



The city of Khorog, the administrative and economic centre of Gorno Badakhshan Autonomous Oblast, hosted the Pamir Strategy Workshop. At the time of the workshop in 2002, the city had just been linked to the Afghan Badakhshan region by a new bridge. (Photo: J. Schneider)

Negotiating strategy elements for sustainable development

Thomas Breu and Hans Hurni

Promoting sustainable development in mountain areas is a major political, economic, social and ecological challenge. This is especially true in areas like the Tajik Pamirs, which are currently undergoing a profound transformation process that affects society, the economy and the natural environment. As the most important step toward success, strategic elements and development priorities must be agreed on and supported by all stakeholder groups. With this in mind, the Pamir Strategy Project (PSP) organized a Workshop for Sustainable Development of the Tajik Pamirs, which was held in Khorog in October 2002. Within the framework of this workshop, knowledge was enhanced, problems and opportunities for sustainable development were highlighted, and strategic elements for the region's development were elaborated based on the stakeholder groups' visions. Joint appraisal of these elements enabled the stakeholder groups to agree on the importance and urgency of the selected development priorities.

The Pamir Strategy Workshop

Workshop objectives

To ensure a sound topical valuation and obtain a broad representation of actor groups, the PSP organised a four-day multi-level stakeholder workshop in Khorog. More than 80 participants representing various stakeholder groups, ranging from

communities to international organisations working in the fields of science, development cooperation and policy-making, took part in the Strategy Workshop for Sustainable Development of the Tajik Pamirs.

The aim of the workshop was to define the elements of a strategy for the sustainable development of the Tajik Pamirs and to provide a platform on which different stakeholders and disciplines could share knowledge about the status and dynamics of the Tajik Pamirs. Ultimately it is hoped that this multi-level negotiation will be the starting point for an ongoing process of participatory strategy development and implementation. As a prerequisite for this process, the information and knowledge on the current state, trends and mechanisms of the Tajik Pamirs, as presented in the preceding chapters, was compiled and analysed.

Approach and methodology

The multi-level stakeholder approach explained in detail on pages 65–69 was originally developed to determine feasible, viable and ecologically sound ways of promoting sustainable land management (SLM) at local levels. This calls for a stakeholder negotiation process that focuses equally on addressing the needs as well as the perceptions of the stakeholder levels involved. Following the declaration of Agenda 21 by the United Nations Conference on Environment and Development (Rio de Janeiro 1992), many international programmes began applying such participatory approaches either explicitly or implicitly. By definition stakeholders are interest groups or dependent groups who share a common interest in a certain region, in this case the Tajik Pamirs.

Since the multi-level stakeholder approach is an open and flexible concept, it was possible to adapt it to the requirements of the Strategy Workshop for Sustainable Development of the Tajik Pamirs. The workshop endeavoured to address themes relevant to the development of this particular mountain region. To this end, six strategic sectors were selected and five stakeholder levels defined. On the one hand, the various parallel sessions brought together specialists from different stakeholder levels. On the other hand, a balanced representation of the perceptions and preferences of the different stakeholder levels was ensured through the formulation of visions of sustainable development and an appraisal of the strategic elements. Through these interlinked processes the workshop exploited expert knowledge while at the same time adequately addressing the different stakeholder levels. As a result of this process, elements of a strategy were appraised in terms of importance and urgency of development priorities, and areas requiring further negotiation were made transparent.

Summary of workshop outcomes

Knowledge about the status and dynamics of the Tajik Pamirs was enhanced by involving both experts and stakeholders. In particular, awareness of the problems of, and opportunities for sustainable development in the region was raised. This included making visions of the different stakeholder levels explicit, elaborating strategic elements for the region's development, and negotiating a list of development priorities. Of the 18 strategic objectives, the following three achieved the highest ratings by all five stakeholder groups:



Breeding new varieties of cultivars using the genetic pool of the Tajik Pamirs could be a priority for applied research. (Photo: U. Lutz)

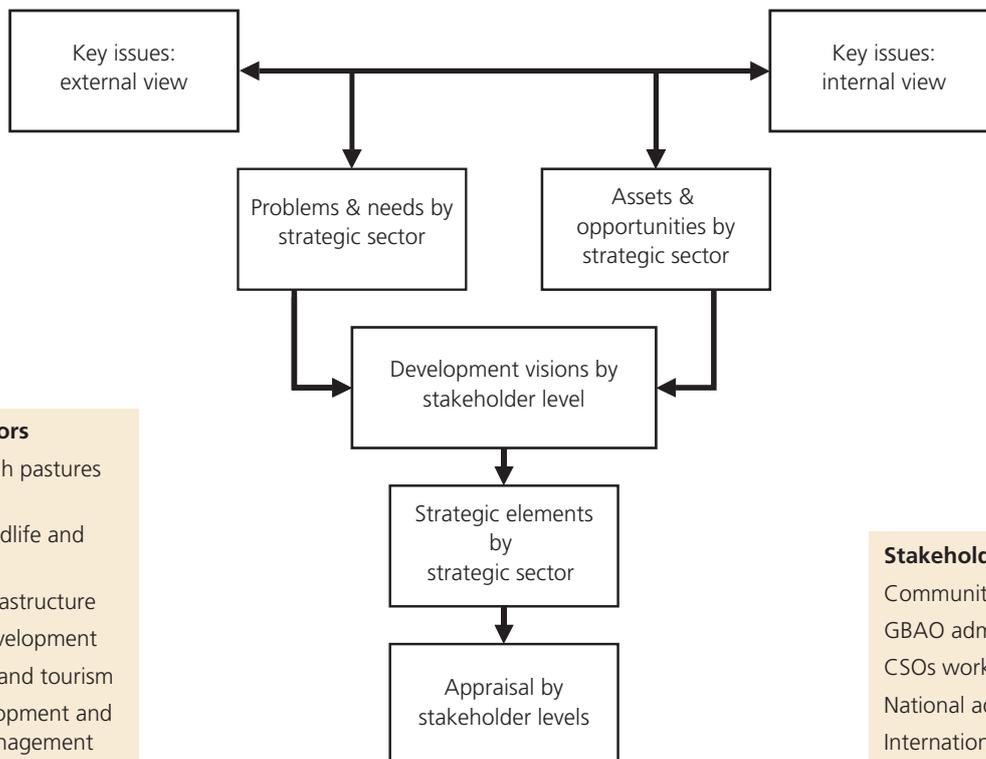
- Maintain energy facilities and increase energy production
- Reform/upgrade legislation and create favourable conditions
- Reanimate existing enterprises and create new ones on the basis of domestic natural resources

In addition to these clear and unanimously accepted objectives, a number of other objectives were rated in very different and even diverging ways. Such objectives will probably require further negotiation among the stakeholder groups.

Besides a wealth of information on development issues in the GBAO and insights on stakeholder perceptions and valuations of problems and potential solutions, the workshop also provided valuable methodological experience on multi-level negotiation processes between stakeholder groups. This experience can be transferred to participatory strategy development in other geographical and political contexts.

Generally speaking, feedback from workshop participants was highly positive. The participatory approach in particular, which brought together representatives from different stakeholder groups and disciplines, was deemed rewarding. In addition,

the methodology selected to prioritise objectives and accord equal weight to each stakeholder group found wide approval. The only major weakness of the workshop was the tight time frame, which impeded in-depth discussions and limited the negotiation process. Although the chosen participatory approach is based on a new concept, its application (probably for the first time) in a former Soviet Union state can be considered successful.



Strategic Sectors
 Agriculture, high pastures and irrigation
 Biodiversity, wildlife and conservation
 Energy and infrastructure
 Institutional development
 Industry, trade and tourism
 Research development and knowledge management

Stakeholder levels
 Communities
 GBAO administration
 CSOs working in the region
 National administration
 International organizations

Sequence of elements dealt with in the Strategy Workshop involving various stakeholder levels and addressing different strategy sectors. (Breu and Hurni 2003b)



Maintenance of the existing infrastructure and an increase in energy supplies were assigned high priority by all stakeholder groups. (Photo: D. Maselli)

Problems and opportunities by sector

The aims of the first session were to identify current problems and to list ways of overcoming them. Additionally the groups who participated in this session were asked to identify the actors affected and those who should take action to address these problems. The aim of the second thematic group work was to compile assets and opportunities for sustainable development in the Pamir mountains. In the second parallel session the groups endeavoured to identify potential beneficiaries in the event that these opportunities are developed, and discuss reasons why such opportunities have not been leveraged to date. The following section provides a brief summary of the group results achieved in the two parallel sessions.

Agriculture, high pastures and irrigation

The central problems in the agricultural sector were found to be the scarcity of arable land and the low productivity level of soils. Other important problems were poor melioration conditions, poor fodder bases, insufficient mechanisation, and an almost total lack of local processing units for agricultural products in the GBAO. Additionally, the absence of an accepted agricultural structure was deemed a major problem. Few problems in the field of high pasture management seem to have the same urgency and importance as the pressing issues in valley agriculture. In terms of (external) observations, degradation phenomena caused by intensive agriculture was perceived to be a core problem in this sector.

Measures and opportunities to increase total agricultural production were identified, with the potential to attract foreign investment for the reclamation of additional arable land, the cleaning and rehabilitation of existing irrigation systems, and the introduction of high-yield crop varieties to produce a second harvest. Opportunities in know-how transfer were also identified, e.g. through the introduction of technologies adapted from other mountainous regions and the revival of traditional agricultural technology. Emphasis was placed on the conditions governing the agricultural sector (market centres, melioration, agricultural structure, training, finances) and on the establishment of small processing units. In the group's opinion, the lack of funds was the obstacle to realising most of the outlined opportunities.

Biodiversity, wildlife and conservation

In view of the reported pressure on wildlife and fauna in the Tajik Pamirs, the group presented six major problems that can be divided into the following three categories: A) Economic: a low standard of living among much of the population and a scarcity of local energy resources, leading to overuse of woody biomass. B) Legal: neglect of existing laws and the inadequacy of nature conservation systems. C) Scientific: inadequate research into alpine biodiversity under changing conditions, along with a lack of studies on sustainable use of natural resources.

To address the energy problems identified, the group suggested developing and promoting alternative energy resources, and restoring depleted forests. To improve the system's weaknesses and promote efficient law enforcement, a set of measures ranging from education to improved organisation and financial support were proposed.

The opportunities identified by the wildlife group ranged from fish breeding, the exploitation of thermal energy, and a range of different tourist activities (sports hunting, photo- and eco-tourism), the breeding of rare insects, and cross-breeding experiments to improve domestic animals. Regarding the use of flora, the best chances were given to the establishment of commercial plantations for medicinal herbs, the enrichment of pastures with valuable plant species, and more efficient use of wild plants by the local population.

Energy and infrastructure

The group agreed that all infrastructure segments are faced with major problems, and that many of them are not in a position to meet the required standards. A total of ten major problems were named in three areas: In the communications sector, the condition of the telecoms system (including radio, television and postal services) and the poor condition of road infrastructure were cited. The second area named problems related to supply shortages and deteriorating energy infrastructures. Thirdly, the public infrastructure, comprising health, education and sanitation facilities was also seen as a major problem.

In order to tackle the problems in the telecommunications sector, ways of encouraging the state, the private sector and CSOs to make investments were proposed. Transport problems could initially be improved by the completion of the Murgab-Kulma-Karakorum and Khorog-Dushanbe highways. To address energy problems, the group believed that a concession agreement between the Republic of Tajikistan and the Pamirs Energy Compa-



Strategic objectives for the agricultural sector include land reclamation, intensified production, and the introduction of niche products. (Photo: D. Maselli)

ny would be an important step. In terms of public services, a major opportunity was perceived in the establishment of the main campus of the University of Central Asia in Khorog. The failure so far to take up proposals and leverage opportunities was attributed to the slow pace of reforms, funding difficulties, disrupted international links, and a lack of ideas and visions.

Institutional development

Two major problems were put forward by the group:

Firstly, institutional structures are unable to meet the demands of a changed economic system, while management staff lack sufficient knowledge and experience. The main factors hampering a smoothly functioning administration were found to be the working conditions of government employees and lack of incentives. Secondly, the legislation was criticised for its inability to address political and economic realities.

To overcome the problems outlined, a proposal was requested for a reorganised management system with a strong capacity building component. Furthermore, the *oblast* administration is to introduce a performance-oriented salary and incentive system. Deputies at all levels were called upon to exercise the right of initiative to update the current legislation.

One potential opportunity is for legislators to improve their image by initiating a process towards a law on sustainable mountain development that could boost production and provide the basis for livelihood support. A second opportunity was perceived in the reorganisation of local government units. The absence of favourable conditions for exchanging ideas and communicating deficiencies, coupled with difficult access to global expertise, were seen as obstacles to leveraging the opportunities identified in this sector.

Industry, trade and tourism

Weaknesses in electricity supply and the state of the telecommunications and transportation infrastructure were seen as the major obstacles to this sector's development. Additionally, problems in the banking sector and the implementation of existing tax laws were named. Inefficient use of local natural resources and the lack of coordination between industry and trade were also identified as major impediments to development. Besides improvements in legislation (banking sector and tax laws), upgrading the current infrastructure was cited as a prerequisite for the establishment of locally-based enterprises.

Industrial opportunities are seen in the production facilities that already exist, the availability of natural resources, and the potential for trade with major markets in neighbouring countries (e.g. China, Russia). Moreover, the highly educated workforce of the GBAO was regarded as a major asset for the future development of the sector. In terms of tourism potential, the assets of the Pamir mountain landscape were regarded as important alongside the multi-ethnic society and its historical heritage.

In the group's opinion, the above assets and opportunities have not yet been exploited due to the region's political history, lack of funds, poor transport infrastructure, and lost ties with former Soviet Union states. Tourism opportunities have reportedly been thwarted by existing visa regulations and the organisational deficits of tour operators.

Research development and knowledge management

The group focused its work on issues related to applied research. Institutional questions in the research and knowledge management sector were not raised. The problems identified in this sector included a lack of, or insufficient research into, alternative energy sources (e.g. geothermal energy), botany (medicinal herbs, crop plants) and biotechnology applications. Besides issues in the field of the natural sciences, the importance of economic research (market and unemployment studies) was stressed.

Research into alternative energy resources, the local genetic pool, and into biotechnology were named as opportunities in this sector. Applications for heating and medical treatments based on geothermal energy resources were named as concrete examples. Research into the genetic pool, or in-depth botanical studies, were regarded as an ideal field for building specialist capacities. Additionally, biotechnology development is expected to produce concrete results and materials. Research into markets and unemployment is regarded as a means of enhancing knowledge of ways to promote more flexible, competitive activities. Besides the funding problems facing this sector, the absence of appropriate equipment and the lack of information and technological capacity were defined as major obstacles.



Visions of the stakeholders

The five stakeholder groups were asked to present an idealistic view of sustainable development for the GBAO by the year 2025. This view was expected to touch upon issues such as how society would be organised, how economic structure and performance would look and how the environment may have developed. Such a vision was not meant to reflect reality, but rather to represent an idealistic view that could serve as a guiding tool for the subsequent elaboration of strategic elements by the concerned thematic sectors.

Local communities

Our vision is that over a period of 20 years, agriculture – including animal farming – will develop and become one of the factors in the improvement of living standards in the GBAO. Government and administration will function in a more democratic way on the basis of the laws of the Republic of Tajikistan.

The role of Village Organisations will be active and there will be self-sufficiency in accordance with the laws of the Republic of Tajikistan. The energy capacity of our rivers will be tapped and will contribute to economic development. High pastures will be used more effectively. The GBAO will depend less and less on the central budget.

GBAO administration

In 2025 the GBAO will be a developed region of Tajikistan, self-sustaining on the basis of internal resources. Government and administration will be functioning according to the international standards that characterise democratic and sovereign governments.

The GBAO population will be 235,000. Civil society will be based on a multiparty system and diversity of opinion, while decisions will be based on polls and referendums. The society will be characterised by a market economy in which the public sector will account for 30%, the private sector 50% and other organisations 20%. It will have ecologically sound ecosystems at all altitudes, to attract tourists.

Restoration of pastures will have taken place by watering and sowing annual and perennial plants. The economic performance of the GBAO will be based on private-sector income and other resources. External investment includes creating joint associations and organisations, cross-border trade, implementation of international projects, and collaboration with countries abroad in all spheres of performance.

Civil Society Organizations (CSOs)

Governmental administrative function will have been delegated to the lowest level possible. Officials are elected by majority vote. Village organisations are given responsibility and authority. The role of the government is to regulate, protect and to provide security. The government will provide the main irrigation channels as well as the transport and telecoms infrastructure; additionally it will provide education and health services. The population in 25 years will be 210,000 among 33,000 households i.e. it will not grow. It is expected that the primary sector will be less dominant with a 33% share of the economy, which is similar to the secondary sector. It is expected that the agrarian sector will produce more cash crops (potato exports, medicinal plant exports, etc.). In the secondary sector, small businesses and infrastructure construction will be balanced. The revenues from tourism will increase through relaxed regulations and improved basic infrastructure.

Ecologically, desertification trends will be reversed in the highlands. Growing importance will be assigned to irrigated pastures and the development of kitchen gardens and horticulture. Alternative energy resources will be used (coal, solar and wind energy). Livestock on the high pasture will total 35,000 sheep and 25,000 yaks. Pressure on wildlife will increase through the use of as yet untouched remote pastures. On the other hand, hunting companies will maintain wildlife habitats. Communities will mitigate hazards through the clearance of mudflow channels.

National administration

By 2025 the population will grow to 260,000 – 265,000. The society will be engaged in energy, industry, agriculture, education, health, tourism, environmental activities, etc. People will work in governmental and non-governmental organisations, the private sector, international CSOs, and joint enterprises. No fewer than five political parties will be active. The economy will develop at the expense of industrial and agricultural production. Tourism, mineral resources (e.g. precious stones) and hydropower production will increase at the expense of trade. Sector distribution will be as follows: 30% energy, 20% industry, 20% tourism, 10% agriculture, 20% services.

Oblast economics will be effectively developed, giving the GBAO the status of a free economic zone. For this it will be necessary to apply and strengthen laws for the region's economic development. Society should be involved in different aspects of production, particularly control of the negative environmental effects of industrial activities.

Private initiatives are leading to an increasing number of small-scale businesses. Meeting the requirements of a market economy and providing favourable conditions are major challenges for the local administration. (Photo: D. Maselli)

Poor transport infrastructure and lost ties with neighbouring countries are regarded as major obstacles to trade and tourism. (Photo: D. Maselli)



By the year 2025 a dynamic balance will be established to provide sustainable development in all sectors of the regional economy, with a ratio of 60/40 for internal and external investment. Comparative analysis shows that in order to achieve the 1991 level of GDP at USD 461 per capita, it is necessary to increase the *oblast* GDP to USD 120 million.

International organisations

In the year 2025 the government and administration will be locally managed according to the slogan "Badakhshan run by Badakhshani". A bottom-up approach has been institutionalised, with community-based organisations active in local and regional governments and a decentralised budget. A democratic society will be established by the year 2025 with locally elected leaders, giving voice to rural and urban interests.

The GBAO will be attractive to foreigners wishing to live in a safe and beautiful environment. Basic education standards will have returned to the USSR level, and incorporate new technologies and critical thinking to help children to adapt to the market system. From the ecological standpoint the GBAO will be sufficiently economically viable to replace fuels such as *teresken*, dung, trees, etc. with alternative renewable energy, especially hydroelectric power. The vegetation cover will have increased considerably, and be able to prevent major soil erosion processes and secure the region's biodiversity.

The primary sector will still be dominant, with a share of 50%. The secondary and tertiary sectors will increase to account for 30% of total domestic production. In general, Tajikistan will not sell raw materials but processed goods. 70% of the workforce will be employed by the private sector; with public sector employees decreasing to 30%. Investments will account for 75% of foreign inputs and aid only 25%.

Appraisal of strategic elements

To determine development priorities, the different sector groups named the three most important strategic objectives and the anticipated outcome. The logical framework was to be completed by indicating important assumptions for each objective's fulfilment. The planning horizon for all strategic sectors was set for the year 2010.

In the subsequent final parallel session, the different stakeholder levels were asked to appraise the sector objectives. A total of 18 objectives (see table p.63) had to be ranked in terms of their importance for the sustainable development of the Tajik Pamirs. Since the implementation of objectives may be regarded as generally important but not as a first priority within the stipulated 8-year timeframe, the stakeholder groups simultaneously defined a second rating in terms of urgency.

Sector assessment

The average appraisal indicates that the greatest importance and urgency is assigned to the strategic elements of the energy and infrastructure sector. The production-oriented sectors (industry, trade & tourism and the agriculture sector) and institutional development were in the middle, while research development and biodiversity objectives came third. This rating clearly reflects the tense economic situation prevailing in the Tajik Pamirs and the most pressing obstacles to be overcome in a short- to medium-term horizon (8 years). Against this background, it is hardly surprising that ecological issues are of less concern and urgency and that potentially long-term research projects whose outcome is uncertain achieved lower ratings.

Stakeholder assessment

A brief analysis of the appraisals by stakeholder groups reveals that the CSOs assigned the greatest importance and urgency on average to the 18 objectives. The ratings by national and local administrations were in the middle, whereas the community and international levels rated the strategic elements significantly lower in terms of importance and urgency. These average ratings may be interpreted in two ways: either the stakeholder groups have different perceptions of the state of the economic and ecological system in the GBAO, or the stakeholder groups do not regard all sector objectives as suitable contributors to sustainable development.

By looking at the detailed results, we can identify three clear leading objectives that influence the economic environment in the Tajik Pamirs. All stakeholder groups rated the development of energy production highest both in terms of importance and urgency. The development of legislation was rated second, followed by the objective of reanimating and establishing enterprises.

Consensus and disparities

An analysis of importance ratings (see figure overleaf) also reveals objectives with a high level of consensus, and objectives with a high level of dissent among the five stakeholder groups. The objectives on energy production (3.2), legislation (4.1), land reclamation (1.2), maintenance of the communications system (3.1) and the re-animation of existing enterprises (5.1) were accorded high to medium importance, with comparatively high consensus among all stakeholder groups. Hence these objectives may be particularly worthy of further examination with a view to potential future implementation.



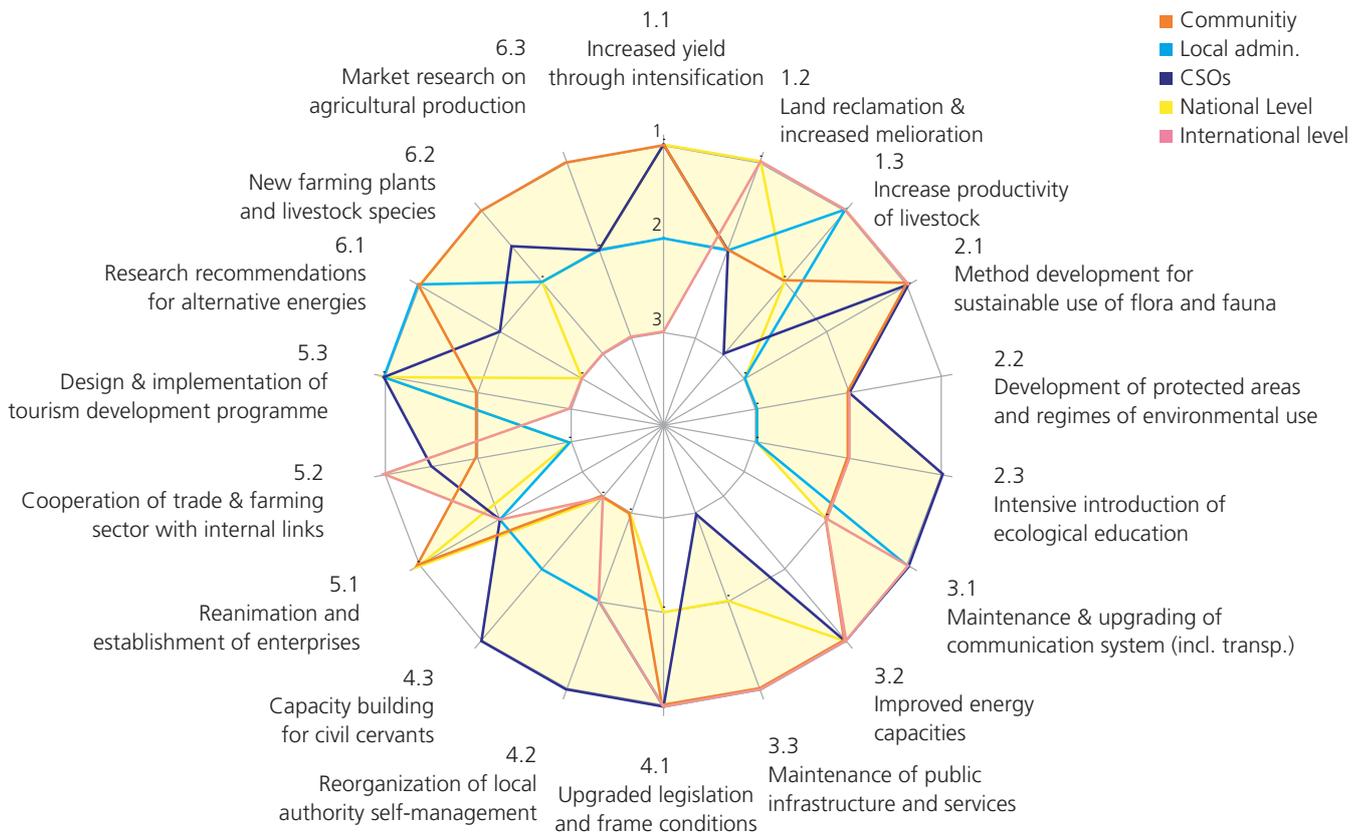
Participants in the Strategy Workshop for Sustainable Development in Khorog, October 2002.
(Photo: D. Maselli)

The above results are supported by an analysis of the urgency appraisal, that ultimately produced three objectives which were accorded high acceptance by all stakeholder groups in terms of importance and urgency:

- Energy and infrastructure: maintain energy facilities/assets, use new power capacities, and increase energy production. Coal production in the GBAO up to 50,000 t per year. (3.2)

- Institutional development: upgrade legislation and create favourable conditions for sustainable development in the GBAO (4.1)
- Industry, trade, tourism: reanimate existing enterprises and create new ones on the basis of the natural resources of the GBAO (5.1)

On the other hand, stakeholder appraisals in terms of importance diverged widely on four objectives that were accorded higher-than-average ratings. The strategic objectives of agricultural intensification (1.1), maintenance of the public infrastructure/services (3.3), elaboration/implementation of a tourism programme (5.3) and research on alternative energies (6.1) probably require additional negotiation among the stakeholder groups.



Appraisal by 5 different stakeholder groups of 3 main objectives in each strategic sector (1 = high importance, 2 = medium importance, 3 = low importance).
(Source: Breu and Hurni 2003b)

Strategy sectors discussed in the workshop

- 1 Agriculture, high pastures and irrigation (1.1–1.3)
- 2 Biodiversity, wildlife and conservation (2.1–2.2)
- 3 Energy and infrastructure (3.1–3.3)
- 4 Institutional development (4.1–4.3)
- 5 Industry, trade and tourism (5.1–5.3)
- 6 Research development and knowledge management (6.1–6.3)



Strategic elements for conservation and environment were not given high priority, reflecting the economic problems of the Tajik Pamirs. (Photo: D. Maselli)

Strategic objectives	Overall*	Importance	Urgency	Consensus on importance	Consensus on urgency
(3.2) <i>Energy and infrastructure</i> : Maintain energy facilities/assets, use new power capacities, and increase energy production. Coal production in the GBAO up to 50,000 t p.a.	1.0	1.0	1.0	high	high
(4.1) <i>Institutional development</i> : Upgrade legislation and create favourable conditions for sustainable development in the GBAO	1.2	1.2	1.2	high	high
(5.1) <i>Industry, trade, tourism</i> : Reanimate existing enterprises and create new ones on the basis of the GBAO's natural resources	1.5	1.6	1.4	high	high
(3.3) <i>Energy and infrastructure</i> : Public infrastructure and health care: Maintenance of existing facilities, provision of new modern equipment, increase in wage levels	1.7	1.6	1.8	low	med.
(5.3) <i>Industry, trade, tourism</i> : Design and implement a tourism development programme	1.7	1.6	1.8	low	med.
(1.1) <i>Agriculture</i> : Increase level of yield through intensification	1.8	1.6	2.0	low	med.
(1.2) <i>Agriculture</i> : Assimilate new land and increased melioration condition of existing lands	1.8	1.6	2.0	high	med.
(6.1) <i>Research development</i> : Develop research recommendations for exploiting geothermal and alternative sources of energy for health and industrial applications	1.8	1.6	2.0	low	low
(1.3) <i>Agriculture</i> : Increase productivity of livestock by establishing forage bases, improve cattle and develop other spheres (poultry farming, apiculture, etc.) including processing	1.8	1.8	1.8	med.	high
(3.1) <i>Energy and infrastructure</i> : Maintenance of existing communication system: TV/radio, transportation. Upgrade systems to the state of the art	1.8	1.8	1.8	high	med.
(5.2) <i>Industry, trade, tourism</i> : Develop the trade and farming sector, forge links with neighbouring countries	1.8	2.0	1.7	low	med.
(2.1) <i>Biodiversity</i> : Elaborate and introduce rational methods for the sustainable use of biological resources	2.1	2.2	2.0	low	low
(2.2) <i>Biodiversity</i> : Conservation, especially of natural territories and regimes of environmental use	2.1	2.4	1.8	high	med.
(4.2) <i>Institutional development</i> : Reorganise local self-management structures	2.2	2.2	2.2	med.	high
(6.3) <i>Research development</i> : Market research, agricultural and livestock production in the GBAO	2.3	2.0	2.6	med.	low
(4.3) <i>Institutional development</i> : Build staff capacities in view of today's requirements	2.3	2.4	2.2	low	med.
(6.2) <i>Research development</i> : Create new varieties of farming plants and livestock using the genetic pool of flora and fauna in the GBAO	2.4	2.0	2.8	med.	high
(2.3) <i>Biodiversity</i> : Intensive campaign to introduce ecological education	2.4	2.2	2.6	med.	low

Ranking of strategic objectives by workshop participants.
(Source: Breu and Hurni 2003b)

Note: High importance and urgency = 1, Medium importance and urgency = 2, Low importance and urgency = 3

* The overall rating is the arithmetic average of the values 'importance' and 'urgency'