

Strategies for Development and Food Security in Mountainous Areas of Central Asia

PAPER 1: SEIZING OPPORTUNITIES TO PROMOTE DEVELOPMENT AND IMPROVE FOOD SECURITY IN THE MOUNTAINOUS REGIONS OF CENTRAL ASIA

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ABSTRACT¹

A confluence of factors – political and economic – may have opened a window of opportunity in the Pamir-Hindukush-Karakoram mountain areas for a substantial investment in physical and social infrastructure, greatly increased communication and cooperation across borders and improved general conditions for stimulating economic growth and development. This paper attempts to briefly describe the current situation, with a particular emphasis on food security in mountainous areas, and to pose a series of questions that must be addressed to capture the potential of the region and take advantage of the changes that are currently underway.

Political, social and economic developments of the past 10 years have increased the flow of aid and remittances, improved the environment for private sector development, and made accessible the abundant physical and human resources in mountain areas. Taking advantage of these developments will not happen automatically, but local communities should not miss this opportunity for a jump in the quality of their livelihoods. Examples of success stories can be found in the literature on mountain development and several prominent examples will be described in this Workshop. Two such cases, undertaken by two NGOs, one in Tajikistan and a second in Pakistan, are discussed showing the achievements of local communities when they are given a chance.

Nevertheless, much remains to be done if people living in these areas are to enjoy the same standard of living as those in the lowlands in these countries. In particular, ways must be found to increase infrastructure development in mountainous areas, capture the benefits of such development for the residents in these areas and increase the alternatives they have for employment and income. This Workshop gives people from the region a forum to raise new approaches and ideas and to discuss what can be done to stimulate the development process, how to do it, where and by whom.

Improved relations between the uplands and lowlands are necessary, as is improved collaboration among people living in contiguous mountainous areas but in different countries. The four countries of Pakistan, Afghanistan, the Kyrgyz Republic and Tajikistan include large mountainous areas, but for historical and political reasons, their borders have been barriers to such collaboration. With those barriers disappearing, this is an opportune time to generate new thinking and new energy in the development process among participants from government, the private sector and civil society.

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SEIZING OPPORTUNITIES TO PROMOTE DEVELOPMENT AND IMPROVE FOOD SECURITY IN THE MOUNTAINOUS REGIONS OF CENTAL ASIA

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I. INTRODUCTION

A confluence of factors – political and economic – may have opened a window of opportunity in the Pamir-Hindukush-Karakoram mountain area for a substantial investment in physical and social infrastructure, greatly increased communication and cooperation across borders and improved general conditions for stimulating economic growth and development. The implosion of the Soviet Union and independence for the states of Central Asia, the recent war in Afghanistan driving the Taliban from power, international concern with terrorism and religious fundamentalism, the very recent rapprochement between Pakistan and India and the blossoming of democratic processes in countries surrounding this region all contribute to this improved environment. With a spotlight on the region, opportunities exist for broad-based development that have never been there before. Let's not let that window close, or at least not before we have taken advantage of it being open.

This Workshop gives people from the region a forum to raise new approaches and ideas and to discuss what can be done to stimulate the development process, how to do it, where and by whom. A number of prepared papers, including this one, are designed to help with this process. It is the working groups, however, where ideas will be scrutinized, debated and honed to produce a set of recommendations that will help move this region forward more quickly than would otherwise be the case. This paper attempts to briefly describe the status quo, with a particular emphasis on food security in mountainous areas, and to pose a series of questions that must be addressed to capture the potential of the region and take advantage of the substantial changes that are currently underway; it must do so recognising the risks in poor planning, poor policies and poor execution and that development can go wrong.

A. CONTEXT

A perusal of the literature on mountain development, including a number of excellent overviews and other articles in the previous three INWENT sponsored workshops⁵ on mountain develop-

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⁵ The first Workshop was held in Kathmandu, Nepal in 2000, the second in Chungdu, China in 2002 and the third in Lahsa, Tibet, China in 2004.

ment in the Himalayas-Hindukush, shows virtually universal agreement that mountain areas are characterised as inaccessible or isolated, fragile and marginalized with often severe bio-climatic conditions. These are all factors leading to extremely vulnerable populations. We are in accord with these views, and need not repeat them or dwell on them here: any programme aiming to assist the people living in these mountainous regions must take these into account or the interventions will surely fail.

At the same time, however, much – although certainly not all – of this literature seems to be much better at identifying the constraints to economic development of mountain peoples than it does at offering ideas for removing these constraints, increasing investment in mountain areas and providing an improved environment for people living in these areas to enhance their livelihoods while doing so in a sustainable way that preserves the environment and other assets of these precious areas. Much of this analysis tends to be rather pessimistic – not surprisingly for the solutions are not obvious nor easy to implement. But this International Workshop on Mountain Development is about identifying solutions, organising ourselves to implement them and setting up next steps to move an agenda for development in the four-country region of Pakistan, Afghanistan, the Kyrgyz Republic and Tajikistan. While this may sound naively optimistic, there is, we believe, reason for optimism.

The recent changes in the region have made possible, although not guaranteed, the following:

1. Large amounts of international development assistance earmarked to these four countries at levels unheard of before.

In 2003, the four countries received official development assistance of US\$ 2,943 million (OECD 2005). Pakistan and Afghanistan have been the biggest aid-recipients, especially after the events on 9/11, and it is expected that the international community in general and the United States in particular will continue this level of support for some time to come. The Kyrgyz Republic and Tajikistan began receiving development assistance and support from the West after they became independent in 1991. Although the level of development assistance has fallen slightly over the past few years in the case of Tajikistan (to \$144 million in 2003) or has remained stable in the case of the Kyrgyz Republic (at \$198 million in 2003), it remains a substantial contribution to the Gross Domestic Product (GDP) in those countries (for Tajikistan 15% and for the Kyrgyz Republic, 17% in 2003 (OECD 2005)). It is realistic to expect that development assistance to Central Asia could decrease further as other regions in the world (e.g. Iraq, Africa and the fight against HIV/AIDS) compete for development assistance. Unfortunately there is little data available that details how much of this development assistance has been directed at mountainous areas within these countries.

- 2. Substantial amounts – although difficult to measure -- of international private funds are flowing into the region from Turkey and the Middle East, from the West, and from Russia, investing in private sector businesses. In addition, there are increased local investments in business activity due to the opening of the private sector and increased competition.**

Anyone who has travelled in the region regularly over the past 5 to 10 years can see enormous investment in hotels, restaurants, shops selling foreign goods and other businesses. While these investments still tend to be primarily in the capital cities, clearly international private investors are involved in business activity in the region. Turkey, in particular, has been active in setting up businesses in Central Asia, and countries from the Gulf States like Abu Dhabi are investing in Afghanistan, but there are many others too. Equally important is the multiplier effect of this investment and the potential for stimulating private investment from within the region in local economies. It would be worth documenting this investment through applied research in order to better understand it, but it is undoubtedly there in a substantial way. Why should local businessmen invest outside the region if there are good local alternatives available?

- 3. An opportunity for great increases in cross border trade linked to a whole series of new or improved transportation alternatives and routes, from bridges to pipelines to air routes to roads.**

For example, Tajikistan, a landlocked country, has limited options for importing and exporting goods. A large, US-funded, bridge over the Panj River between Tajikistan and Afghanistan is under construction. The bridge will reopen historic trade routes between Central Asia and Afghanistan and the expectation is that it will greatly facilitate the increase of international trade for the region. Further up the Panj, a series of smaller bridges offer an opportunity for isolated villages on the Afghan side to trade or seek medical care in Tajikistan (consult the Starr paper in the Workshop for more robust examples). Hundreds of millions of dollars are going into rebuilding the roads in Afghanistan, including the rehabilitation of the so-called “ring road” between Kabul, Kandahar, and Herat. This road will unite the main economic regions of Afghanistan and, in addition to that, provide multi-dimensional links with other economic centres elsewhere. This project equally serves both north-south and east-west routes. Because this “ring road” will serve as a kind of switching yard for regional transport, no other project currently underway has greater implications for the future (Starr paper).

Mobile phone coverage of Afghanistan is far from covering the whole country, but the speed with which modern communications has arrived in this country in three short years, has allowed them to do a technological leapfrog over other forms of communication.

Pakistan and Afghanistan are keen to play a role in the networks for transport of energy (natural gas, oil or electricity) either for domestic consumption or for transit to other countries like India. Tajikistan, which has largely untapped hydropower potential, could become an important energy provider for countries such as Pakistan and Afghanistan, and indeed for the whole Central Asian region. Exploitable hydropower in Tajikistan is estimated at around 264 billion kilowatt hours per year, of which less than 10% is currently being used. Total electricity consumption in the five Central Asian republics over the last few years has averaged 135 billion kilowatt hours per year: if Tajikistan's hydro potential were fully harnessed, the country could single-handedly power the whole Central Asia region twice over (UNDP 2003b). One would expect such infrastructure projects to encourage further business activity and reduce the cost for commerce and trade and thus stimulate investments by the private sector.

4. Sizeable remittances from people from these four countries working abroad in Russia, Iran, the Gulf and Middle East, etc.

Tajikistan alone has at least 10% of its 6.3 million citizens working abroad, especially in Russia. Different sources state that level of labour emigration in highland regions of Tajikistan is the highest within the country, with percentages ranging from 17 % to 30 % (See Olimova paper). While the percentages maybe smaller in the other three countries, the numbers are substantial, particularly in Pakistan and Afghanistan, the latter having an estimated 1,5 to 1,7 million people (many of them refugees) working abroad, especially in Iran and Pakistan. It is more difficult yet to estimate the amount of money these migrant works send back to their families at home: it is also substantial. But what happens to that money? Does it simply sustain the lives of those remaining at home, including the mountain areas? Is it used to buy consumer goods made abroad, e.g., television sets? Or is it used to build or remodel homes or perhaps finance the education of a younger sibling or relative? The more that this money could be used to finance development in these villages and the more that these funds can be turned over in the local economy, the greater the multiplier effect this will have on the local economy.

In addition, the way these savings get transferred back home and at what cost should also be considered. Formal bank transfers would be cheaper and more secure, and these should be supported. The more informal ways to transfer funds, including young men carrying large amounts of cash back home when they travel for their vacations, are expensive and risky. Thus, governments in the region could help improve these processes so that more funds end up in the villages and are earmarked for development.

5. Increased interest in and potential for tourism.

The mountain areas in Northern Pakistan, Tajikistan and the Kyrgyz Republic offer a wide variety of stunning landscapes, a huge biodiversity, and numerous opportunities for adventure tour-

ism and exploration. As they become more accessible, available infrastructure is being upgraded and services are developed to cater to local as well as foreign tourists. The recent history of fighting and struggle in Afghanistan makes it an unlikely destination for (mountain) tourism for some time to come, although the country possesses a great potential of natural and cultural attractions, and it has a history as a tourist destination. If one combines the mountain resources of the four countries, the region can offer an expanded set of tourist attractions; trekking from GBAO in Tajikistan across the Wakhan Corridor of Afghanistan into the upper valleys of Chitral or Hunza Pakistan, for example. This comes at a time of increasing international demand for tourism and a growing interest in new tourist locations.

In this regard, the experience from Nepal is instructive as it offers similar attractions for trekking and mountain sightseeing. With a concentrated focus on developing their tourist industry, tourist numbers increased 33 fold over a period of 31 years (from 12,500 in 1966 to 422,000 in 1997) (Sharma 2000). Northern Pakistan has had substantial but more uneven growth in its tourism industry, but lessons should be drawn from each case searching for application in Central Asia.

6. Productive use of abundant and now accessible natural resources.

The high altitude areas of Pakistan, Kyrgyz Republic and Tajikistan are storehouses for huge amounts of freshwater through their glaciers, and they play an important role in the irrigation of the lowland areas. Tajikistan, as an example, produces an estimated 50.9 billion m³ of water on its territory, through precipitation and the melt of glaciers, and is responsible for 55% of the water flow in the Aral Sea (UNDP. 2003b) through the Panj (Amu Darya) River and the Sry Darya River, which irrigate thousand of square kilometres of agricultural land down stream. The hydro-electrical potential of the countries is large and remains largely untapped. Minerals and precious metals are another source of wealth in the mountain regions, though the current exploitation of those resources is limited and many of the benefits often go to the lowlands. These resources can be tapped in a sustainable fashion and the returns from using them must be available to the people living in these areas to a much greater degree than they have in the past.

7. Mobilisation of high levels of social capital in communities and regions that have well-established traditions of cooperation and collective work, often with unique and well adapted coping strategies.

All the mountain areas in Central Asian have been inhabited for thousands of years, and until recently, remained in a state of profound isolation. One of the most vital resources of mountain region development is the ancestral experience that has been in place and has proven successful. However, in the Kyrgyz Republic and Tajikistan, its use is rather complex because during the rule of the former Soviet Union several generations of people lived under state control and

many problems were resolved by the state. Thus, there is a need to regain old and accumulate new experience in the organization and management of life in the mountains. In any event communal organization for development projects is an important resource that must be maintained or reclaimed for the development process. The long-term experiences of the Aga Khan Rural Development Programme in Pakistan and Tajikistan are proof of the importance of mobilizing the social capital present in the communities and putting it at the centre of development interventions.

8. *Increased participation in democratic process, particularly at the village level.*

Individuals in these countries are increasingly demanding participation and becoming more engaged in self-governance, and grassroots-level social processes are robust. While the countries struggle with fundamentalism and sectarian tensions and outbreaks of violence that are too common, with relations with neighbours at the government level that are weak and, not least, with drug production and trafficking and the illegal spin-offs that accompany it, the balance, we believe, towards improved positive and active participation is on the plus side.

However, this environment for the region as a whole does not assure inclusion of mountain areas within the various national boundaries. Down-country areas tend to be first in line to take advantage of good economic prospects and large cities and capitals are favoured. With respect to the mountain areas themselves, they offer a combination of special characteristics that could be turned into advantages such as their long history of social cohesion and collective work in the face of physical hazards or environmental disasters.

Many of these issues will be raised and discussed by the subsequent presentations, and all of them will be picked up by in the working groups as we attempt to address them. Thus, we will not dwell on them here. Rather the remainder of the paper is divided into three sections. The first briefly describes some basic characteristics in each of the four countries, then we present two examples of successful interventions in rural development programmes in mountain areas, one in Tajikistan and the second in northern Pakistan, and finally, we pose several questions to provoke Workshop participants to wrestle with difficult but important issues that affect all mountain communities.

II. COMPARATIVE STATISTICS

The workshop focuses on four countries in the region – Tajikistan, the Kyrgyz Republic, Afghanistan and Pakistan, which together encompass some of the most impressive mountain ranges and some of the highest peaks in the world. The K2 in Pakistan, at 8,611 meters above sea level, is the world's second highest peak.

All four countries face problems of poverty and unequal development, whereby the mountain areas comparatively suffer more and are worse off. With the exception of the Kyrgyz Republic, living conditions and livelihood opportunities in high-altitude zones have been further complicated by conflict, in and between countries.

From a demographic viewpoint, Pakistan is by far the largest in size and population with 150 million people (2004), the large majority of whom live in the lowlands and plains in the Punjab and Sind provinces. The mountain areas of Pakistan include the rugged plateau of Balochistan Province in the west, the mountainous valleys of the North-West Frontier Province and the high elevation areas of the north. It is in the Northern Areas where the Hindukush, Karakoram and Himalaya ranges converge.

Afghanistan has a much smaller population, in 2004 estimated at 28.5 million inhabitants and is a landlocked country with a much more pronounced mountain character than Pakistan, with whom it shares a border of 2,430 km. The terrain of Afghanistan is dominated by rugged mountain ranges, which generally run from the northeast to the southwest. Mountains occupy all but the north-central and southwestern regions of the country. Nearly half the country has an elevation of 2,000 meters or more, and the highest peaks in the northeastern Hindukush range are above 7,000 meters. Historically, mountain passes along the northeastern border with present-day Pakistan have been of great strategic importance. The north-central and the southwest regions are mainly plains; a significant part of the south-western region is desert.

The two Central Asian countries, Tajikistan and the Kyrgyz Republic, have small populations (6.2 and 5 million persons in 2004 respectively), are landlocked, and have relatively small surface areas in comparison to Pakistan and Afghanistan. Tajikistan is dominated by the Alay Range in the north and the Pamir Mountains to the southeast, where it shares a 1,230 km border with Afghanistan. The Pamirs occupy 43% of the territory of Tajikistan, but contain only 3% of its population. More than 90% of the country has an elevation above 2000 m, and more than half of the country is higher than 3000 m. The mountain chains are interspersed with deep valleys formed by a complex network of rivers, while the Eastern Pamirs are characterized by high altitude desert like plateaus. The Pamir Mountains contain many glaciers and lakes, among them the Fedchenko Glacier, with 700 square kilometres, the largest non-polar glacier in the world. Peak Somoni at 7,495m is the highest mountain in Central Asia.

The Kyrgyz Republic is the smallest and most northerly situated of the four. It shares an 870 km border with Tajikistan. Its topography is defined by sharp mountain peaks and valleys; with considerable areas covered by glaciers. The republic is located within the eastern part of the Tien Shan and northern part of the Pamir and Alay Mountain systems. Ninety four percent of

Kyrgyzstan is 1,000 meters or more above sea level, and 30 percent of the terrain is higher than 3,000 meters. The only relatively flat regions are the Kyrgyzstani part of the Fergana Valley, in the southwest and in the Chu and Talas valleys along the northern border.

Banskota estimates that 61% of Pakistan is covered by mountain-like terrain and includes 25 % of Pakistan's total population (Banskota 2000). It is just a slightly smaller percentage in Afghanistan: 60%, but 89% of the population live in these areas. Tajikistan and the Kyrgyz Republic both claim to be 100% mountainous.

Table 1 gives some development indicators for each country and this for two moments in time: 1997 and 2002. The main indicator is the Human Development Index (HDI), which attempts to measure the average achievements within a country, taking into account the three basic tenets of human development: a long and healthy life, knowledge, and a decent standard of living⁶ (UNDP, 1998).

Pakistan had the lowest HDI of the four countries in 1997 and its position deteriorated by 2004 when it was ranked 142 out of 179 countries. Its low literacy rate (41.5% in 2004) is the main culprit for its low ranking, which puts it in the group of countries with "low human development". Medium human development countries, Tajikistan and the Kyrgyz Republic, benefited from their Soviet legacy in education and health services leading to very high rates of adult literacy and life expectancy. The Kyrgyz Republic ranked 97th in 1997, and, while its HDI did not change, it had slipped to 110th place in 2004. Tajikistan went from 110th to 116th place.

The population in the three countries has increased steadily between 1997 and 2004, a rate not matched by a similar increase in Gross Domestic Product (GDP) for the Central Asian nations, and thus per capita income dropped in each case. In Pakistan, the per capita income increased significantly, by almost a quarter during the five-year period. For the period 1990 - 2002, Pakistan's per capita growth was a modest 1.1 % per year (UNDP 2004). The negative growth figures for the Kyrgyz Republic (-3.6 % per year) and especially Tajikistan, where the per capita GDP shrank, in average, by 8.7% per year, are proof for the economic disorientation and difficulties those countries faced after the implosion of the Soviet Union.

Data for Afghanistan are scarce. The only Afghani statistic available in the table is the life expectancy in 2004, which is the lowest of the whole Asian continent and could be taken as a symbol of the difficult current state of the country. The mountainous character of Afghanistan aggravates the lack of access of the population to services in education and health.

⁶ Income level is included in the HDI to reflect the standard of living and as a measure of potential in all other areas that are not taken into account by the other two parameters

Table 1: Development Indicators for Kyrgyz Republic, Tajikistan, and Pakistan

	HDI ^a	HDI Rank ^a	Life expectancy ^a	Adult literacy ^a	Population ^a	GDP/capita (PPP) ^a	Agri-culture ^b	ODA ^c
			Years	%	Million	US\$	% of GNP	% GNP
1997								
Kyrgyz R.	0.702	97	67.6	97	4.6	2,250	45	14.1
Tajikistan	0.665	108	67.2	98.9	5.9	1,126	na	5.0
Pakistan	0.508	138	64.0	40.9	144	1,560	25	1.0
Afghanistan	na	na	na	na	na	na	na	na
2002								
Kyrgyz R	0.701	110	68.4	97.0	5.1	1,620	45	11.6
Tajikistan	0.671	116	68.6	99.5	6.2	980	na	13.9
Pakistan	0.497	142	60.8	41.5	149.9	1,940	25	3.6
Afghanistan	na	na	43	na	22.9	na	na	na

^a UNDP 1998 and UNDP 2004; ^b World Bank website; ^c OECD website

All the figures apply to the countries as a whole. Reliable and comparable statistics on the mountain areas of these countries are difficult to find. Parvez and Rasmussen (2002) compared socio-economic achievements in mountain regions and the national level for South Asian countries and China, for which such disaggregated intra-country data were available. That analysis showed that development performance in these individual mountain regions is varied, with some of them demonstrating stronger relative performance leading to a catching-up with their respective national socio-economic averages, although absolute levels of poverty are still higher in most mountain regions than in related lowland regions.

In Tajikistan, the Pamir Mountains region, which covers almost half of the country, ranks as one of the poorest regions of Tajikistan. The World Bank Poverty Assessment Update in 2004 reported that GBAO had recently made significant gains in reducing poverty, with the percentage falling below the poverty line⁷ dropping from 91% in 1999 to 76% in 2003 (World Bank 2004). Despite these improvements, GBAO remains the poorest oblast in Tajikistan and also the most

⁷Poverty line of \$2.15 per person, per day.

vulnerable. Chronic malnutrition of children, expressed by stunting (height for age), in GBAO decreased from 54% in 1999 to 32% (AKF 2005), but is still prevalent with almost a third of the children.

For the Kyrgyz Republic there are separate HDI-statistics available for the different mountain terrains, and they make clear that the difficulties of everyday life in the mountains influence the human potential development in these regions, where the human potential development processes have their own specifics and distinctive features. Problems that are characteristic for the whole country are more acute in the mountainous regions and the level of human development is lower there than elsewhere. This is, to some extent, a consequence of the mountain regions development policy in the country that has been implemented for a relatively long period of time: i.e. mountainous regions have been considered as regions that require subsidies and compensations (UNDP 2002).

As could be expected, the HDI for high-mountain zones significantly differs from that of valley zones. This difference is not related to life expectancy, although the index of achieved education influences it somewhat. However, the discrepancy in income is the most important factor that determines the difference in HDI. The average level of GDP to PPP, which is the basis for calculating the income index, in the high-mountain zones is lower by USD 887 per annum than that of the valley areas. (UNDP 2002).

Pakistan has calculated HDIs for the different provinces in 2001, but did not record separate statistics for the high-mountain areas in the North⁸. The rural areas of the mountainous North-west Frontier Province recorded a HDI of 0.489, significantly lower than the national HDI (0.509), while the GDP per capita was 23% lower than the number for the whole country (UNDP 2003). An analysis of household income data from the Aga Khan Rural Support Programme (AKRSP) in North Pakistan shows that though the regions still lagged behind the national average for per-capita incomes, there has been some significant catching-up in the 1990s as measured by the enhanced proportion of incomes in all three mountain regions to national incomes (Parvez and Rasmussen 2002).

III. SUCCESS STORIES

In spite of the current economic and political situation in the region and the difficulties in setting up effective development programmes, there are a number of success stories out there, several of which will be presented in this Workshop. To begin that process, two are briefly presented below. The first illustrates what can be done with a concerted focus on the agricultural sector in

⁸The Northern Areas in Pakistan fall under federal administration.

an effort to move toward a more secure food situation in the Gorno-Badakhshan Autonomous Oblast (GBAO) after independence in the early 1990s; the second of a successful enterprise development programme in northern Pakistan that has created hundreds of jobs.

A. STRATEGIES TOWARDS FOOD SELF SUFFICIENCY IN GBAO, TAJIKISTAN

1. Background

The GBAO is located in the eastern part of the country. The region is the heart of the Pamir Mountains, and its 67,500 km² is 43% of the landmass of Tajikistan. GBAO has a strategic location: it is bordered by the Kyrgyz republic in the North, China in the East and Afghanistan in the South.

The landscape in the eastern part of the Pamirs is characterized by unusually flat-bottomed valleys with a slow river current, vast drainless basins with salty lakes, rounded massifs and high-altitude desert-like plateaus (3,000 - 4,000 meters). The western part of GBAO is defined by the Panj River, which determines the border with Afghanistan, and this area is known for barbed ridges and glaciers with deeply incised valleys; most of the 206,000 plus residents in the Oblast reside in these valleys. The Oblast is divided in 8 administrative districts and has 674 villages: Khorog is its capital. With the amount of arable land very limited (260 km²), this amounts to a little more than one-tenth a hectare per person.

During the Soviet times, beginning in 1921, the GBAO was first considered a strategically important region as part of Moscow's strategy in "the great game" to make the Tajikistan GBAO border the northern limit for Great Britain. Being a border region with China and Afghanistan also made it important during the cold war. Moscow was intent on increasing the population in GBAO, and it encouraged large families and highly subsidised people who lived there. The Soviets abolished private land ownership and replaced it by *kolkhoz* (collective farms) and later *sovkhos* (state farms). The traditional emphasis on food production changed throughout the century, shifting from food production to fodder production and livestock rearing. A majority of the requirements of the region, including food and energy, were imported at favourable rates. As agriculture became less relevant, employment shifted to other, service-oriented jobs in government.

The Soviet era brought prosperity to GBAO in terms of access to services as health and education (literacy at 98% is among the highest in the developing world today), transport to and connections with the outside world, delivery of electricity and water and access to a regular year-round supply of food.

2. Collapse of the Soviet-Union and a humanitarian crisis

The collapse of the Soviet-Union in 1991 brought quick and drastic changes to GBAO. A region that had been dependent on outside supplies, suddenly found a shortage of food and energy. The food situation was especially precarious: all available agricultural land and production assets were state owned and agricultural and livestock production was heavily dependent on outside inputs; at independence GBAO produced only 15% of its staple foods requirements. Furthermore, after 70 years of Soviet presence, local peoples had lost their farming skills.

The situation was further aggravated by the civil war in Tajikistan, waged between 1992 and 1997. Although the GBAO experienced little actual fighting, the civil war led to a further isolation of the region and an influx of some 40,000 refugees.

An imminent humanitarian crisis after 1991 was averted through a large humanitarian aid effort led by the Aga Khan Foundation (AKF), and included *Medecines sans Frontiers* and the Red Cross/Red Crescent Societies, covering all eight districts of GBAO that brought in food and goods like fuel. The magnitude of this assistance is shown in Figure 1. AKF set up the Mountain Societies Development Support Programme (MSDSP) as a local NGO to bring in and distribute humanitarian aid.

3. Strategies towards increased food security

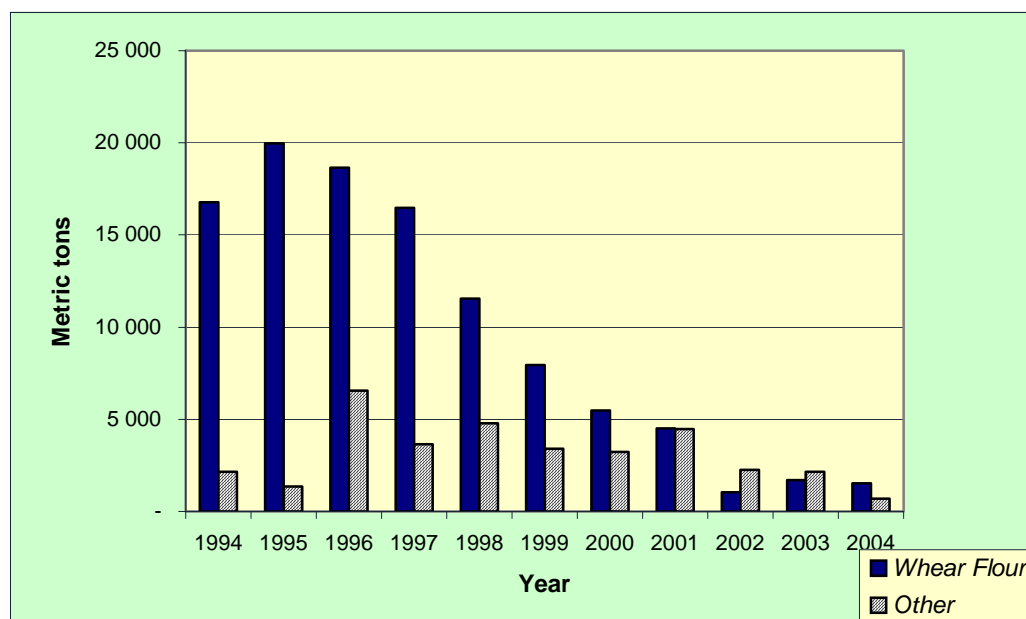
Since humanitarian aid was so expensive and certainly not a long term solution for GBAO, MSDSP began providing support to the communities and the local authorities to increase food production as soon as possible. The local communities and MSDSP worked together to create change that would enable the needed increase in food production. The strategy focused on providing individual families with the necessary means of production and skills to provide food security at the household level.

- In 1994, the local government started a land-reform programme that brought all unused or non-utilized state land under private management: it was evenly distributed along those villagers who agreed to become private farmers. By the end of the decade, almost all former *sovkhos* and state farmland had been privatised. In 1994, 227 hectares of land was made available for private production, in 1999 that had increased to 11,474 hectares (MSDSP 2000).
- The livestock owned by the state farms was distributed in a similar manner.
- MSDSP provided capacity building and training on agricultural practices and livestock rearing to the communities in GBAO. In 1994, 554 farmers participated in this programme; in 1999 this number had increased to 22,054 (MSDSP 2000). MSDSP made available modern varieties of imported cereal and potato seeds and ensured that there was an adequate steady supply of mineral fertilizer. These inputs were offered as in-kind credit programme to aspiring farmers, in which they received the inputs at planting time, repaying the credit and interest charge with grain or potatoes after harvest.

- MSDSP also assisted farmers and communities in installing or, where possible, restoring community-based irrigation systems for the arable lands.

Initially, there was a strong focus on the promotion of wheat production for household consumption. By the second half of the 1990s, however, MSDSP was actively encouraging

Figure 1: Humanitarian Assistance to GBAO, 1994 -2004.



Source: MSDSP data bank.

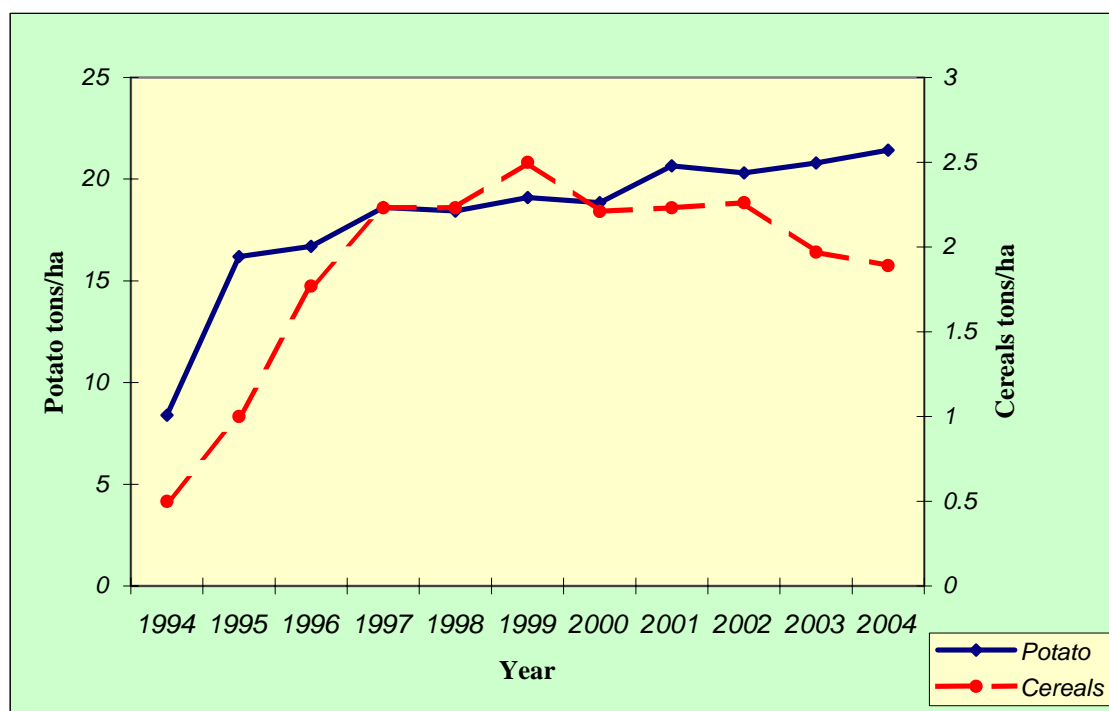
farmers to diversify their production activities and produce potatoes, vegetables and establish or re-establish orchards. These crops enriched the local diet and provided an opportunity for marketable surplus at the same time.

The production in areas under private cultivation in GBAO shot up. Figure 2 shows the jump in yields, particularly between 1994 and 1999 as a result of the use of new and improved seed, adequate supplies of inputs, better irrigation facilities and training and demonstration of proper cultural practices. So did total production, due in part to the increase in private land under cultivation in the oblast in the period 1994 – 2004. During the first four years of the land-privatisation, private managed land cultivated with cereals increased from 277 ha to 6,643 hectares, and it has remained around the 7,000 hectares level since 1999. Private potato cultivation became significant from 1998 onwards (1,000 ha), increasing to 1,842 hectares 2003.

The increase in locally produced food is reflected in the need for humanitarian aid in GBAO during this period. The need was urgent and the greatest in the first years after the collapse of

the Soviet Union, but as the agricultural production area increased, together with the yield, the need for outside assistance diminished. As can be seen in Figure 3, humanitarian aid peaked in 1996, when GBAO received 25,213 metric tons of wheat flour. The reduction in food-aid evolved to a specific targeting of the assistance to the most vulnerable segments of the communities.

Figure 2: Yields of Cereal and Potato Production in GBAO, 1994 - 2004.



In a period of seven years, from 1993 until 1999, GBAO was able to increase its self-sufficiency for its staple, cereals, from 10% to 77%, a remarkable turn-around in a short period of time. Since 1999 this self-sufficiency rate has plateaued at about 70%.

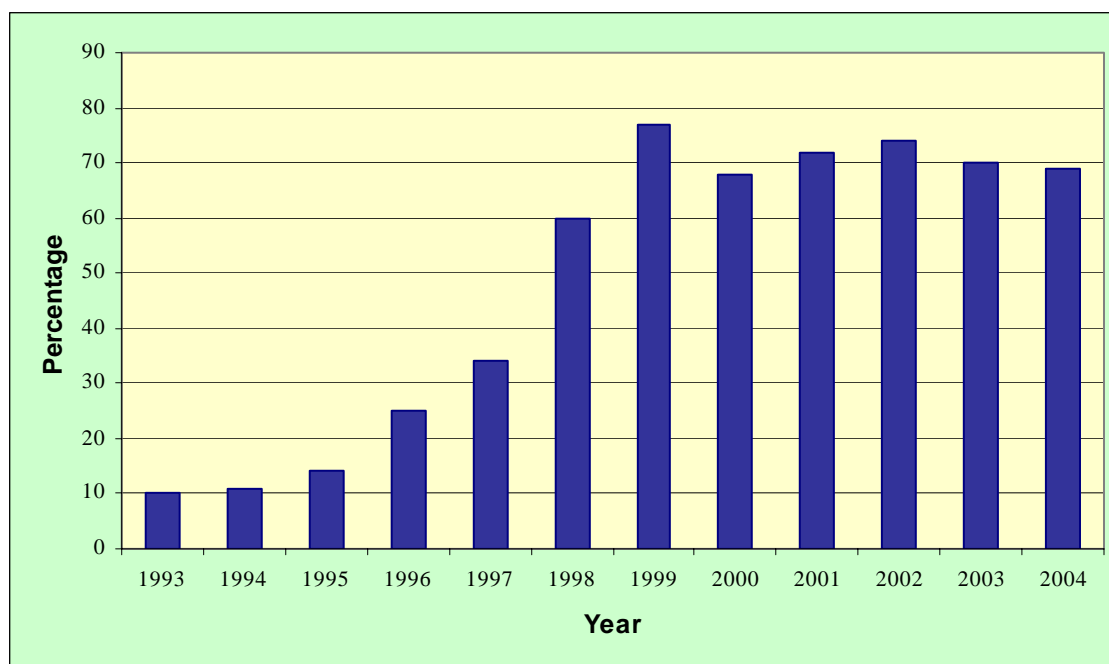
4. Towards sustainable food security.

There is an important difference between food security and food self-sufficiency: the goal is the former and not the latter. For a family to be food secure, they must have access to adequate food supplies, resources to acquire food and adequate health to be able to properly use that food: “Three fundamental pillars – food production, food access and food use” (IFPRI 1995. 93). Thus, MSDSP never set out to achieve 100% food self-sufficiency; but it was clear that a substantial increase in local production there was a first, and, in the case of the GBAO, very necessary step on the road to food security. With one ton of humanitarian wheat shipped to GBAO costing from \$250 (that purchased in Kazakhstan and shipped to Khorog) to \$700 (that purchased in the US and shipped by boat, then train, then truck to Khorog), it was clear that such an

expensive programme would not be sustained long. Thus, even with imports of seed and fertiliser, the costs of locally produced wheat in the valleys of Gorno-Badakhshan were estimated to be only \$65 to 70 per ton in the late 1990s (MSDSP documents).

This effort by MSDSP did not take place in a social vacuum. The villages in GBAO were closely involved, and in 1998 MSDSP started a formal community development programme that aimed to first establish and later develop and strengthen an inclusive community-based

Figure 3: Self-Sufficiency Rate in Cereal Production in GBAO, 1994 - 2004



organization in every village (see Tetlay and Jonabekova paper). These Village Organizations (VOs) have played a central role on increasing and sustaining levels of food security through:

- Engaging or re-engaging the populace into agriculture and ensuring that they had the necessary skills and assets to increase production.
- Taking group loans and distributing the loans and collecting the payments from individual members.
- Taking responsibility to rehabilitate and maintain irrigation systems.
- Reclaiming unused and new lands for agriculture.
- Acting as a delivery mechanism for services like agricultural training and extension.

With the self-sufficiency rate stabilising and even dropping a bit after 1999, one question is what is an ongoing target for wheat and potato production? The drive for increased and intensified farming activities faces a number of constraints that have surfaced (Breu and Hurni 2002):

a high level of subsistence orientation; the tiny proportion of the irrigated plots; the low level of and low potential for mechanization; household dependency on agricultural production, as other income sources are not available; and decaying infrastructure. The answer lies partially in the fact that with the recent growth in the market in GBAO and improved links with Dushanbe including markets for agricultural products, this allows farmers to diversify their production, perhaps growing more high-valued crops or fodder for animals and thus reducing their self-sufficiency while increasing their incomes, and through that, their food security. Introducing alternative crops into the wheat-potato rotation is important to sustain long-term yields of cereals as well. MSDSP's diversification programmes have also had an impact, and vegetable and fruit production have been rising relative to cereals since 2000.

The need to identify and promote viable alternative or additional incomes to agriculture in GBAO is probably more urgent than in any other region of the country. To move forward, MSDSP has decided to phase out of directly providing inputs to farmers, and it intends to pass these functions to the private sector, although these agri-businesses are still risky in GBAO. MSDSP will continue to support nascent input supply businesses with start up capital and technical support.

B. FROM TRAINING TO ENTERPRISE: A DRIED FRUIT COMPANY IN PAKISTAN

Enterprise development is difficult in rural areas in any developing country, and it is particularly difficult in mountain environments where there are few alternatives where a real comparative advantage exists. Yet the need for creating jobs, the need for a more vibrant private sector to take root and the need for diversification of livelihoods are important. This case – growing, drying and shipping apricots to the United Kingdom from northern Pakistan – is one success story. If one could replicate this experience ten-fold, the impact on the economy and the labour market in the north would be phenomenal.

1. The potential of dried fruits

In the dry mountainous areas of North Pakistan, dried fruits and nuts have always been important resources for families, for domestic consumption and as a source for cash. The most common fruits and nuts cultivated include apricots, mulberries, red currants, apples, walnuts and pine nuts. Commerce had always been extremely limited and localized, as access to outside markets is difficult. The opening of the Karakorum Highway to China in 1978 provided producers with a potential outlet to China and to the Pakistan lowlands, but commerce remained very limited and was constrained by the quality of the dried fruits, which was poor. The traditional sun drying of apricots involves de-stoning the fruit and placing it on flat rocks for approximately six to nine days. This produces a dried fruit with an uneven dark brown colour and a tough texture. The open-air treatment allows for insect damage and micro-biological contamina-

tion, resulting in a high wastage of fruits, to which inappropriate harvesting techniques contribute as well.

From the beginning of its programme in 1983, the Aga Khan Rural Support Programme (AKRSP) in North Pakistan had engaged in promotion of fruit production, in particular apricots, but the lack of organization behind the production and processing, quality of the dried produce, the absence of a good network of for sales, in- and outside the country, and the weaknesses associated with communal marketing limited the success and outreach of dried fruits as an additional income for farmers.

2. From the Dried Fruit Project to Mountain Fruits Ltd

In the late nineties AKRSP was able to make linkages with a British fair-trade company, Tropical Wholefoods Ltd, which was interested in buying dried fruits from North Pakistan. In the same period, new drying techniques were disseminated in Pakistan, based on sulphur fumigation and drying trays, providing a low-cost alternative to farmers to produce quality dried apricots.

In 1999, AKRSP set up the Dried Fruit Project, which aimed to increase the quality of dried fruits, with an emphasis on apricots, through improved dissemination of and training on improved cultivation practices, appropriate harvesting and improved drying and preparation of the fruits. The project, working through the different village organizations and women-organizations that were cooperating with AKRSP, aimed at improving the production; it also played a facilitating role in the marketing, improving the processes of cleaning, sorting and packaging and selling dried apricots.

What began as a training project soon took on the dimensions and aspirations of a small enterprise and, in 2003 AKRSP, decided to transform the Dried Fruit Project into a private enterprise "Mountain Fruit Ltd". This venture, officially registered in 2004, has as its goal to process and commercialize dry fruits that they buy from different village organizations. The company works together with AKRSP for continuous training and awareness raising of interested communities on the harvesting and drying of fruits. The company runs a small processing centre in Gilgit, where it receives the dried fruits (mainly apricots) from the different regions, washes, treats and packages them. In 2004, the Mountain Fruits Ltd bought and processed 80 tons of apricots, from village organizations in Baltistan, Chitral and Gilgit, a rise in volume with 25% over the previous year. The statistics from Mountain Fruits show that the prices paid to the producers increased by 23% over the last five years. The company also purchased and processed small quantities of apples, tomatoes, walnuts and apricot kernels (Mountain Fruits 2005). The UK remains the main market for Mountain Fruits, while in 2004 the company has started to access the local Pakistani market, for its lower grade produce, but with limited success at the present time.

From a profit perspective, Mountain Fruits had a productive and successful first year: Both the production and sales reached new highs, while the company was able to reduce its operating costs. Although the Dry Fruit Company lost \$7,000 in 2003 due to a problem with grading its apricots, under the new company logo, Mountain Fruits made over \$38,000 on sales of \$192,000, an increase of 38% in sales over 2003 (draft accounts from AKRSP 2004). Mountain Fruits is an important local employer, providing up to 200 women in Gilgit with an income opportunity during the processing season. More importantly, it buys dried fruit from over 1,500 small farmers, increasing their cash incomes and earnings.

3. Mountain Fruit Ltd: future opportunities and questions

This small enterprise has evolved into a well-functioning (semi)-private business with substantial potential to contribute, by its own action or as an example for others, to the development of mountain communities in northern Pakistan.

Organic fruits: there is a strong interest from Europe in organically grown fruit, which are sold at a price premium. The use of external inputs in the cultivation of the fruits in the mountains in Pakistan is already very limited, and only few changes would be necessary in the practices of the farmers to adhere to standards of organic agriculture. AKRSP and Mountain Fruits are working with the community on dissemination of sulphur-free drying practices. The Mountain Fruits has already exported a batch of sulphur-free apricots to the UK, and plans to increase its supply and processing of those fruits.

Diversification and other types of fruit products: Apricots are the most abundant fruits in the mountains, but there is a demand for other fruits and nuts. Mountain Fruits Ltd. has bought and processed small quantities of apples, tomatoes and apricots kernels and will expand to walnuts in 2005.

Domestic markets: There is widespread local consumption of dried fruits and nuts in Pakistan. Mountain Fruits, Ltd. has not been able to penetrate this market, but the company realizes the importance of local sales and has taken different initiatives to build up a local network of clients for its products.

Multiplier effects: Once Mountain Fruit Ltd. has been established and becomes profitable, it is possible that a number of similar businesses will develop in the region. These are likely to use similar technologies, methodologies and business linkages without paying Mountain Fruits a license fee. It will mean that the experience that the development of the dried fruit industry generates will be available for other entrepreneurs and should bring sustainable benefits to the communities. Business can be developed at the level of processing, packing and marketing, but

there would be space at community level as well for individuals to earn additional incomes with activities related to the gathering, drying and transport of fruits and the sales of inputs.

It would be too easy and too early to present this enterprise as a solid success or a model for economic development in the mountain regions, but it is a good example on how to use and also adapt traditional local resources, add value to them and provide new sources of income for farmers and entrepreneurs. A few dozen similar alternatives of specialisation in mountain areas would permanently alter the economic environment in these areas.

IV. QUESTIONS TO BE ADDRESSED

If, as argued in the opening section, people in these four countries currently have a unique opportunity to promote their development agenda, what specifically do they need to do to take advantage of this opportunity? While the recent political developments described above are not specifically oriented towards the mountain areas in these four countries, mountain areas have a chance to benefit from them in the same way as other geographical regions of the countries. What are the basic tasks ahead, how to we focus on them and how do we apply them to mountain environments? We pose these as questions, structured around three themes. Finding the answers is the prime objective of this workshop and our task in the five days we are together.

A. INVESTMENT, GOVERNANCE AND POLITICAL INTEGRATION

How and where can funds be found for the large investments needed in infrastructure in mountain areas; primarily for roads, energy, communication and the improvement of social services?

These investments are substantial and given the low population density in these areas as they are very expensive on a per capita basis. Therefore they are often given a low priority for the call on government funds. How do we reverse the calculus of mountain investment? What are the multiplier effects of those investments and who will benefit from them? How do we prevent extractive policies that take – but do not give back – to mountain communities? Substantial rethinking on the value of mountain areas and the need to preserve them is required to convince the majority of the population living in low lands to increase financial allocations to investment in the highlands.

What mechanisms can help compensate mountain areas for resources, services and benefits rendered to surrounding downstream areas?

These include dams for (inter)national electricity grids as well as low land irrigation systems, tourist activities such as hunting and fishing and specialised agricultural and livestock produc-

tion. Take the case of tourism. As currently managed, the lion's share of income goes first to tourist agents in the sending country and then second to agents in the capital and large cities in the receiving country. Little actually is spent or ends up in the hands of residents who live in the mountains that attract the tourists in the first place. The trickle-down benefits available to lower socio-economic sectors are generally limited to menial labour jobs, farming and food production, and time-consuming, minimally profitable handicraft production, while uncontrolled tourist-influx can pose a serious threat to the biological and cultural diversity of mountain areas (Lama & Sattar, 2002). This allocation of spending and profit needs to be reallocated towards covering the full cost of visiting, using and appreciating the mountain areas. The value of maintaining pristine mountain environments for the pleasure and use of residents in the low lands would be one of the reasons that allows for greater investment to protect and sustainably develop those environments.

What is the appropriate balance between the private sector and government in these mountain areas, what is governments' role, and where do non-governmental organisations fit in?

Government services and support to mountainous areas tend to be weak and receive a lower priority than the more populated areas down country. At the same time, the private sector has a very limited presence or is absent altogether. The remoteness, lack of infrastructure and difficult topography cause additional costs that lead to higher prices or less access for clients, like in the case of bank services like credit. As a result, some NGOs have occupied this vacant space and have taken up a number of duties of the government with respect, for example, to education and health care or to providing extension advice to farmers. But since NGOs cannot sustain this support over the long-term, ways quickly need to be found to re-engage governments in these areas and re-establish a balance between the private, governmental and civil society sectors, each playing a role that is complementary to one another, without developing a competitive, dual system with the state and negatively influence it developing the capacity to act in these areas.

B. ECONOMIC DEVELOPMENT

What is really required to develop a mountain tourism industry and how can one access its potential?

While tourism has great potential and is considered a crucial factor in the development of these areas, past experiences in similar regions have shown that the benefits for mountain communities are often limited and that tourism can cause additional pressure and disturbances. Who must take a lead role in the development of tourism? How can the cultural and biological heritage be used as an asset and preserved at the same time? What is required in terms of infrastructure, na-

tional parks, trekking trails, guides, transportation, etc.? How can the accessibility be smoothed and improved? One essential point is that many facets of tourism need to be worked on simultaneously if real progress is to be made. These include improving public infrastructure such as roads, airports and communication facilities; increasing private investment in lodging and transportation, training guides and tour operators, improving their language skills; and improving government services including issuing visas and travel permits. In addition, to arrive at sustainable mountain tourism, the mountain peoples must play an active and responsible role in planning and carrying out mountain tourism, supported by other stakeholders and networks, by government policies and actions, and by technical and capacity building assistance (Lama and Sattar 2002).

What is the role of out-migration and how could remittances be steered towards investment rather than consumption and, thus, capture the economic growth multiplier effect of local investment?

Mountain areas are characterized by substantial out-migration, either to the lowlands or abroad. Remittances play an important role in the local economy, but they may have a limited economic growth multiplier effect if they are not used for productive investments. What are the strategies needed to promote investment with these remittances? What are the ways we can encourage additional private sector investment within these communities and within the country to complement venture capital and financial support from abroad?

C. NATURAL RESOURCES MANAGEMENT

What are the key opportunities in agriculture and livestock production that can be tapped?

Sustainable livelihoods in these mountain areas are primarily based on agricultural and livestock production and will be for some time to come. More importantly, economic growth and diversification must be driven by the engine of agricultural growth or it simply will not happen. Thus, we need key jumps in productivity per unit of labour as well as in per unit of land in agriculture, giving mountain residents some cash income that allows them to diversify production and play a role in the emerging market economy. What types of crops and practices should be promoted? What are the linkages with and results of agricultural research for the region's mountain areas? What are the role and the effectiveness of agricultural extension services? Should there be a more explicit shift in focus from self-sufficiency towards a diversified, commercial agriculture?

What critical environmental issues must be addressed before major harm has been done?

The mountain environment and the corresponding ecosystems are vulnerable to outside pressures and disturbances. As populations have increased or lost support from the lowlands, the

environment has suffered and loss of biodiversity and degradation of land and water resources has become visible in numerous ways. What is the role of land-use planning, reforestation projects or alternative fuel sources? This raises the complicated debate on whether poverty is the cause or the consequence of the environmental degradation that has taken place.

There are few easy answers to these questions. Any solution, as exemplified by the experiences discussed above, carries multiple dimensions and requires the input and efforts of various stakeholders. Any sustainable response to these difficult questions lies at least partially in applying several guidelines:

- Recognition of mountains as important and unique areas, worth preserving, developing and using.
- Approaching mountain development from a “people oriented” perspective rather than the more common “resource oriented” approach (Parvez and Rasmussen 2002).
- Developing and working through community-based organisations and employing participative process in working with these villagers.
- Improving roads is a key to decreasing marketing margins for a wide assortment of goods and services via which both producers and consumers will benefit, i.e., higher farm gate prices for farmers and lower prices of food for consumers.
- Strengthening the upland – lowland connection within countries as well as relations between upland areas in adjacent countries (Parvez and Rasmussen 2002).
- Capturing down country benefits from investments in mountain regions and using those to reinforce investment decisions in up country projects.

V. CONCLUSION

It is time to address and tackle the tough issues surrounding mountain areas in Central and South Asia. InWEnt and GTZ have joined hands with AKF to bring together a distinguished group of development specialists from the region to focus on mountain development. It is presumed at the outset that cooperation, collaboration and integration will speed up the development process. The deliberations and discussions over the next five days will determine whether this presumption was correct. A series of robust and practical recommendations for presentation on Friday will indicate that this was in fact the case.

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