum of society-produced emissions and the natural flows from the lithosphere (weathering processes and volcanic eruptions) exceed the sedimentation rate and the rate of final disposal in the lithosphere. Because of the complexity and delay mechanisms of processes in the ecosphere, it is extremely hard to define the level at which accumulation will cause an effect. In fact every substance has a limit (often unknown), above which damage occurs in the ecosphere. Increasing amounts of carbon dioxide in the atmosphere, of sulphur dioxide leading to acid rain, of phosphorus in lakes and of heavy metals in soils and in our bodies are all examples of such accumulation processes.

Principle 2: Society-produced substances must not systematically accumulate in the ecosphere.

We produce molecules and atomic nuclei in society in amounts previously unknown to the ecosystem. Some of these are persistent and degrade very slowly. If they are emitted faster than they are degraded into molecules or nuclides that can be integrated in the ecospheric cycles and/or the lithosphere, such substances will accumulate in the ecosphere. CFC-molecules destroying the ozone layer, DDT and PCB in the ecosystems, and radioactive inert gases in the atmosphere are examples of such accumulation.

Principle 3: The physical basis for production and diversity in the ecosphere must not be systematically deteriorated.

A sustainable society must not systematically deteriorate the physical basis for production and diversity. The productive capacity of the ecosphere must be maintained for the supply of food, fuel and various raw materials. Society must neither take more resources from the ecosphere than are regenerated, nor systematically reduce its productivity and diversity by the way in which we make use of the natural systems. Deforestation, soil erosion, extinction of species, exploitation of productive land for asphalt roads and other construction purposes and the destruction of freshwater resources are examples of such reduction processes.

Principle 4: The utilisation of natural resources must be efficient and just with respect to basic human needs of the global population.

The three principles described above constitute external preconditions for a sustainable society. The assimilative capacity of the ecosphere as well as the available flows of resources are limited. In order to satisfy the basic needs of a growing global population, the resources and services which we obtain from nature must be used efficiently. In a social context, efficient use of resources means that they should be used where they are needed the most. This leads to a requirement of a just and fair distribution among and within societies.

Maintaining the physical basis for our survival and a just and fair distribution of resources are not sufficient premises to sustain a decent human life. We have other basic needs too, which must be adequately met. The Chilean economist Manfred Max-Neef (1989) has suggested

nine areas of these needs which he calls: subsistence, protection, affection, understanding, participation, creation, identity, idleness and freedom. I would not suggest that his listing of human needs is complete or the only way to describe them. Somebody might want to name them differently or maybe add one or another. But in principle, I agree with Max-Neef that the needs he identifies represent necessary preconditions for a decent human life. The needs are interrelated but not exchangeable. We can, for instance, not compensate for a lack of freedom by providing more material goods (subsistence needs) and more protection. But these latter needs must be reasonably met to allow the realisation of the former.

Max-Neef claims that his list of needs has a universal application, i.e. applies throughout different cultures and political systems. The means, however, by which the needs are met, will vary between cultures and societies, as will the priority assigned to them. The means he calls satisfiers. People must not have access to the same kind of satisfiers but if the basic needs themselves are not adequately met, people in any culture or society will experience a deficiency and try to change their situation. If they do not succeed in these efforts, they may develop destructive or even pathological compensation behaviours such as excessive consumption, drug abuse and crime.

The role of process facilitator

My intention with this exploration of the sustainability concept is to show that although complex, it is possible to operationalise in such a way that it can be used as a guide in extension work. However, the extensionist will have few clear-cut answers and technical solutions to contribute with in efforts to promote sustainable development. What is the right thing to do is contextual, i.e. depends on the specific set-up of conditions and variables in each situation. The traditional transfer-of-technology model for extension will not work. The promotion of sustainability principles calls for an interactive knowledge generation process, in which farmers, together with other actors learn about a problem situation and search for appropriate actions. Such fora for communication and learning are now increasingly referred to as platform processes (Röling, 1994). The need for these fora defines a role as *process facilitator* for the extensionist.

Also when sustainability is not the focus of attention in extension work, the role of process facilitator is important. This was demonstrated in two of the workshop papers. Mussoi in his paper points to the need for university staff to engage with other societal actors in rural development. Lossouarn et al describe the need for extensionists to perform the role of imaginative and professional discussion partners to farm managers in efforts to develop technically, economically and socially satisfying solutions in animal production as part of larger food production systems. In both these cases process facilitation is in focus.

The competence needed

What competence is needed to perform the role of process facilitator and how can this competence be learnt? The papers presented at the workshop specifically emphasise the application of a broad perspective, knowledge about the social and institutional context of farming, systems thinking and social skills. Sutherland et al propose “a wide experience and knowledge of relevant farming systems, and insight into individual differences.” Koutsouris and Papadopoulos refer to Jiggins in stressing the importance of a capacity to integrate

knowledge from diverse perspectives and disciplines in both natural and social sciences and the ability to understand dynamic systems and environmental laws. Mussoi stresses the importance that students acquire a more human and less technocratic relationship with rural families and learn to understand their ways of thinking and decision-making.A difficulty in performing the role of process facilitator arises as a result of the different perspectives and interests represented by the participating actors in a platform process. The actors may differ in their perceptions of the problem situation and act from different positions in the social structure. They may also have unequal access to resources and differ with respect to their potential to exert influence. To handle this situation, the extensionist needs competence in group dynamics, communication, negotiation and conflict management skills.

Suggestions for training

Experiential learning is suggested as the most important means to develop these competencies. Mussoi presents a curriculum which includes that students live and work with farming families to get what he calls “a shower of reality” and to learn about the problems, potentials, contradictions and injustices in their situation. This farm experience should be prepared and followed up under the supervision of their teachers. Students’ experiences are presented and discussed at seminars together with the farming families. Lossouarn et al have developed a course of eight weeks in which students carry out a project work to learn about the functioning of production systems and food chains. In these projects the students are asked to identify problems, propose projects, explore a problem area and to suggest solutions which include the technical, economic as well as social aspects of a problem. Also in this case the results are discussed at seminars together with the outside non-academic actors who own the problems that are the subject of exploration.

The workshop discussion focused to a large extent on the potentials of introducing a broadened systems perspective, and problem-oriented and experiential learning methods in our universities. It was recognised that present university reward structures do not promote such developments. The discussion ended in a suggestion to apply a small-step strategy. It was recommended that scientists who want to develop new approaches in teaching make use of their freedom and establish networks to support each other. Several of the methods which were presented in the papers were recommended, as for instance, project based learning, the involvement of students in problem identification and of outside actors in the learning processes. It was suggested that problem areas such as food chains and, of course, sustainable farming systems, should be brought in as central areas of exploration in teaching. Farmers and NGO:s were mentioned as examples of outside actors that should be involved. It was also suggested to analyse the content and implications of the values and assumptions which are applied in food production. The main emphasis was placed on encouraging and supporting students in “discovering the world” by introducing various ways of experiential learning opportunities. In addition to these suggestions, I want to stress the importance of learning about group dynamics and about methods and procedures for facilitating group processes. The platforms suggested for learning and decision-making to promote sustainable farming systems are social processes.

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