Towards a methodological framework for strategy development

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Apart from outcomes of direct relevance to the Tajik Pamirs, what are the lessons that can be learnt from the Pamir Strategy Project (PSP) for other mountain areas with different political, social and economic contexts? Can the overall methodological framework be applied elsewhere? Are the village studies of the PSP particularly suitable models for drawing up information in a participatory way and thus developing shared knowledge? Do regional statistics and information that have been moulded into a Geographic Information System (GIS) constitute a useful decision-support tool? And finally, are multi-level stakeholder workshops like the one held in Khorog in October 2002 useful for jointly defining a common vision, strategic goals, and elements for sustainable development?

A strategy for sustainable mountain development

According to OECD-DAC guidelines, a strategy for sustainable development should comprise: “A coordinated set of participatory and continuously improving processes of analysis, debate, capacity-strengthening, planning and investment, which integrates the economic, social and environmental objectives of society, seeking trade-offs where this is not possible.” (OECD-DAC, 2001: 8). The purpose of strategies is to mobilise efforts to achieve sustainable development. They can do this by providing the means to define visions, choices, goals and principles for sustainable development, and illuminating the historical, ethical and cultural dimensions underlying these choices and goals (Bass and Dalal-Clayton, 2002). A strategic approach to sustainable development calls for new ways of thinking and working (see box). This includes ongoing improvements in governance, shared responsibility, transparent information, a focus on impacts, integrated planning, and continuous learning.

New ways of thinking and working in a strategic approach to sustainable development

- Move from developing and implementing fixed plans, ideas and solutions, towards operating an adaptive system that can continuously improve governance to promote coherence between responses to different challenges.
- Move from a view that the state alone is responsible for development towards one that sees responsibility resting with society as a whole.
- Move from centralised and controlled decision-making towards sharing results and opportunities, transparent negotiation, cooperation, and concerted action.
- Move from a focus on outputs (e.g. projects and laws) towards a focus on outcomes (e.g. impacts).
- Move from sectoral towards integrated planning.
- Move from a dependence on external assistance towards domestically driven and financed development.
- Move towards a process which can accommodate monitoring, learning and improvement.

These basic elements constitute a system that should encourage and facilitate the building of consensus in society with regard to shared visions, goals, and objectives for sustainable development (the central circle), as well as a coordinated set of information and institutional mechanisms to deliver these (the boxes around the circle).

Depending on circumstances, a sustainable development strategy should take the form of a system with the following components (Bass and Dalal-Clayton, 2002):

- A shared vision, common goals, and a set of strategic objectives.
- Regular communication between stakeholders and opportunities for negotiation at national and sub-national (regional) levels, with links between them.
- Coordinated measures for policy integration, budgeting, monitoring, and accountability.

Strategies must therefore define goals and identify means of achieving these goals. This implies adopting an approach that is based on good evidence, has an underlying vision, sets priorities, goals and direction, and sets out the main tactics for achieving these (OECD-DAC, 2001: 15–17). Central mechanisms of such a strategy have been compiled in the figure on the right.

The purpose of developing strategies is to mobilise internal and external efforts to achieve sustainable development. The Northern Pamir mountains viewed from Sarytash in Kyrgyzstan. (Photo: U. Lutz)
A methodological framework for preparing a sustainable development strategy

One of the most important elements for preparing a sustainable development strategy is to enhance knowledge about the social, political, economic and environmental contexts within which the strategy should be applied. Knowledge generation is a process in which those who are expected to gain knowledge should be involved from the outset. In other words, rather than delegating the generation of knowledge to a specialised group of stakeholders, e.g. a team of specialists and researchers, it must be jointly elaborated within the framework of a transdisciplinary process that involves all concerned stakeholders. An example of such a multi-level stakeholder approach is given in the figure overleaf. In this case sustainable land management has been set as a goal. The figure shows that stakeholders in land management are situated at all levels, from local households to international organisations. Hence representatives of all these institutions should be involved in the process of negotiating and evaluating strategy development.

A knowledge system for sustainable development rests on two major components: concerned actors and stakeholders on the one hand, and related spatial units along with their natural resources on the other hand. Since both components are dynamic, i.e. subject to continuous change, both the status and dynamics of the major elements of both components should be sufficiently known by all concerned, in order to anticipate possible impacts of scenarios or concrete action to be taken in the sustainable development strategy. An instrument entitled ‘Sustainable Development Appraisal’ (SDA) was developed by Hurni and Ludi (2000) for such participatory assessment of a regional unit and its actors and stakeholders. Basically it consists of a 12-step approach using a transdisciplinary methodology (see table page 67). The SDA is usually applied first to individual villages, and then to groups of villages and entire regions in a process of amalgamation on a different scale.

Experiences in the application of the SDA at the village level in the Pamir Mountains have been gained with the PSP by applying the methodology to three different villages, as described earlier in this publication.

Mechanisms contributing to a sustainable development strategy. (Redrawn following Bass and Dalal-Clayton, 2002)

- Principles and standards for adoption by sectors and stakeholders, through legislation, voluntary action, economic instruments, etc.
- Pilot activities to generate learning and promote ownership.
- A facility with authority for coordinating these mechanisms.
- A mandate for all the above from a high-level, central authority such as the prime minister’s office and, to the extent possible, from citizens’ and business organisations.
Village studies as a basis for regional strategy development

One of two Swiss-Tajik study teams conducted in-depth studies in the villages of Tavdem and Basid, located in the western part of Gorno Badakhshan. At the same time a similar study was carried out in Kuna Kurgan, a jamoat close to Murgab in the eastern part of the GBAO. The aim of these participatory case studies was to gain an insight into daily realities in households and rural communities, as well as obtain knowledge about resource management and conditions at the local level, according to the elements of the SDA. These exemplary field-level assessments provided the backbone for interpreting and classifying the aggregated statistics and information gathered in the more sectoral studies of the Pamir Strategy Project.

Appraising sustainability

The village studies were based on the components and elements contained in the Sustainable Development Appraisal (SDA, Hurni and Ludi 2000), a tool that has been applied and further developed in different geographic and socio-cultural contexts world-wide. Its aim is to combine participatory, transdisciplinary methods with interdisciplinary and disciplinary methods and thus amalgamate quantitative and qualitative data with indigenous knowledge. Particular emphasis is given to the incorporation of both internal views (e.g. local land users) and external perceptions (e.g. researchers), with subsequent attempts to construct a holistic, shared view of a region and its potential for sustainable development.

Semi-structured interviews and group discussions provide insight into the functioning of the communities chosen for study. Different actor categories and wealth classes become transparent in this process. Through mapping and analysis of environmental conditions (e.g. soil, water resources, land use, etc.), the potentials and limitations of the natural system are assessed. On the basis of both these sources of information, core problems, potentials and opportunities for local development are made transparent, and a village development profile is established. The results of the SDA provide an ideal basis for broad discussion of the path of development for the community, and thus for negotiating a development strategy. In future, the SDA will be used as an instrument to monitor the effects of a particular strategy chosen by the communities, since the same approach applied some years after implementation of the strategy will reveal possible impacts in terms of achievements and shortcomings.

Concrete fieldwork at the village level

At the beginning of each of the three village studies, the study team members and the aims of the study were introduced to the population and the local authorities. An overnight stay in the villages helped to create an atmosphere of mutual respect and acceptance. Both steps were indispensable prerequisites for participatory research, e.g. in subsequent group discussions. The second day was used to carry out a wealth ranking and a transect walk through the village area. The aim of the transect walk, guided by a villager, was to gain insight into local history and an overview of natural resources and the territorial order of the community. This preliminary analysis was used to determine different social classes and biophysical units in the villages.

On completion of this preparatory phase, the four subject specialists in the study team pursued their individual studies for one week. On the basis of the wealth ranking, the social economist selected six households for semi-structured interviews. These were based on an open question-
Sound management of natural resources will guarantee the survival of threatened species and at the same offer local people a source of income. (Photo: P. Sieber)

naire, with issues ranging from education and health care to irrigation and traditional farming. The interviews focused particularly on change and how it affected the household. The answers shed light on individual perceptions and people’s fears and hopes. The household interviews were complemented by a focal group discussion on the socio-economic situation of the community and on the role of women in society.

At the same time a resource management specialist focused his studies and interviews on farming practices, soil degradation problems and deforestation, animal husbandry, horticulture, and water management and irrigation issues. In addition, village agricultural calendars completed the picture of the local farming sector as the dominant economic sector. In order to assess current land use and estimate potential alternatives, an agronomist and a mapping specialist drew up a plan of the village area. Each spatial unit was mapped in terms of soil quality, current and potential land use, connection to the irrigation system, and potential risk of soil degradation. Elements of public infrastructure such as roads, schools, and micro hydropower stations were also mapped.

On the last day local stakeholders, interview partners and the study team gathered to present the preliminary findings of the various SDA studies. The meeting concluded with a discussion focusing on opportunities and obstacles to be overcome in promoting the sustainable development of the villages concerned.

Data evaluation and follow-up
Ten days of intensive research by four persons produced a considerable amount of data. This wealth of information was used to prepare a Local Development Profile (LDP), including a Geographical Information System (GIS). The LDP is a portrait of a village containing general data such as statistics on population, topography and distance, more detailed information on agriculture, water and energy resources, and information on public infrastructure and services. GIS plays an important role: besides providing baseline information on the state of the actual land use system, it also can help identify potential areas for intensified land use or land reclamation.

The LDP concluded with a list of development needs, options and constraints from an external point of view. This was ultimately contrasted with the view of the local population (see preceding chapter on the Khorog Strategy Workshop), revealing areas of consensus as well as issues with divergent ratings that probably require further negotiation.

Lessons learned
Overall, experience with the SDA in terms of project implementation was positive. From a methodological point of view, the SDA proved once more to be a practical tool, facilitating close and fruitful cooperation between external specialists and people living in the villages. On a topical level, the village studies played a major role in the overall objective of the Pamir Strategy Project. In particular, they contributed a great deal towards a better understanding of living conditions, and significantly enhanced knowledge of the Tajik Pamirs. One major advantage was that the village studies made traditional sources of information (e.g. statistics and subject reports) more concrete, thus better reflecting local realities and ultimately contributing a great deal to the subsequent process of strategy development in the Tajik Pamirs.

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<td>Participatory assessment and appraisal of current situation</td>
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<td>Component II</td>
<td>Participatory assessment and appraisal of dynamics</td>
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<td>Component III</td>
<td>Participatory assessment and appraisal of development</td>
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<td>Characterisation of spatial units</td>
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<td>Element 10:</td>
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Geographic Information Systems (GIS) as a decision-support tool

Progress in the development of Geographic Information Systems (GIS) and Remote Sensing (RS) techniques, coupled with the promotion of user-friendly and cost-efficient systems, has led to a major increase in the user community, including users in transition and developing countries. Mountain regions in particular often lack a reliable and accurate spatial information base, thereby impeding decision-making processes and the implementation of strategies and development programmes. The high variability and small spatial scale of mountain areas such as the Tajik Pamirs makes setting up a GIS in such areas a challenge. The high spatial variation in altitude results in small-scale patterns of climate, soil, and land cover. Limited accessibility in mountain areas may lead to the development of totally different cultural, land use and livelihood systems within a relatively small area. As a result, most development-relevant aspects and corresponding variables are characterised by great spatial heterogeneity and major efforts to collect and analyse data.

Given the ambitious and comprehensive objective, the PSP aimed to compile, as far as possible, geo-referenced data on natural resources, topographic features and socio-economics. For this purpose data was derived from existing maps on different scales. In addition, remotely sensed data on the project area was acquired and processed, tabular data was collected in cooperation with the PSP partners, and data from the field studies was integrated into the Information System. A number of models were also prepared (e.g. population density and climate models) and, along with appropriate training, handed over to the partner institutions of the Pamir Strategy Project. It is hoped that the versatile and detailed PSP Information System will be widely used in different contexts and will serve as a reference for planning and monitoring in the Tajik Pamirs.

Project identification and planning

The major objective of the PSP Information System is to contribute to the elaboration of a cohesive planning system for sustainable resource management at the regional level, by providing a basis for geographic priority-setting for project implementation. The database and related statistics along with the maps therefore offer highly practical tools for project activities at reconnaissance level, since they substantially speed up the planning process and significantly increase the likelihood that planning will be sound. With regard to the numerous activities at the village level in the GBAO, the PSP GIS has the potential to serve as a basis for project steering, management and monitoring.

Scenarios for decision-making

The PSP Information System can contribute to the construction of more complex and more accurate models and scenarios for development, thereby contributing to more informed decision-making. The following section outlines a few of the numerous potential applications for this versatile spatial information system:

Overview of the SDA carried out in Basid and Tavdem

<table>
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<th>Day 1</th>
<th>Introduction at the local administration in Basid and Tavdem</th>
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<tbody>
<tr>
<td></td>
<td>Preparation of wealth ranking and transect walk</td>
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<tr>
<td>Day 2</td>
<td>Wealth ranking and analysis (division of village into 3 social layers)</td>
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<td></td>
<td>Transect walk</td>
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<td>Day 3-9</td>
<td>Expert 1</td>
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<td></td>
<td>Socio-economics</td>
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<td></td>
<td>• 6 semi-structured interviews (2 in each wealth class)</td>
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<td></td>
<td>• Group interviews</td>
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<td></td>
<td>Exchange and discussion of information gathered during the day</td>
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<tr>
<td>Day 10</td>
<td>Group discussion of opportunities for and obstacles to sustainable village development</td>
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Disciplinary research on status and dynamics is a requirement for strategy development. However, an appropriate knowledge base can be achieved only through participatory valuation and enhancement based on interdisciplinary and transdisciplinary processes. (Photo: A. Haslinger)

- Probably the most interesting PSP application for the Tajik Pamirs would be the localisation and assessment of natural resources which have not been tapped or fully exploited to date. To support conservation of the natural production base, PSP data on demography, land use, livestock, soil and climate data can be used to obtain a model of the impact of human activities on natural resources. Such models can support sustainable land management and facilitate the implementation of corrective measures.

- As another example the digital terrain model (DTM), could be used in communications and transport infrastructure planning in conjunction with geological, hydrological, demographic and economic data, to facilitate the assessment of options with the maximum benefits, lowest costs, and the lowest negative impact on natural resources. In conjunction with micro-climatic data, the DTM would constitute the basis of prediction models for runoff and glaciological events.

### Awareness creation, training and policy advice

On the one hand, PSP data constitute a technical tool whose primary use is technical planning and monitoring in the fields of natural and human resource management. On the other hand, the statistics, models and simulations produced on the basis of the PSP data have other concrete and practical uses: they can be used to create awareness among the population or specific target groups with regard to sustainable management and the use of natural resources. In this way the PSP info system can help to promote the idea of sustainable natural resource conservation on a larger scale. Furthermore, it can be used by universities, research institutes, etc., for training in the field of watershed management in particular, and sustainable natural resource management in general. Finally, the PSP database and related case studies constitute an integrative tool that can contribute to informed decision-making and the formulation of adequate policies in various fields.

### Multi-level stakeholder workshops for initiating strategy development processes

Organising multi-level workshops for initiating the process of strategy development is a practical way of providing equal opportunities to concerned stakeholders for sharing current information and jointly developing strategic sectors.

The process of strategy development can be broken down into five major steps during the multi-level stakeholder workshop (see figure on page 57):

- In a first step, information collected from village studies, statistics, maps and literature on the concerned region is presented to the participants. Information that has been accorded different values by different stakeholders is presented as far as possible according to these views, e.g. as ‘internal’ or as ‘external’ view.

- In a second step, a list of strategic sectors is jointly established by all participants. Participants are then divided into groups so as to ensure that, for each strategic sector, at least one representative of a stakeholder category is assigned to each group. Group work is divided into two parts in order to define problems and needs as well as assets and opportunities for each strategic sector. The results of each group work package are then presented and further synthesised in plenary.

- In a third step, work groups are reorganised such that each working group consists of one stakeholder level. These groups now define specific visions of sustainable development from the perspective of their stakeholder level. A plenary is then held with the aim of developing a joint vision.

- In a fourth step, strategic elements are elaborated again by sector, while the original groups are reformed, i.e. each group consisting of mixed stakeholders. These elements are presented in plenary.

- In a fifth and last step, each stakeholder category appraises the different elements of the strategy by sector according to importance and urgency, and again discusses the results in plenary. The final concrete outcome of the workshop is a common draft strategic vision.

This type of strategy workshop extends over a period of four full days, resulting in a wealth of information and significant progress towards shared knowledge and common visions and goals. Feedback on the Khorog workshop was very positive, particularly because of the clear structure and step-wise approach, as well as the structured interaction among different stakeholders in changing groups. The overall workload required from each participant, as well as the tight schedule and short time allocated for each step (usually half a day) were less positively evaluated. Finally, the methodology and approach were highly rated.

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1 This section was prepared by Thomas Heimgartner.

2 Wealth Ranking is a participatory method to assess social stratification. Selected village representatives were asked to assign all households to three wealth classes (well-off, constrained, struggling).