

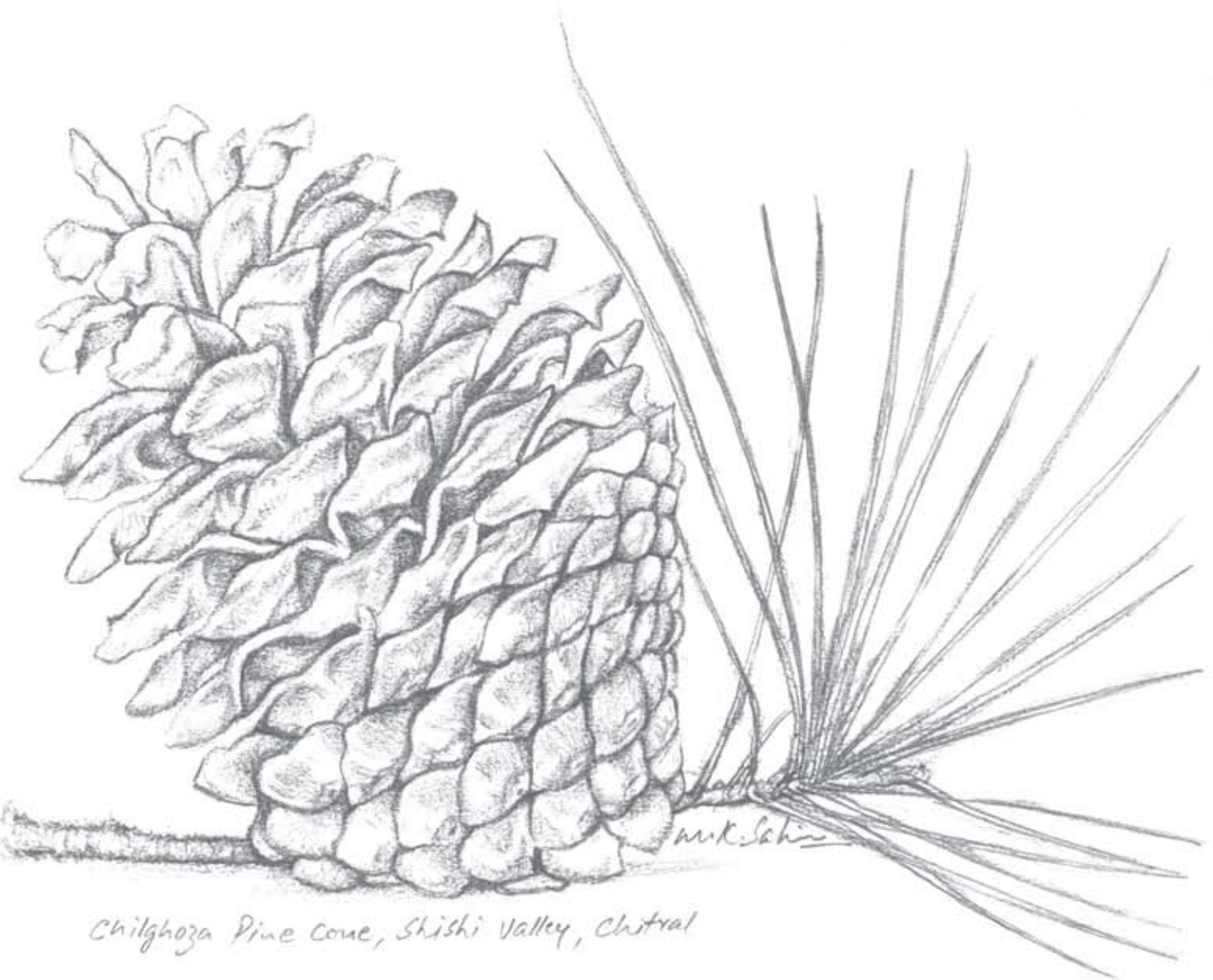


Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

Swiss Agency for Development  
and Cooperation SDC

**IUCN**  
The World Conservation Union

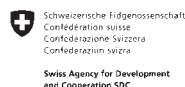
# Natural Resource Management for Improved Livelihoods in Northern Pakistan



*Chitghoza Pine cone, Shishi Valley, Chitral*

The designation of geographical entities in this book, and the presentation of the material, do not imply the expression of any opinion whatsoever on the part of IUCN concerning the legal status of any country, territory, or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.

**Published by:**  
IUCN Pakistan, Sarhad Programme Office.



**Copyright:**  
© 2007 International Union for Conservation of Nature and Natural Resources, Pakistan and Swiss Agency for Development and Cooperation (SDC).

Natural Resource Management for Improved Livelihoods in Northern Pakistan was prepared by the The World Conservation Union (IUCN), Pakistan.

It was supported by the Swiss Agency for Development and Cooperation (SDC).

Citation is encouraged. Reproduction and/or translation of this publication for educational or other non-commercial purposes is authorised without prior written permission from IUCN Pakistan, provided the source is fully acknowledged.

Reproduction of this publication for resale or other commercial purposes is prohibited without prior written permission from IUCN Pakistan.

The contents and the opinions expressed do not constitute an endorsement by the SDC.

**Citation:**  
GoNWFP and IUCN Pakistan (2007). Natural Resource Management for Improved Livelihoods in Northern Pakistan. IUCN Pakistan, Peshawar, Pakistan. 36 pp.

**Author:**  
Inam Ullah Khan

**Editor:**  
Dhunmai Cowasjee

**ISBN:**  
978-969-8141-91-2

**Design:**  
Azhar Saeed, IUCN Pakistan

**Printed by:**  
Ferozsons Printers (Pvt) Limited

**Available from:**  
IUCN Pakistan  
Sarhad Programme Office  
House No. 109, Street 2  
Defence Officers Colony  
Peshawar, Pakistan  
Tel: 091-5271728/5276032  
Fax: 091-5275093

# Contents

<b>Abbreviations</b>	<b>3</b>
<b>Executive Summary</b>	<b>4</b>
<b>Introduction</b>	<b>6</b>
Background to the Projects	7
Natural Resource Focus	7
Partners	8
<b>The Natural Resource Management-Livelihood Nexus</b>	<b>10</b>
<b>North West Frontier Province</b>	<b>10</b>
<b>Chitral</b>	<b>10</b>
Sustainably Managing Non-timber Forest Products: Chilghoza Pine Nuts, Shishi Valley	11
Equitably Distributing Increased Irrigation Water, Kiramatabad, Mulkhow Valley	12
Encouraging Environment-friendly Mining Practices	14
<b>Abbottabad</b>	<b>14</b>
Sustainably Using Natural Assets, Narhotar Village	14
<b>Dera Ismail Khan</b>	<b>15</b>
Adopting a Livelihoods Approach to Warm Water Fisheries, River Indus and Thathal Lake	16
<b>Peshawar</b>	<b>16</b>
Improving Women's Livelihoods through Mushroom Farming, Union Councils Wadpaga and Kaneeza	17
<b>Northern Areas</b>	<b>17</b>
<b>Ghizer</b>	<b>18</b>
Benefiting Communities from Cold Water Fisheries, Gupis Valley	18
<b>Diamer</b>	<b>19</b>
Linking Rural Communities and Non-timber Forest Products, Hudur Valley	19

---

<b>Reflections from the Field</b>	<b>20</b>
Exercising Natural Resource Ownership and Use Rights	20
Increasing Incomes and Improving Livelihoods	22
Involving Women in Natural Resource Management and Livelihood Opportunities	23
Involving the Marginalized and the Poor	24
Influencing Changes in Policy and Legislation	25
Assessing the Sustainability of Natural Resource Use and Management	26
Mushroom Farming	27
Chilghoza Forests	27
Fisheries	28
Water Resources	29
Natural Resources	29
<b>Lessons Learned</b>	<b>30</b>
<b>References</b>	<b>31</b>
Annexure I: Guidelines for Innovative National Resource Management/Livelihoods Model Projects	32
Annexure II: Criteria for Identification/Selection of Natural Resource Management/Livelihoods Projects	34
Annexure III: Criteria for Selection of Local Meso-level Partner Organizations	35
Annexure IV: Projects	36

## Abbreviations

AKRSP	Aga Khan Rural Support Programme
D.I. Khan	Dera Ismail Khan
IC	Intercooperation
IDVs	Integrated Development Visions
IPRP	Innovation for Poverty Reduction Project
IUCNP	The World Conservation Union (IUCN) Pakistan
LGO	Local Government Ordinance 2001
NA	Northern Areas
NASSD	Northern Areas Strategy for Sustainable Development
NGO	Non-Governmental Organization
NRM	Natural Resource Management
NTFP	Non-Timber Forest Products
NWFP	North-West Frontier Province
PSNP	Programme Support for Northern Pakistan
SDC	Swiss Agency for Development and Cooperation
SERVE	Sustainable Education, Rural Infrastructure, Veterinary Care and Environment
SPCS	Sarhad Provincial Conservation Strategy
SRSP	Sarhad Rural Support Program
UC	Union Council
WCS	Wildlife Conservation Society
WWFP	World Wide Fund for Nature - Pakistan

## Executive Summary

**E**xecuted from June 2004 to June 2007 with support from SDC, PSNP aimed to support sustainable development in the NWFP and NAs by carrying forward institutional mechanisms developed over past phases of the SPCS support projects, applying the lessons learnt from developing the Abbottabad and Chitral district strategies to other districts in the NWFP and NAs and sharing experiences gained from implementing these strategies.

With new global trends and priorities, the context of the programme also underwent a change. As a result, the challenge for PSNP was to demonstrate the contribution of healthy ecosystems and natural resources on reducing poverty and improving livelihoods as well as to forge partnerships at the local level for taking the work forward.

This led to the initiation of eight NRM-related model projects implemented through partners in two geographical locations: in the districts of Abbottabad, Chitral, D.I. Khan and Peshawar in the NWFP and Ghizer and Diamer in the NAs. These sites were chosen to cover northern Pakistan and areas for which conservation

strategies or IDVs were already formulated.

The model projects not only attempted to demonstrate the link between poverty and equity with economic development and sustainable management of natural resources but also translate some of the priorities of the IDVs and strategies into on-ground implementation to demonstrate that sustainable management of natural resources is key to addressing poverty issues. With partners in the lead, the model projects were process-cum-result-oriented endeavours, focusing on adding value to on-going partner initiatives or designing actions to optimize approaches used by partners.

To design and implement the model projects, PSNP developed guidelines that included criteria for selection of NRM-related initiatives as well as meso-level partner organizations. Together with an understanding of innovative and successful community-based natural resource management projects carried out to date in northern Pakistan, the criteria were used to select areas of intervention.

In order to monitor socio-economic and ecological changes

occurring as a result of the initiatives, the projects carried out baselines studies covering socio-economic parameters, demography, natural resource status, tenure, rights, equity and benefit distribution and use patterns. To validate the results, assessment studies and joint evaluations were conducted. The findings confirmed that most model projects delivered positive tangible results.

Project outcomes can be conveniently divided into exercising natural resource ownership and use rights, increasing incomes and improving livelihoods, providing women with natural resource management and livelihood opportunities, involving the marginalized and poor, influencing changes in policy and legislation and assessing sustainability of natural resource use and management.

The interventions sensitized community elders to create space for the marginalized and poor by involving them in planning and implementation on the one hand and taking decisions in favour of addressing equity issues on the other. Similarly, the projects were able to garner support of policy makers for initiating change, bringing into practice participatory, community-based natural resource management aimed at conserving natural resources and improving livelihoods.

Given that women constitute a sizable portion of the workforce in



Community Elders in Hudur Valley, Gilgit

rural areas despite their contribution to household incomes remaining low and involvement in household chores virtually invisible, strategies and interventions to involve them in development activities were also devised.

Sustainability issues, both in terms of the natural resource and initiative, were duly addressed. With trends used as indicators towards sustainability, the interventions demonstrated that natural resources needed management in order to provide sustainable benefits.

During the process, some very useful lessons were learnt that can potentially help guide similar initiatives in different cultural, economic and ecological settings. These lessons suggest that NRM initiatives can only be sustained in

the presence of linkages between poverty and equity with economic development and sustainable management of natural resources. Adopting approaches that address community needs and help them realize conservation benefits, enhance community acceptance of external interventions, involve all stakeholder groups, including local activists as well as the marginalised and poor, in the design, planning, implementation, monitoring and evaluation of interventions, adapt formal planning and management tools for village-based institutions and tailor initiatives to match existing models of society play a pivotal role in creating an environment in which communities can participate proactively in the development process and successfully implement initiatives.

## Introduction

IUCN's mission worldwide is to conserve the integrity and diversity of nature and ensure that natural resources use is equitable and ecologically sustainable. In Pakistan, IUCN played a key role in preparing a national conservation strategy, three provincial conservation strategies for the NWFP, Balochistan and Sindh and a strategy for sustainable development of the NAs. In the NWFP, one of the recommendations of the conservation strategy was to devolve governance, particularly of the environment, to administrative levels such as districts that were directly managing and using natural resources. Abbottabad and Chitral were chosen for this experiment and efforts were made to develop district-level conservation strategies.

At about the same time, political support for decentralization continued to grow, culminating in the approval of LGO 2001. The ordinance called for a vision for each district. As a sequel to this decision, district strategies were adapted to fulfil the requirements of a vision and IDVs for Chitral and Abbottabad were formulated. Later, an IDV for D.I. Khan was also

developed. These IDVs were well received by district governments and adopted as official documents for implementation.

The work in the NWFP, including the provincial strategy and district visions, were supported from the start by the SDC that had also partially supported work in the NAs. This led to the development of PSNP, a broader IUCN programme in the north of Pakistan, covering the NWFP and the NA. PSNP built on the success of the four phases of the SPCS to respond to the changing context of decentralization and influence policies and institutions to support sustainable use of natural resources at the local level. The programme also capitalized on experiences gained in developing the NASSD.

While continuing to work with provincial and local governments, the emerging challenge was to demonstrate the contribution well-functioning ecosystems and natural resources could make towards poverty reduction and improving livelihoods. To this end, PSNP set out to build recognition of the ways in which people depend on goods and services provided by natural ecosystems



for their day-to-day income and their long-term well-being. Likewise, the focus shifted from building institutional capacities needed for integrating environmental considerations into development planning to work at the local level, strengthening networking and relationships between local governments, communities and development organizations working in the field. PSNP's goal also included creating fora for collective decision-making and developing processes to ensure equitable and sustainable use of natural resources.

## Background to the Projects

Efforts to demonstrate that sustainable management of natural resources can be key to addressing poverty issues were made through eight model

projects. Equally, attempts were made to implement some priorities of the provincial and regional strategies and IDVs on the ground.

Each project was designed through a participatory, consultative approach, applying lessons learnt to ongoing efforts. Particular emphasis was placed on involving women and marginalized groups in planning, implementation, monitoring and evaluation. The projects focused on adding value either to on-going field initiatives or approaches being used by other development organisations and local institutions. The main thrust was to design people-centered projects to enhance human well-being as well as the natural resource base on which it was primarily dependent. Essentially, these replicable projects were meant to test interventions supportive of

sustainable natural resource management to improve rural livelihoods. But they also attempted to identify unwise natural resource use and management practices to influence district and local institutions towards more equitable and sustainable systems.

## Natural Resource Focus

The model projects built on lessons learnt from past and current initiatives. As such, all innovative, successful community-based NRM projects carried out to date in northern Pakistan were identified and assessed. In addition, organizations involved in developing NRM projects meant to impact positively on rural livelihoods were approached for their understanding of local approaches to sustainable resource use. Initiatives were then selected based on guidelines (see Annexure I) and a criteria (see Annexure II) based on relevance to environmental conservation, potential for sustainable management of the critical natural resource and livelihood improvement of local communities, especially disadvantaged groups and women, community stake and replicability.

This resulted in five focus areas:  
utilization of natural assets: forests and chilghoza pine nuts  
water resources and use rights  
water resources and livelihoods  
environment-friendly mining  
mushroom farming



Meeting of community members in Khalti, Gilgit

## Partners

Carried out in partnership with other organizations, the projects aimed to benefit from the strength of partners in community mobilization and training, fostering gender and equity concerns, promoting sustainability of the resource base, addressing ownership and usufruct, forwarding input for policy discussions and legislation, monitoring project impacts on the livelihoods of local communities and knowledge management through documenting and sharing experiences and learning.

Partners were selected using specific criteria (Annexure III), including their credibility in the project area, values on environment, development, social justice, gender, equity, governance and sustainability and 'fit' within the implementing organization's ethos and philosophy. It was mandatory for the partner organization to demonstrate clear strategic orientation and organizational structure, relevant experience in implementing development projects in a cost efficient, effective manner through in-house or engaging external expertise. Apart from having sound monitoring and reporting systems, the partner had to be innovative, learning-oriented with the capacity to document and share experiences. IUCN finally chose a mix of partners: civil society organizations that are well established in the NWFP and NAs

and smaller institutions that could be encouraged to work in environment-poverty alleviation programmes.

Once the initiatives and partner organizations were selected, IUCN held joint meetings with them to develop the projects, define roles and assign financial responsibilities. To simplify the process, a standard project format was developed with terms of partnership defined on a case-to-case basis. To monitor the socio-economic and ecological changes resulting from the initiatives, the projects initiated baselines studies covering socio-economic parameters, demography, natural resource status, tenure, rights, equity and benefit distribution and use patterns. To validate the results of the projects, assessment studies and joint evaluations were conducted.

As envisioned, partner organizations took the lead in motivating and working with communities to raise awareness on the contribution of natural resources to livelihoods and poverty alleviation, the need to improve environmental conditions, access and benefit sharing with marginalized groups, particularly women, and encourage enterprise development and business approaches. IUCN provided technical assistance and financial support, conducted baseline studies on natural resources, socio-economic conditions and use rights, monitored progress, documented the process and

disseminated the knowledge gained. In short, the partners were responsible for implementing the projects while IUCN provided value-added to their efforts in order to build institutional capacity for replicating the interventions.

The partner organizations were:

### **Aga Khan Rural Support Programme**

Established by the Aga Khan Foundation in 1982, AKRSP is a community-based development organization that has experience of working in northern Pakistan in the field of integrated rural development. By organizing local human, physical and financial resources, AKRSP enables rural communities to fulfil development needs through self-help and eventually self-reliance. AKRSP works in all five districts of the NAs and in Chitral District, NWFP, in pursuit of its mission of fostering grassroots development.

### **Intercooperation**

IC is a Swiss foundation engaged in development and international cooperation since 1982. The foundation's primary aim is to alleviate poverty in rural areas through pro-poor approaches and working with committed partners. IC Pakistan is an active member of the IC global network and believes in empowering partners to access and manage human and financial resources. The IC-sponsored 'Innovation for Poverty Reduction Project' (IPRP) is working to demonstrate that livelihoods of poor communities can be

improved by innovative, market-oriented diversification in NRM, in this case through the sustainable use of NTFPs. In Shishi Valley, Chitral, IPRP is working with communities harvesting and marketing chilghoza pine nuts.

#### **Chitral Mine Owners Association**

The Frontier Mine Owners Association (FOMA) seeks to bring all relevant stakeholders on one platform to develop and promote the mining sector and create employment opportunities in the region. The Chitral Mine Owners Association, a chapter of FOMA, was established in 2001 with members drawn from the entire district.

#### **Sarhad Rural Support Program**

Established in 1989 in the NWFP, the SRSP is an NGO with a livelihood-based approach to rural development. SRSP works as a catalyst organization, providing communities with technical and material support and social guidance to realize latent abilities. Organizational capacities include community development, participatory infrastructure, gender and development, education, micro-finance, micro-enterprise and NRM. Over time, SRSP has been supported by various donors, including the World Bank-funded Pakistan Poverty Alleviation Fund, Canadian International Development Agency, UK Department for International Development, Swiss Agency for Development and Cooperation and US Agency for International Development.

#### **Sustainable Education, Rural Infrastructure, Veterinary Care and Environment**

Popularly known as SERVE, the D.I. Khan-based NGO began operations in 1998 with a focus on addressing poverty issues through mobilization, socio-political and political change. SERVE contributes to this vision by supporting and working with community-based organizations on socio-economic development initiatives that can potentially empower marginalized groups and in turn reduce poverty.

#### **Sungi Development Foundation**

Sungi Development Foundation was established in 1989 to work at the grassroots level in what was then Hazara Division in the NWFP. With the principal aim of promoting good governance, democratization and poverty alleviation, Sungi focuses on empowering marginalized communities through integration into mainstream development processes, advocacy for enhanced livelihoods and rights as well as national-level policy and institutional changes for pro-poor development. Sungi's fieldwork is carried out in select parts of the NWFP, Punjab and Azad Jammu and Kashmir.

#### **Wildlife Conservation Society**

Since 1895, WCS has worked from its Bronx Zoo headquarters in New York City, USA, to inspire care for nature, provide leadership in environmental education and help sustain global biological diversity. With over 100 years of

experience and expertise in field-based conservation, WCS is today working in 53 nations across Africa, Asia, Latin America and North America for the conservation of wild landscapes that are home to a vast variety of species. WCS activities in northern Pakistan include strengthening management systems, improving collaboration between communities, government and other relevant stakeholders, creation of community resource conservation and social development organizations and sub-committees to act as entry points for potential management conservation and development ventures through interested stakeholders, wildlife research and surveys and community conservation education.

#### **World Wide Fund for Nature - Pakistan**

With country headquarters in Lahore, six regional offices in Karachi, Islamabad, Peshawar, Gilgit, Quetta and Muzaffarabad and project offices in Chitral, Zhob, Nathiagali, Swat, Sonmiani, Jiwani, Khabeki (Salt Range) and Gahkuch Ghizer, WWFP works for the conservation of natural resources through active participation of local communities. Since 1990, WWFP is involved in the conservation and protection of nature and natural resources in the Himalayas, Karakorum and Hindu Kush mountain ranges by preserving genetic, species and ecosystem diversity and ensuring sustainable use of renewable natural resources.

## The Natural Resource Management-Livelihood Nexus

**T**he projects (Annexure IV) were initiated in Northern Pakistan in areas for which IDVs or provincial/regional conservation strategies were already prepared. This covered the districts of Abbottabad, Chitral and D.I. Khan in the NWFP and Ghizer and Diamer in the NAs.

### North West Frontier Province

#### Chitral

The largest district in the NWFP, Chitral covers 14,850 sq km with a population density of approximately 21 people per sq km. The district is bound on the north and west by Afghanistan (specifically the provinces of Wakhan, Badakhshan and Nooristan), on the south by the districts of Upper Dir and Swat and the east by the NAs.

Topographically, the area is extremely rugged and mountainous with several deep, narrow valleys. The Hindu Kush Mountains in the area have 40 peaks exceeding 6,000 m in height, including Tirichmir, the highest peak in the range. Chitral is also the most isolated district in the province, accessible only

through mountain passes that are all over 3,500 m (only the Lowari and Shandur are motorable) or by air. For four to five months in the winter, the district is completely cut off from the rest of the country.

The climate in general is dry temperate, ranging from sub-humid in the lower parts of the district that receive between 500 and 1,000 mm of rain annually to cold arid in the upper parts, particularly the high mountains that get less than 125 mm of rain in the year.

The Chitral IDV includes several recommendations to improve management and use of natural resources. All are based on issues raised by people during consultations undertaken to develop the vision and their subsequent prioritizing. The highest priority is the need to bring additional land under irrigation based on the potential of the level land still available to support agriculture. This, in turn, is dependant on sufficient water being available to irrigate the additional land and the cost-effectiveness of conveying water to areas selected for cultivation. A corollary to this priority is that disputes over land ownership and water rights need to be resolved as they would form a

critical part of any plan to increase household incomes.

Similar importance needs to be accorded to creating employment opportunities and poverty alleviation in the long term. Another priority highlighted by the IDV is the sustainable management of renewable resources such as forests, including NTFPs such as chilgoza pine nuts, to deliver multiple goods and services to meet the needs of people. Finally, Chitral's mineral deposits could provide both employment and financial resources for the district, provided that infrastructure is improved, investment and partnerships between the private-sector and communities are fostered and environment-friendly mining measures are adopted. Accordingly, the projects undertaken in Chitral covered the areas of forestry, water supply and mining.

### **Sustainably Managing Non-timber Forest Products: Chilgoza Pine Nuts, Shishi Valley**

Chilgoza pine is native to the subcontinent and natural to Chitral in the Hindu Kush Range, parts of Dir Kohistan, South Waziristan and the Suleiman Range of Balochistan. The tree also grows in the Western Himalayas on each side of the Pak-India border. In the NAs, it is found in Diامر and parts of Nagar Valley in Gilgit district.

Chilgoza pine can be found in Shishi, a large side valley in the southern part of Chitral with several villages scattered over an area of



Chilgoza Pine cone

about 58,940 ha. The Shishi Valley is drained by the Shishi River, flowing north-east to south-west which convergences with the Chitral River near Drosh. The tree is found scattered among oak and deodar forests or as pure stands on drier, hotter aspects.

Shishi Valley is inhabited by four ethnic groups: Chitralis, Pathans, Gujars and Persian-speaking people in the village of Madaglasht. In the 10 villages in the project area, which lies in the upper middle part of the valley, slightly more than half the people are Chitralis (54%) with the remaining divided between Gujars (26%) and Pathans (20%). Birgah, Daam, Kalaas and Ziarat are Chitrali-dominated villages, while Balpanj is purely Pathan. Bayak and Bela are dominated by the Askaris, Kawaash and Kotek with small groups of Gujars.

Land ownership is different in each village. In Askaari, Bayak and Bela, ownership is disputed and under litigation. In Balpanj, a few households have purchased the land while the rest are tenants paying a meagre amount to lease the land. As such, they have become de facto owners: the actual owners would have to go to court to raise the rent or get the land vacated. In the Chitrali-speaking villages, land ownership is clear but settlers are at a disadvantage due to restricted access to forests and in turn to timber, fuelwood and NTFPs such as pine nuts. In Kotek, villagers have settled ownership by purchasing land from the owners. Overall, 65 percent of households are landholders, 27 percent are tenants and the remaining 8 percent are landless.

In Shishi, landholdings are small - an average of 0.23 ha per household - and have low productivity. The same is true for livestock owing to poor quality, underfed stock. A large area of the valley is under rangelands that are degraded. Similarly, the forests are under tremendous pressure from logging (for timber and fuelwood) and grazing. The infrastructure too is in poor condition and education, health and extension services are inadequate. Though labour is available, employment opportunities are restricted as only a few have the skills required to be hired.

Close to a subsistence level of living, households depend on a variety of income-generating on and off-farm activities, with the latter being more common. Over 56 percent of the income is from labour (local, within the district and services), 19 percent from forest resources (sale of timber, fuelwood, mushrooms and chilgoza but excluding forest labour), only 17 percent from agriculture (crops, walnuts, fodder and livestock) and 8 percent from business.

The total forest area in the valley is 14,774 ha, with protected forests totalling 10,575 ha. The remaining 4,199 ha is forest-owned and managed by communities or individuals. The area covered by chilgoza trees is estimated to be 163 ha within the designated forest. Since chilgoza trees also grow among oak forests, it can be safely assumed that an equal area is covered there, raising the total to 326 ha.

In the past, chilgoza cones were picked for domestic consumption only. Around 2000 or 2001, traders from Bannu started purchasing

pine nuts. Consequently, the demand for nuts as well as its price increased substantially leading to unsustainable harvesting. Pickers cut off branches or even whole trees to get easier access to the cones, jeopardizing future productivity and tree stands in some areas. Moreover, there were serious accidents every year, as cone collecting is a hazardous activity with the pickers having to climb trees. Also, climbing trees meant that harvesting was carried out by only a few households roughly estimated at less than 31 percent. Women were not involved as cone collection was an exclusively male activity.

The IC Foundation's IPRP was working in Shishi Valley on chilgoza management since 2003, focusing mainly on community organization, harvesting techniques and safety measures (low cost tools and tree climbing training), and marketing (separating nuts from cones and selling at Bannu). Given the need to add value to the on-going initiative, IPRP and IUCN agreed to work jointly to demonstrate the potential of sustainable management as a means of maintaining or improving the production potential of chilgoza pines in the valley. Efforts were made to increase incomes through further value addition to the processing and marketing aspects of the trade and securing access rights to natural resources for disadvantaged groups, including women, in a bid to address poverty and gender aspects.

IPRP focussed on raising awareness among communities on the economic and ecological value of chilgoza pine and building

capacities of local community organisations in value addition and entrepreneurship through improved harvesting, processing and direct marketing of pine nuts. Women were involved in the trade through the processing process, including extraction of nuts from cones, extraction of kernels from the nuts, and polishing, grading and packing of kernels. PSNP's interest was in resource mapping by documenting prevailing socio-economic conditions, customary and statutory rights to natural resources and the status of the natural resource base and prevailing management conditions.

#### **Equitably Distributing Increased Irrigation Water, Kiramatabad, Mulkhov Valley**

Mulkhov, a remote valley in northern Chitral, is located in the rain shadow zone, receiving scant rainfall in summer and precipitation mostly in the form of snow during winter. The project covered the Kiramatabad area and five villages in the valley: Chatandok, Pasun, Kundar, Raigas and Samagole. The villages are located next to the main road through the Mulkhov valley, about 15 km from Booni, the tehsil headquarters, and around 85 km from Chitral town.

Historically, the area is water deficient. As a result, even though it falls under the double cropping zone, single crop production is the practice. In the spring, glacial melt provides adequate irrigation water. However, in summer, only limited spring water is available and is insufficient to reach the tail end of the irrigation system in lower parts of the villages. Besides the lack of irrigation water, the area is characterized by limited cultivable landholdings, poor physical



Water reservoir in Mulkhow, Chitral

infrastructure, a low literacy rate, unorganized communities and negligible opportunities for off-farm or self employment.

An average landholding is around 9 chakawarums<sup>1</sup> or 0.97 ha, of which only two-thirds is cultivated because of water scarcity. Livestock and cereal crops remain the mainstay while fruit and vegetable production is insignificant due to lack of irrigation water. The water deficit has also led to low cropping intensity and production that lead to below par farm incomes: in Mulkhow, the overall annual income from farm sources is about 28,000 rupees compared to 57,787 rupees for the district.

Agriculture is the main source of livelihood for more than 90 percent of the households but off-farm incomes contribute over 70 percent of household incomes. This is through public or private sector employment, self-employment or casual/daily wage labour. The lack

of education restricts opportunities. Only a few are employed by the public or private sector. Similarly, a small proportion is self-employed, mostly comprising those running retail shops or vehicle/tractor owners.

Women are considered equal partners in all farming activities and influence men's decisions on land allocation for different crops and choice of seed varieties and fertilizers. Livestock management, like elsewhere in Chitral, is a female responsibility. Women also engage in off-farm activities to supplement household income. They produce shu, the traditional Chitrali woolen fabric, which is either marketed or used by the family. In most households, women also make sheep wool rugs and practice embroidery that is sold for cash. Still, women's control over resources remains low. Men continue to be in charge of capital, both cash and kind, and decide its use even if it has been earned by

women. Women have the right of inheritance to land and property but are traditionally deprived of their share.

In Mulkhow, the water distribution system and water rights are institutionalised. In general, water is distributed according to landholding size rather than to families. However, in some cases, certain families have specific rights over water resources. In Samagole, water is distributed equally among all households regardless of landholding size.

Against this backdrop, the project focused on developing a reservoir to improve water availability in summer and upgrading the water distribution system in the five villages. Once additional water was available, the first priority was to irrigate existing cultivated land followed by bringing additional cultivable land under irrigation. Mechanisms for the equitable distribution of water within the community, including disadvantaged groups and women, were also put in place.

The SRSP was working in Chitral since 2002 on physical infrastructure improvement, including communication, land development and irrigation. Assessing the potential to address issues of poverty and livelihoods by increasing supply of irrigation water in the target area, PSNP and SRSP entered into a partnership and launched this demonstration. PSNP's intervention was to add value to an SRSP-supported initiative. The project itself, building a water reservoir, was not original but it was innovative in two

1. Local land measure equivalent to 2.14 kanals or 0.108 ha.

respects. First, the project monitoring put in place was novel and important for SRSP's future initiatives to improve rural livelihoods. Second, the project's efforts to document the distribution system and traditional water rights and in turn develop a more equitable water distribution system were unique.

### **Encouraging Environment-friendly Mining Practices**

With over 20 economically valuable minerals found in Chitral, the district is rich in mineral resources. These include gemstones such as aquamarine, ruby and jasper, metallic minerals, including iron, copper and gold, and non-metallic minerals such as marble, granite, serpentine, quartzite and slate. Of particular interest are the high quality marble and granite deposits. Marble can be found in three major belts extending from Broghil in the north to Arandu in the south. Large deposits of granite also exist in the district.

Despite the presence of high-quality marble deposits and the recent increase in the number of mines and processing units, marble extraction and processing is at a rudimentary stage in Chitral. Outdated mining techniques continue to be used leading to high wastage and small, irregularly shaped blocks that reduce yields of dimension stones. The processing industry also uses inefficient, outdated technology for finishing. Further, though pollution is not a problem at present, mining can potentially have many adverse

environmental impacts, particularly on fragile mountain environments, as well as scenic landscapes.

This initiative built the capacities of mine and processing unit owners to extract and process economically viable stones in a safe manner, while reducing waste and increasing the supply potential of mines. The project also assisted in improving the quality of finished products, facilitating access to capital for introducing modern technology and increasing household incomes from the resource.

The AKRSP has actively engaged with the mining sector in Chitral since 2000 by facilitating mineral exploration, laboratory testing of minerals for quality and assisting with the development of market linkages. For its part, PSNP focussed on identifying safe, environment-friendly mining techniques through initiatives such as pollution control, waste rock disposal and facilitated the upkeep of Chitral's natural beauty, important from a tourism perspective. The potential of stone handicrafts for improving livelihood options of disadvantaged groups and women was also explored. The project involved the private sector through the Chitral Mine Owners Association.

### **Abbottabad**

Abbottabad district is named after James Abbott, Hazara's first Deputy Commissioner. The district is spread over an area of 1,967 sq km, with predominantly scenic,

though, rugged, mountainous terrain. The district's location at the base of the Himalayas allows the area to enjoy temperate weather. Of the total area, forests cover 20.3 percent while 35 percent<sup>2</sup> is agricultural land. The remaining consists of rangeland, shrub land and sparse vegetation. The district is heavily rain dependent, with only 0.4 percent of total area designated as irrigated land, compared to 11.1 percent in the NWFP and 14.7 percent for settled districts in the province.

The Abbottabad IDV clearly acknowledges that forest resources play a critically important role in the economic life of the district and that natural resource conservation and wise use could go a long way in mitigating poverty, particularly in areas with a large rural population and in economies that are dominated by agriculture. The IDV suggests developing social forestry to boost forest-based livelihoods, increase fuelwood supply and protect natural forests and the environment. The vision suggests devising a consensual framework that facilitates the active involvement of local communities in forest management. One of the options is to formalize forest entitlements and ensure continuity of policy aimed of protecting community interests.

### **Sustainably Using Natural Assets, Narhotar Village**

Narhotar Village, in Lora Union Council, lies to the south-west of Abbottabad with an estimated population of 2,619 people<sup>3</sup>, comprising 1,208 males and

---

2. Government of NWFP and IUCN, 2004. Abbottabad - An Integrated Development Vision. Peshawar and Karachi: GoNWFP and IUCN Pakistan.  
3. 1998 census figures subsequently updated in 2003-04 by the Bureau of Statistics. OR Estimates for 2003-04 based on 1998 Census figures.



1,411 females living in 437 households with an average family size of 6.2 people per household. Ethnically, 70 percent of the population is Dhund, popularly known as Abbassis, 10 percent Syeds, 5 percent Awans, 5 percent Gujars, 5 percent Karal or Chaudhry and the remaining 5 percent from marginal groups and craftsmen.

The available revenue records reflect that the total village area is 1,306 acres, of which 347 acres are cultivated, 258 acres comprise forests, 600 acres remains covered by shrubs and grasses and 101 acres is *mahdooda* land.<sup>4</sup> This means only 26.6 percent of village land is cultivated while the rest is used as grassland. In addition, a *guzara* forest covering 125 acres falls within the Narhoter village catchment. The landholdings are small - about 3 acres per household - with per capita land being 0.5 acres. As the irrigation system was swept away by floods in 1992, agriculture is limited to the production of *barani* or rain-fed crops such as wheat, maize and mustard. Vegetable production is dependant on water availability.

Land tenure is based on status of individual households and families, with different types of stakeholders, land owners, non-owners and the government being recognised. Generally, most households are landowners. The various rights and concessions (both legal and traditional) can be confirmed from the *Wajib-ul-Arz*<sup>5</sup> for Narhotar village. Both land owners and non-owners have property rights and

traditional use rights to grazing, grass cutting and collection of dry wood for fuel from the village *shamilat-e-deh*<sup>6</sup>. According to the *Wajib-ul-Arz*, only ancestral owners of land are entitled to a share of land from further distribution of *shamilat-e-deh*, precluding those who are landowners through purchase or other means in the village. Individual or household possession or acquisition of land earmarked for community needs or religious purposes is prohibited.

Only 20 percent of households are totally dependant on agriculture. The remaining 80 percent supplement their household income with off-farm employment. It is estimated that agriculture contributes 60 percent of total household income, with crops contributing 40 percent, livestock 40 percent and forestry 20 percent.

Sungi began work on sustainable management of natural resources with active community participation in Narhotar in 2003. Cognizant of the natural resource potential in Narhotar, PSNP joined hands with Sungi and launched a small initiative to demonstrate that equitable and sustainable utilization of natural assets could improve the livelihoods of villagers, including women and marginalized groups. PSNP added value to the process by facilitating working relations between village community organisations and government line agencies, notably the agriculture and forest departments. Participatory forest management was also encouraged by discussing options and identifying better

coordination mechanisms that could assist in meeting community needs.

The project focused on strengthening existing community organization for sustainable use of natural resources, initiating the development of a forest management system that would not only prove beneficial to local communities but also encourage forest sustainability and increase agricultural production. Various activities were combined to raise awareness and interest of the community in forest management, including clarity on rights regarding tenure and use of natural resources that were already documented in government revenue records.

### Dera Ismail Khan

Dera Ismail Khan is the southernmost district of the NWFP. To the north, the district shares boundaries with Tank and Lakki Marwat. In the west is South Waziristan Agency, with the Indus River on the east. The district is spread over an area of 7,326 sq km and is situated 580 feet above sea level. The 1998 census recorded a population of 853,000 people with over three-quarters or 82.25 living in rural areas.

The major part of the district consists of the daman or sloping piedmont plain that extends down into the Dera Ghazi Khan district of the Punjab. The western part is intersected by numerous hill torrents, which flow from the slopes of the hills of Suleiman Range,

4. Mahdooda land is area set aside by the Forest Department for the conservation of trees, where the breaking of land by the owner for cultivation is not allowed.

5. Local term for land revenue record.

6. Common property belonging to the village.

bringing water with heavy silt. Canals irrigate 30 percent of the area while the remaining 70 percent is spate irrigated by seasonal hill torrents fed by monsoon and winter rains. Agriculture and livestock rearing dominate the economy.

That said, the fisheries sector is also important, with more than 60 percent of the NWFP's fish production coming from D.I. Khan. Freshwater catch comes from several waterbodies in the district, including the Indus River and connected lakes on the eastern boundary of D.I. Khan, irrigation canals and waterlogged areas. Fishing leases and licenses for the whole stretch of the river and lakes are auctioned annually to commercial contractors and regulated under the West Pakistan Fisheries Ordinance 1961 and the North West Frontier Province Fisheries Rules 1976. There are many challenges facing the management of freshwater fisheries, ranging from economic, political and technical to social. Management of inland fisheries from a fish stock protection, production and sustainable livelihoods perspective has still to become a focus of public sector custodians or private sector beneficiaries.

The D.I. Khan IDV endeavours to provide a coherent and long-term sustainable development vision for the district, integrating both environmental and socio-economic issues. The IDV takes stock of the potential for fisheries to improve livelihoods, owing to favourable aquatic, ecological and climatic conditions. In the same vein, the document also reflects on some of the major constraints impeding the development of fish resources. As

such, it suggests that D. I. Khan's capture/culture fisheries and aquaculture potential be systematically studied with a view to developing these resources as components of a diversified economy.

#### **Adopting a Livelihoods Approach to Warm Water Fisheries, River Indus and Thathal Lake**

The livelihood sources of the three groups are quite different. The Thathals' main source of income is agriculture and livestock, though some are also employed as daily labourers. The Sindhis, who have skills in fisheries management and artisanal trades such as building boats and weaving nets, depend on fisheries and work mainly as labour for the fish contractors. The most disadvantaged of the three groups, the Kihals are dependant on seasonal agricultural work and basket weaving/rope making. They have also resorted to begging.

Women's economic contribution patterns indicate that among the Kihals, they contribute equally to the household economy, whereas among the Sindhis and Thathals, men dominate.

Under the Fisheries Rules 1976, river fisheries are leased out to commercial contractors. Local communities living alongside the river do not enjoy fishing rights. In fact, the only benefit accessible to local communities is occasional employment on daily wages by fish contractors.

As departmental capabilities and infrastructure to enforce rules remains inadequate, unsustainable harvesting is taking place. Illegal catch methods, including the use

of explosives, poisonous chemicals and electrocution, are being used. The result has been smaller fish catch, disturbed species composition and threat of local extinction of some species.

Implemented by Sustainable Education, Rural Infrastructure, Veterinary Care and Environment, the project in D.I. Khan was tasked with promoting community-based fish resource conservation and management practices to improve livelihoods of poor communities, including the Kihals. The project also identified reforms in policy and legislation in consultation with all stakeholders, including traditional fishermen.

#### **Peshawar**

Peshawar district lies in the middle of the NWFP with Peshawar, the capital city of both the province and the district, situated near the eastern end of the Khyber Pass. Peshawar is literally the frontier city of Central Asia and historically a part of the Silk Route. Age-old traditions continue to prevail in the district, restricting women to the confines of the home. This reduces the potential of women to contribute productively to household income besides limiting their role in decision-making at the household level.

The SPCS acknowledges the importance of women and their contribution to household incomes in particular and the economy in general. For development to be sustainable the principles of equitable access to natural resources as well as their economic benefits must accrue to both genders, the document

asserts. To improve the livelihoods and living standard of communities in such a way that both men and women reap benefits, the SPCS strongly recommends that women be specifically involved in development efforts. This is not only because they are socially disadvantaged but also due to the fact that many development initiatives will only succeed with their meaningful involvement.

Keeping the cultural context in view, the need was to identify small ventures that would enable rural women, especially belonging to landless and small-farmer families, to contribute to family income. This would enhance their social status and involvement in household decision-making.

### **Improving Women's Livelihoods through Mushroom Farming, Union Councils Wadpaga and Kaneeza**

Union Councils Wadpaga and Kaneeza are respectively located about 12 km to the east of Peshawar and 20 km to the north of the city. The union councils



A woman worker handles freshly picked mushrooms in Wadpaga Union Council, Peshawar

reflect two distinct cultural and linguistic contexts: Wadpaga is Hindko speaking area while Pushto dominates in Kaneeza.

In both areas, women observe strict purdah. As a result, they are generally precluded from outdoor activities except post-harvest handling of agricultural produce and livestock management. The literacy rate is low and women have little exposure to income-generating activities other than embroidery and sewing. Cultural barriers provide little space for small family-owned enterprises where women can play a productive role in raising household incomes.

Pivoted on these ground realities, the project focused on mushroom farming as an activity that would allow women in rural areas to be involved in development, increasing women's and household income without substantially increasing their workload or rankling cultural sensibilities. The focus was on poor families in the villages and every effort was made to involve men in the process to pave the way for women's involvement. SRSP was responsible for the initiative. For its part, IUCN provided SRSP the opportunity to work in an NRM-based project and revive their NRM programme. Besides, IUCN also gave technical support in gender and NRM approaches.

### **Northern Areas**

The NAs comprise six districts: Gilgit, Ghizer, Skardu, Ghanche, Astore and Diamer. Geographically, Afghanistan's Wakhan Corridor is to the north-west, the Xinjiang Uyghur Autonomous Region of China to the

north-east, Indian-administered Kashmir to the south-east, Azad Jammu and Kashmir to the south-east and the NWFP to the west. The region is home to some of the world's highest mountain ranges, including the Karakorum and the western Himalayas. The Pamir Mountains are to the north and the Hindu Kush lies to the west. Amongst the highest mountains are Godwin-Austen (K2) and Nanga Parbat.

Over the last several decades, the natural resources base of the NAs have come under increasing stress as a result of a growing human population and the opening of the Karakorum Highway. At the same time, the authorities are well aware that increased development interventions are seriously impacting the fragile environment, especially aquatic systems.

The natural forests of the NAs are among the most important in the country and are found in the south-western portion of the area in Diamir district, the southern part of Gilgit district, the Punial area of district Ghizer and a few pockets of Baltistan district. Legally-designated forests cover 281,000 ha while scrub forests cover an estimated 381,200 ha, together covering over 9 percent of the NAs. Forests protect the watershed of the Indus River, support a rich array of biodiversity, are a source of forage for the livestock population and contribute to the national supply of softwoods and the local supply of timber and fuelwood. In addition, forests supply a range of NTFPs, including medicinal plants, spices, nuts, honey, mushrooms and plants such as sea buckthorn.

Cold water fisheries are also found in the rivers of the NAs with around 28 fish species, including exotic trout. Trout culture began in the NAs in 1908 when brown trout seed was first introduced from Kashmir and bred in a small hatchery in Gilgit. Later, fingerlings were released into rivers throughout the NA, including Ghizer River in Ghizer Valley.

The NASSD recognizes the vital role of forests of the area and the role of NTFPs in improving livelihoods and poverty reduction. Similarly, cold water fisheries are viewed not only as a means of improving food security in a region that is beginning to import food but also as a means of supplementing household incomes. The NASSD particularly mentions women and the need for awareness raising, education and capacity building.

### Ghizer

Ghizer district shares its western boundary with the Chitral district

of the NWFP. The district covers an area of 12,324 sq km with a population of 120,200 people, of which 51 percent are women. Ghizer is one of the poorest districts in the NAs in terms of food security, infrastructure, economic opportunity and trained human resources. However, it is gifted with rich water resources, in the form of flowing rivers, streams, springs, ponds and natural lakes, offering opportunities for development of capture and culture fisheries and aquaculture.

#### Benefiting Communities from Cold Water Fisheries, Gupis Valley

The village of Khalti is located in the Gupis valley of Ghizer district at an altitude of 7,000 ft above sea level. The village comprises five small hamlets: Aliabad, Bushating, Ghamez, Khalti and Khutum. Reaching the village requires travelling a distance of 136 km from Gilgit which amounts to a 180-minute drive. The main Gilgit-Chitral road passes through two hamlets, benefiting them with all sorts of transportation facilities.

At 1.15 acres, a household's average cultivated landholding is small. Moreover, the area falls in a single cropping zone. This landholding size is half that of adjoining villages as people lost large swathes of land after a recent thunderstorm flood caused landslides, dammed Ghizer River and created a permanent lake. The mountainous terrain means that little additional land is available for cultivation.

Fish from the Ghizer River and new lake are available but currently *de facto* rather than *de jure*. The 1999 amendment to the Northern Areas Fisheries Act 1975 grants rights to communities to manage local fisheries but it has yet to be adopted and practiced. The result is that communities have no sense of ownership, do not see themselves as stakeholders and regard fisheries to be under the government's purview.

Most of the population is dependant on off-farm employment: government service (31%), private sector (8%) and business (2%), agriculture (24%) and work as skilled (9%) and unskilled (12%) labour.<sup>7</sup> The remaining are pursuing their education. In Khalti, the share of off-farm employment in household income is 60 percent. About 27 percent of households can be considered poor and 17% ultrapoor.<sup>8</sup> More than half the women in the village are not involved in any economic activity and are therefore unable to contribute significantly to household income. As their economic contribution remains low, their overall position in the household and community is insignificant at best.



Picturesque view of the Trout Project area in Khalti, Gilgit

The project established a replicable model of sustainable harvesting and management of cold water trout fish for poverty alleviation of rural communities, including the marginalized and women of the Khalti community in particular and Ghizer in general. AKRSP was responsible for the intervention.

## Diamer

Diamer district, with Chilas as the district headquarters, is the gateway to the NAs. Compared to other districts of the NAs, Diamer is considered less developed. The district is bounded by Astore district in the east, Kohistan and Mansehra in the south, Ghizer in the north and north-west and Gilgit in the north and north-east.

### Linking Rural Communities and Non-timber Forest Products, Hudur Valley

Hudur Valley is situated in the heart of Diamer district and is rich in natural resources. In fact, it is considered one of the richest valleys for timber and chilghoza nut production. The local population has complete access to the natural forests that provide abundant timber, fuelwood, valuable medicinal plants and chilghoza pine nuts. Owing to the wealth of natural resources, the local population have relatively high income levels.

Comprising 30 villages with a population of 6,509 males and 3,277 females in 575 households<sup>9</sup>, Hudur is socially and economically divided into two groups based on one major determinant: ownership of natural resources, especially forests and NTFPs. The early settlers or *malikaan*<sup>10</sup> are the actual owners of resources and have all use rights. The late settlers or *ghair malikaan* have no right to use the natural resources without consent of the owners. About 40 percent of the households are *ghair malikaan* and have been granted limited concessions for the collection of fuelwood, livestock grazing and the collection and sale of NTFPs such as chilghoza pine nuts and mushrooms.

Over 40 percent of the population of Hudur Valley is involved in agriculture with farm incomes based on crops and vegetables, livestock and forestry resources. The valley falls in a single cropping area due to the cold and short cultivation season in the upper reaches of the valley. This results in fodder scarcity which in turn encourages the rearing of small ruminant, mainly sheep, because of their comparatively moderate fodder requirement. Sheep are also the main source of wool that is used for local winter clothing. Some larger livestock are kept for

milk production with most families keeping up to four animals to balance production with fodder consumption.

Another large group of people are employed as skilled or unskilled labour, the second largest occupation in the valley. Public and private sector employment is in the shape of jobs in government primary schools and dispensaries or in retail trade.

The culture and traditions of the Hudur Valley being rigid, women are normally confined to the home. Consequently, they are completely dependent on men for the most basic requirements to making household decisions or availing education and health facilities.

This project benefited from the experiences of the Shishi Valley chilghoza initiative. IUCN, the WWFP and the WCS joined hands to initiate a community-based chilghoza pine conservation and management project. The main objective was to demonstrate the potential of chilghoza pine for improving the livelihood of rural communities, including disadvantaged groups, and ensuring the sustainability of the resource.

7. Khan, Maqsood, 2006. Socio-Economic Baseline Survey Report, Sustainable Management and Harvesting of Trout Fish Resources for Poverty Reduction in Freshwaters of Gupis Area in District Ghizer, Northern Areas, June 2006. Peshawar: IUCN.

8. Ibid. The poverty line is defined as a per capita income of less than Rs. 10,543 for the year 2006 and the poorest/ultra-poor households are those who are half-way below this poverty line i.e. Rs. 5,272.

9. Unknown, May 2007. Socio-economic Baseline Survey of Hudur Valley. Gilgit: IUCN.

10. Malikaan and ghair malikaan are local words.

## Reflections from the Field

**T**he key objective of these projects was to link natural resource management to improving household incomes and livelihoods, particularly of the marginalised, very poor and women. The findings can be grouped into a number of areas:

- 1 Exercising natural resource ownership and use rights
- 1 Increasing incomes and improving livelihoods
- 1 Involving women in NRM and livelihood opportunities
- 1 Including the marginalized and poor
- 1 Influencing changes in policy and legislation
- 1 Assessing the sustainability of natural resource use and management

### **Exercising Natural Resource Ownership and Use Rights**

Natural resources refer to the natural capital people can access such as soil, water, forests, rangelands, wildlife, fisheries and

other biodiversity. It is clear that access and use of natural resources is based mainly on land ownership and associated rights. However, these vary according to the context and are often de facto rather than de jure. Clear land tenure and use rights along with effective, efficient management regimes and regulatory systems can form the basis for equitable and sustainable use of natural resources in village catchments.

Though land tenure may vary, equitable decision-making structures for the use of natural resources can significantly influence decisions, often benefiting the poor. Examples from the chilghoza pine nuts project in Shishi Valley, Chitral, and Hudur Valley, Diamer, testify to the fact that community-based organizations (CBOs) can create space for more equitable access and benefit sharing within communities, particularly among the poor and women. Earlier, for instance, labour from outside the community was hired to collect cones. Sensitising CBOs and right owners to the impact of this practice on the poor and women in the community led to a ban on external hiring. Instead, the

community decided to hire labour from local women-headed households, ensuring they benefited economically from the process. Such households covered not only widows and their dependants but also those whose male members were employed down country or abroad. This created space for women who had no role in decision-making earlier.

Harvesting periods were also fixed by CBOs and widely publicised through announcements from mosques, providing equal opportunity to everyone involved in the trade. This clarity in exercising use rights to natural resources and equitable distribution of benefits among those involved in the chilghoza pine nut trade resulted in safeguarding social coherence in the communities. The measure also reduced, if not resolved, conflicts arising due to perceived loss of control by landowners and disadvantaged groups alike.

In Chitral, community management of the Shishi forest and its NTFPs, including chilghoza pine nuts, is being piloted. Moreover, a forest management plan has been developed by the communities and forest department with support from IUCN. Once approved, the plan will be the first of its kind focusing on chilghoza pine, opening the door for developing management plans for other NTFPs. Awareness raising and value addition to the trade have also led to unforeseen benefits: efforts are underway to conserve and protect chilghoza forests. For his part, the District Forest Officer has prohibited the transport of sawdust used as cooking and heating fuel in the valley to other

parts of the district to control logging for fuelwood.

In Kiramatabad, Mulkhov Valley, the CBO instituted a management system allowing the poor in the community an equitable share of additional irrigation water from the new reservoir. For a start, the whole village participated in recording the traditional water distribution system to avoid differences of opinion in the future. Using this customary arrangement as a base, an equitable and sustainable water distribution scheme that had unanimous approval from all stakeholders was developed to ensure smooth supply of water on a turn-by-turn basis to each household. For the first time, poor families were included in the decision-making process.

Further, maintenance, distribution and audit committees were set up and assumed responsibility for the maintenance of the reservoir, equitable allocation of additional water and regular inspections. The members of the committees were selected through a transparent, open at a meeting that drew participants from all households, including the poor. The process has ensured that the poor in the community have a voice and participate in decision-making that impacts their lives.

For Thathal, D.I. Khan, decision-making at a different level was required to effect change in usufructs related to waterbodies and fisheries. District level institutions had to be convinced to intervene on effective, equitable policy and legislation at the provincial level. Locally, an

important milestone was the first-ever dialogue between disadvantaged communities such as the Kihals, Sindhis and Thathals and district-level policy makers on water resources and fisheries. This raised awareness about the disadvantages of commercial fishing for the poor among policy makers.

Awareness of legal provisions for natural resource management and use can benefit communities in local decision-making with government development agencies. Abbottabad district and Narhotar village were part of Hazara when the first land settlement took place in 1872. Though forests were reserved for government ownership and management, sizable swathes of forest land close to villages were set aside to meet the bona fide domestic needs of local communities. These forests were designated as guzara and their ownership was vested in local people, either as individual property, jointly owned through family ownership or as village shamilat. Over time, however, misinterpretations about these forests and their tenure, management and use became well entrenched. Similar confusion prevailed about water resources and their use. In Narhotar, a survey to document tenure, access and use rights concluded that the village had ownership titles to 14 perennial springs and streams. This knowledge helped the community secure rights to use the water points for irrigation of additional land based on the Wajib-ul-Arz for the village. They also had specific legal rights to the guzara forest. This helped in accessing the guzara forest set aside for subsistence use.

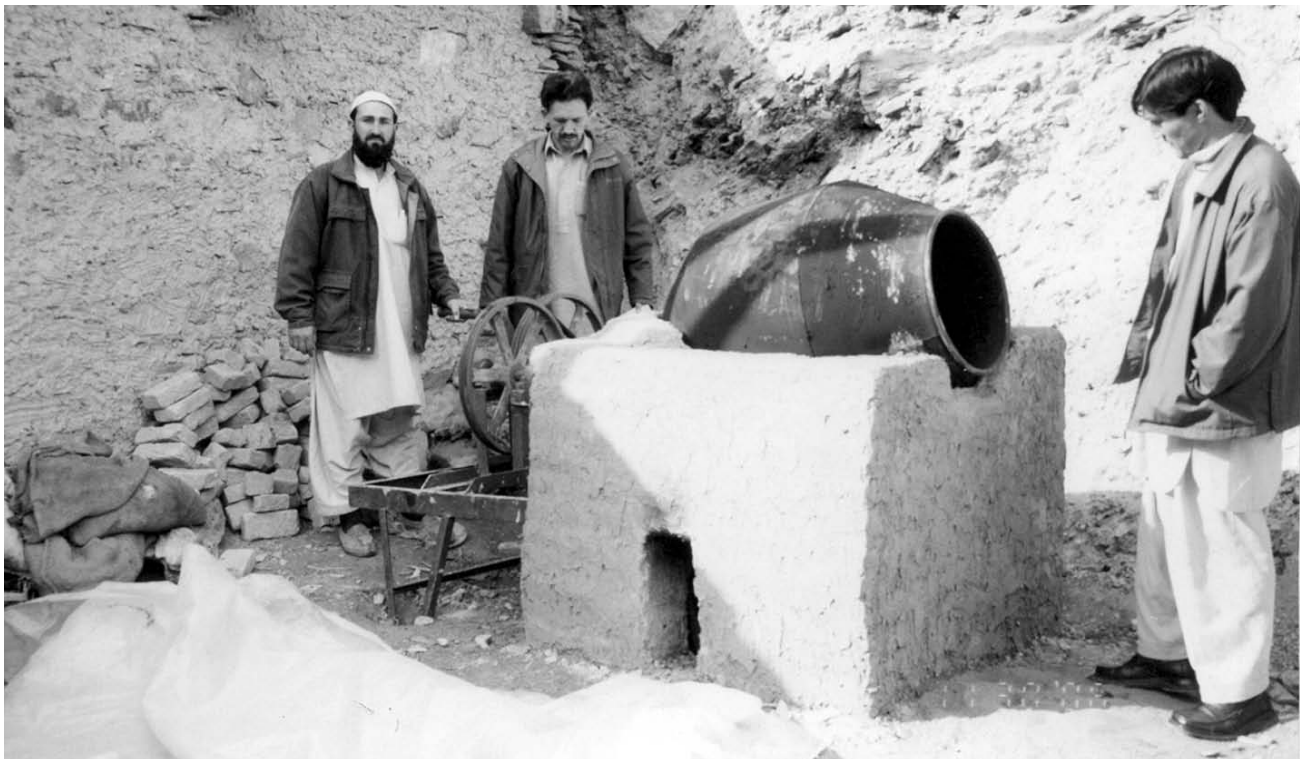
Another positive outcome was a consensus within the village on sustainable forest management. The villagers approached the Forest Department to initiate the process of joint forest management in the area through the development of a management plan and the selection of a management committee. To take this process forward, community members unanimously agreed to nominate two individuals to negotiate with government. Once formally established, this initiative will be the first of its kind in the Galiat area, opening the window for other such ventures.

Another example is from Khalti in Ghizer where awareness of legal provisions and willingness to engage in discussions set the stage for addressing the needs and interests of communities as

well as the line department and administration. This led to flexibility in the interpretation of policy and legislation and provided space for individual income generation by sale of fish caught under angling licenses and community management and use through a share in income from fish licenses on the provision that the community is involved in fisheries conservation. These changes were ensured through notifications issued by the Fisheries Department and the NAs Administration. This was the first instance for the NAs, the administration at the regional level as well as the department at the local level of coming forward with an unprecedented commitment towards community-based management of natural resources and stewardship in the fisheries sector.

## Increasing Incomes and Improving Livelihoods

Mountain communities can increase their household incomes by value-addition to current practices and will actively support developments which offer similar opportunities. Chitral's Shishi Valley has a largely traditional economy with households, comprising landowners and tenants who earned low incomes in comparison with the rest of the district. With a shortage of cultivable land, local communities could not survive by agriculture alone and practiced a mixed agro-silvo-pastoral subsistence living, making use of the diversity of natural resources in the valley. Non-timber forest products and chilghoza nuts in particular contribute towards cash incomes and local subsistence.



A roasting machine for chilghoza nuts in Shishi Valley, Chitral



As a result, there was keen interest within the community in interventions that led to increased household incomes. They easily adopted measures to improve pre- and post-harvest management of chilgoza nuts and tools that improved safety of pickers during harvest operations. Households were ready to learn skills needed for small enterprises, marketing through cooperatives and links with external markets. The communities managed to successfully adapt to adding value to chilgoza nut collection and marketing. The result: harvesting figures showed relative improvement from the 2003 level, number of households involved in chilgoza collection increased by 30 percent and average income per household by 20 percent, of which 35 percent was from chilgoza nuts.

When the Shishi model was replicated in Hudur, Diamer, it contributed significantly to adding value to the chilgoza nut market as local communities started selling nuts instead of whole cones, earning comparatively better returns. In 2006, each family earned approximately 50,000 to 100,000 rupees from the initiative. The additional income allowed families to purchase goods for improving their livelihood, including vehicles, farm implements, machinery, land and livestock, the last understood as a sign of wealth in the area. Some families that could not afford an education for their children earlier have now started sending their children to down country schools. Borrowing money, a common practise among the poor, was also less prevalent.

For mountain communities, an investment in new technology

helps increase incomes and improve livelihood. This became evident in Kiramatabad, Mulkhow, where the construction of the water reservoir resulted in 30 percent additional irrigation water becoming available during the water-stressed summer period. This allowed households to bring more area under cultivation, increase production per acre of existing cultivable land and start double cropping. An additional benefit was the saving which would otherwise have been spent on purchasing wheat and straw.

In Khalti, Ghizer, the new lake offered fishing opportunities and renewed interest in cold water fisheries. Under the Northern Areas Fisheries Act 1975, the sale of trout fish is prohibited. But after dialogue between the Khalti community and district administration, the latter has allowed the harvest and sale of a specific number of trout by anglers on an experimental basis. The maximum number of fish that may be caught at any time has been specified to prevent over harvesting. As a result of networking and increased exposure, several community members of both sexes have been motivated to re-engage in aquaculture while eight new farms are in the process of being established. Other livelihoods options being explored include tourism and trout sport fishing competitions that would allow sidelines businesses such as sale of angling equipment, local food items and handicrafts to flourish.

In D.I. Khan, Thathal, the capacity of communities to improve livelihoods was enhanced by training in fish storage and

processing and poultry and livestock management. To improve their life skills and diversify livelihood options, the communities were linked with the provincial Literacy for All Project which opened three adult literacy centres in the Kihal area.

### **Involving Women in Natural Resource Management and Livelihood Opportunities**

More often than not, environment-related roles of women go unacknowledged. Women use natural resources in the collection of water for household needs, farming, fishing and collecting food, fuelwood and NTFPs. However, they are constrained by limited access to renewable energy sources, lack of property rights and education. Women's contribution to NRM has to be acknowledged or they will remain marginalized from valuable physical resources such as irrigation water or forest products and human assets, including training and credit benefits. This is not only an equity issue but also one of efficiency and effectiveness. Without the participation of women, sustainable development initiatives are clearly less effective.

In Khalti, the NAs Administration took the bold step of employing two women as guards, paving the way for women entering non-traditional occupations. Moreover, training sessions were held exclusively for women in unusual activities such as value-added fish processing and preparing special trout dishes.

In Shishi, women activists from the villages of Pathan and Gujar were

trained in improved cone collection techniques and post-harvest value-added work such as separating chilgoza nuts from kernels, grading, roasting and packing. Though this activity added to their workload, it was seasonal and lasted for a short time. The benefits were both tangible and intangible: women earned extra income, were involved in training and shown to play a productive role in adding to household income.

In Narhotar, Savera Tanzeem Baria Khawateen, a women's community organization was already in place. The organization was included in efforts to enhance agricultural production, improve access to productive services and address the issue of water shortage, through training in vegetable farming, access to vegetable and crop seed varieties, compost formation for domestic agricultural use and repair and rehabilitation of irrigation channels. With the introduction of kitchen gardening, access to seed facilities and training, women grew a variety of seasonal vegetables such as radish, potatoes, chillies, spinach, garlic, peas, tomatoes, onions and carrots on 35 plots measuring half a kanal each. This eliminated their dependency on external markets, afforded them a decision-making role on when to buy and sell produce and confidence to manage home-based natural resources.

Women were also involved in the setting up a village water supply

system and implementing water management practices. Practically, the availability of irrigation water for kitchen gardening and domestic use meant a reduction in the household workload by obviating the need to walk long distances to fetch water from neighbouring villages or depending on water carriers or rainwater for irrigating crops.

In Kiramatabad, Mulkhov, women were involved through women-only organizations, formed with representation from all households. As in Narhotar, about 35 women were trained in vegetable production and, with the availability of additional water, could grow vegetables not only for domestic needs but also for sale, contributing to household incomes. One spin-off of the additional water was that it was used to grow fodder crops near homes, reducing the time and effort otherwise spent by women on collecting feed for livestock.

In Thathal, the route to women's involvement in capacity building activities was through the cooperation of male members of the communities. Once the men were convinced of women's potential to contribute to household incomes, a vocational centre for the Kihal and Thathal women was established in the village. As a result, the women have access to training, providing them with the skills to generate income. Thirty-two women were enrolled in the adult literacy programme set up by the Literacy

for All Project. The most dramatic and visible change is that the women and children of the Kihal community have stopped begging.

In Hudur Valley, though women were involved in picking cones and separating and sorting nuts in their homes, they could neither be approached directly nor participate in trainings. To redress this marginalization, the men were sensitized to the value of women's involvement which resulted in them expressing an interest in involving women in capacity building initiatives.

### **Involving the Marginalized and the Poor**

Groups within communities can become marginalised on the basis of limited land ownership and use rights, ethnicity and culture. The poor can include marginal people but poverty can be defined by many factors, including access to natural, produced, human, social and political capital.<sup>11</sup>

In Northern Pakistan, each village has well-defined hillside catchments to which villagers have access according to land ownership and traditional rights defined at the local level. Access to chilgoza pine trees is based on traditional rights to guzara forests and wastelands. Both Tenants and the landless collect chilgoza cones according to community decisions while settlers have limited access within the boundaries of village catchments. In privately-owned forests,

---

11. UK Department for International Development. Sustainable Livelihoods Guidance Sheets.

[http://www.livelihoods.org/info/info\\_guidancesheets.html#6](http://www.livelihoods.org/info/info_guidancesheets.html#6). Natural capital: land, water, forests, marine and wild resources; produced capital: physical infrastructure, tools and technology and credit; human capital: health, nutrition, education, knowledge and skills; social capital: networks and connections, the benefits of patterns of association; and political capital: power or powerlessness.

proprietors enjoy the first right to collection. The landless, on the other hand, are allowed to collect leftover cones. Since cone harvesting is difficult and laborious, it is mostly the poor who are involved in the task.

In Hudur Valley, Diامر, the poor had limited access to chilghoza pines which impacted their incomes and livelihoods. Once sensitized to the predicament of the poor, the community took a number of steps to include these groups in decision-making and sharing benefits from the chilghoza trade. These included representation in village chilghoza-related committees, improving access to the resource by setting harvesting periods based on the maturity of the cones as well as harvesting tools, involvement in trainings on worker safety and value-added production techniques such as roasting and collective marketing down country.

In Thathal, the Kihals were the most marginalized and deprived members of the local communities. In a bid to improve their situation, the Kihals were organized into groups and then introduced to stakeholders such as local politicians and government staff, providing them with a level playing field to discuss issues regarding access to fish resources. This resulted in building their confidence and capacity to negotiate access rights. Another spin-off was that during interactions with the district government the Kihal community leaders raised the issue of the need for land for housing. For his part, the district nazim approached the Revenue Department to initiate measures to identify suitable

government land for housing and submit a case for approval to the provincial government.

### **Influencing Changes in Policy and Legislation**

Sustainable management of natural assets cannot be ensured without enabling legal and administrative mechanisms. Accordingly, lacunae in policy, legislation and governance were identified and steps taken towards initiating change needed to support participatory management for sustainable resource use and livelihood improvement.

In Shishi Valley, it was through the involvement of government staff in the field that gaps in legislation were identified and efforts made to plug them. Both the awareness raising campaign and direct contact with the communities helped the NWFP Forest Department staff appreciate the fact that the current rules governing NTFPs in general and chilghoza nuts in particular were not equitable. This resulted in the review and redraft of operational rules for chilghoza forest management being drafted that are currently under review.

Similarly, gaps in legislation around community management of local fisheries were identified in D.I. Khan after dialogue with the local communities. Benchmark studies identified that fisheries were being seriously degraded due to over fishing by commercial contractors with few or no benefits accruing to local people. This led to the initiation of dialogue with the district government on the need for change, with policy makers oriented to the importance of the

resource vis-à-vis livelihoods through meetings with the three relevant communities: the Kihals, Thathals and Sindhis. The effort proved useful. The district nazim made a commitment to help the communities access water resources and conserve fish stock. A District Fish Protection Committee was established with the mandate to review the existing Fisheries Act and to formulate a set of recommendations for community participation in fisheries management as well as provisions to regulate fish catch. The recommendations, under the seal of the district nazim, were submitted to the NWFP Chief Minister's Office for action.

The issue of community-based fisheries conservation and management arose in Khalti in Ghizer District, convincing the NAs Administration to review existing fishery policy and law and identify legal provisions for community management and benefit-sharing. If such provisions were missing, amendments were to be suggested. According to the Northern Areas Fisheries Act 1975, all natural waters are state owned and marketing fish, particularly trout species, caught from these waters is prohibited. Legally, the communities could not fish commercially for trout or sell their catch. The review recommended changes in the Fisheries rules, allowing half the license fee to be shared with communities involved in fisheries conservation.

Similarly, anglers were not allowed to sell trout in the market, depriving them of an alternate source of income. The review also recommended allowing the sale of trout caught under an angling

license. The NA Administration has agreed, in principle, to the proposed changes in and has allowed local anglers to market trout. This has not only benefited the local communities in terms of income but has also enhanced their motivation and commitment towards conservation. However, the agreement has still to be given legal cover.

In Chitral, efforts to promote environment-friendly mining and processing practices led to a review of the environmental impacts of the sector in turn leading to proposals for policy change and a set of recommendations on remedial measures presented to the district government. In light of the recommendations, the district government has created a monitoring cell that provides information on modern mining

tools and techniques and links to mine product markets. Mine owners in Chitral were linked to the Small and Medium Enterprise Development Authority (SMEDA), the Export Promotion Bureau (EPB) and the US Agency for International Development Strategic Working Group on Marble and Granite. The results have been:

- SMEDA's Aik Hunar, Aik Nagar. The Village, One Product programme, similar to initiatives in Thailand and Japan will focus on marble products in Chitral. SMEDA has also received approval from the federal Ministry of Industries, Production and Special Initiatives for a Marble Handicraft Training Centre at Chitral and a proposal for a Regional Business Coordination Centre in the district is under consideration.

- The EPB has proposed a Handicraft and Mosaic Tile Making Training Centre in the district.
- In recognition of the enormous potential of marble mining in Chitral, the Strategic Working Group on Marble and Granite has recommended the district as one of eight sites for a model quarry to be established at a cost of 35 million rupees.

### Assessing the Sustainability of Natural Resource Use and Management

The sustainability of both the resource and intervention was assessed. Trends were taken as indicators towards sustainability as the initiatives were for too brief-lived to produce concrete figures. However, they have set the stage for demonstrating that to benefit



Bird's eye view of Chitral



Indiscriminate logging of chilgoza pine trees in Hudur Valley, Gilgit

from a resource, sustainable care needs to be taken and that too in a sustainable manner.

### Mushroom Farming

Mushroom farming is dependent on the availability of spawn and marketing opportunities. In Wadpaga and Kaneeza union councils, Peshawar, steps were taken to reduce risks from the start. Women cultivators were linked with the Agricultural Research Institute at Tarnab, Peshawar, and an agreement for regular supply of spawn was signed. Strong links with local restaurants and other market places were forged and collective marketing, rather than individual sale, enabled women to negotiate better prices, encouraging regular production in line with market demand.

### Chilgoza Forests

There are a number of issues around chilgoza forests, with local people divided in their opinions over voluntary trade-offs versus use. Pragmatic and realistic steps need to be taken to address the issue of resource sustainability and the livelihoods it supports in settings where:

- Chilgoza tree cover is declining due to intensive cutting for fuelwood.
- A high demand and attractive prices for pine nuts in national and international markets has led communities to employ unsustainable harvesting methods such as cutting whole branches and harvesting immature cones to save time and labour.
- Natural regeneration is seriously affected not only due to branch

cutting and the collection of immature cones but also from logging, overgrazing, soil erosion and land slides.

In Shishi Valley, increased awareness helped communities realize the multiple benefits of chilgoza pine and work towards conserving the forests. As such, they were willing to invest in modern forestry management tools and techniques and nut collection practices to increase their livelihoods. They agreed to:

- Maintain mother trees and retain cones on each tree to sustain natural regeneration.
- Conserve large tree crowns by avoiding excessive branch lopping during cone collection.
- Reduce the incidence of injuries to green trees by only allowing local villagers to harvest cones.

- Minimize instances of premature cone picking by agreeing on a harvest calendar and implementing it through collective decision-making at the village level.
- Use proper tools for cone collection.
- Establish conservation committees to implement community rules.
- Ban cutting of green branches and chilgoza trees and impose a fine of 3,000 rupees and 10,000 rupees, respectively, to ensure compliance.

In 2004, five people died and 12 were seriously injured during cone collection. However, safety training and appropriate harvesting tools improved the situation with no falls or casualties reported in 2005 and 2006.

In Hudur Valley, the traditional forest management system was adapted to support regeneration of degraded chilgoza stands. In the older forest management regime, the jastero or community elders were responsible for a forest. The elders managed the forest through the zaitu system instituted through village wardens or a sub-committee responsible for implementation of their decisions or even a local forest conservation and management committee, comprising elders from each malikaan family of the area. This system was unable to address the issue of poverty as almost 45 percent of the population comprised ghair malikaan families with limited access to chilgoza pines. As a result, the communities were motivated to revise their system by transforming the zaitu into a conservation committee

responsible for monitoring the implementation of decisions related to forestry while a valley-based organization, which consists of all the jastero and influentials, became the highest level decision-making body. However, all groups including ghair malikaans are now represented in both committees.

## Fisheries

If the fisheries sector is to contribute to improving livelihoods, fish stock in Thathal Lake and the Indus River in D.I. Khan needed to recover from over harvesting. The communities, with support from the Fisheries Department, have started monitoring harvesting levels and stopped fishing between May and August, the breeding season. Moreover, contractors have been motivated to restock the lake with fingerlings.



Angling competition in Khalti, Gilgit

The Khalti community in Ghizer district and the government are carefully planning and implementing joint actions for the recovery of trout and the improvement of its habitat. A sense of ownership and responsibility has motivated the community to take decisions in favour of managing the resource. For example, women who previously used to wash their clothes alongside the lake have discontinued the practise to avoid polluting the water with detergents. Two male and two female watchers have also been appointed to patrol the area, making noteworthy strides in checking and controlling illegal fishing practices such as the use of explosives to catch fish. The NAs Forest Department has contributed by restocking the lake with 7,000 trout fingerlings.

The result has been that local anglers as well as outsiders who recently visited the area have reported that both catch and fish size has increased considerably, indicating a trend towards improvement. Indicators of sustainability of the resource and initiative can be seen through:

- Restocking of river.
- Measures for people-centred policy and legislative frameworks.
- Developing partnerships for conservation.
- Highlighting and demonstrating the potential of conservation for improving livelihood.

### Water Resources

In Kiramatabad, the benefits were the result of water storage and a



Preparing for winters in Khalti, Gilgit

new water distribution system. For sustainability, it was important to monitor the effect of the new system on different stakeholders, ensuring that none were worse off. As a preemptive step, the communities instituted measures to prevent water loss and recover some of the costs, in cash or kind, for reinvestment and maintenance. This was effected through the establishment of a village fund, with households monthly contributions. Widows and the very poor have been exempted from these contributions.

The upshot of this arrangement is that adjoining villages are motivated to approach various development organizations to replicate the scheme in their area. While the initiative of constructing reservoirs in water scarce areas was strongly endorsed by partner communities, the issue of

equitable water distribution will remain a tricky matter. Water harvesting projects should be mindful of perpetuating existing inequities as the success of similar initiatives will depend on how communities address the issue of distributing additional water.

### Natural Resources

In Narhotar, the initiative has led to consultative and cross-sectoral discussions on managing nature resources issues, creating a sense of ownership and commitment within the community and ensuring continuity and efficacy. A certain degree of economic diversification has taken place, especially in agriculture and forestry. Participatory orientation has also led to the incorporation of the needs of local communities into development priorities for the area.

## Lessons Learned

**T**he adoption of a pragmatic strategy for linking poverty and equity with economic development and sustainable management of natural resources acts as a cornerstone to safeguard the sustainability of an initiative. An approach that addresses community needs and presents a prognosis of positive economic changes expected through the intervention can help communities appreciate the benefits of conservation, encouraging proactive participation in the process and in turn assisting in the success of the initiative.

In conservative societies, it is advisable to engage in sensitization activities to enhance receptivity towards external interventions, creating an environment conducive to successful implementation. Moreover, the involvement of the entire community in the design, planning, implementation, monitoring and evaluation of an initiative is likely to dissolve barriers between socio-economic groups, particularly the marginalised and the poor. ownership by all groups, while simultaneously promoting equity. It also reduces impressions about interventions as a 'foreign agenda' with ulterior motives towards cultural and religious norms.

The identification and engagement of local activists can help influence and educate local communities and enhance their access to the benefits of sustainable development.

The adaptation of formal planning and management tools for village-based institutions can add value to outputs, enhancing efficiency and effectiveness. Tailoring new systems to match existing community dynamics also improves chances of the initiative's success. In fact, if interventions do not match existing models, glitches may occur in implementation and long-term sustainability of interventions.

It is equally important to institute an effective communication and information sharing system in multi-party initiatives to avoid misunderstandings arising from different messages being conveyed to communities by the various partners.

Also, appropriate tools and training opportunities need to be available for communities if safety measures are introduced as part of the interventions.



## References

Haq, Ehsanul, February 2006. *Socio-economic Conditions and Institutional Mechanism for Water Distribution in Kiramatabad, Mulkhow, District Chitral*. Chitral: IUCN

Khan, Maqsood, June 2006. *Socio-economic Baseline Survey Report. Sustainable Management and Harvesting of Trout Fish Resources for Poverty Reduction in Freshwaters of Gupis Area in District Ghizer, Northern Areas*. Gilgit: IUCN

Malik, Nazir Ahmed, June 2006. *Baseline Survey Report of Village Narhotar, Union Council Lora, District Abbottabad*. Peshawar: IUCN

Riaz, Mohammad, n.d. *Geological Evaluation of Marble as Resource Base In Identified Areas of Chitral*. Chitral: AKRSP

Ahmed, Rizwan, n.d. *Baseline Survey on the Potential of Mushroom Farming for Improving Livelihoods of Women and Marginalised Groups in Two Select Union Councils of Peshawar*. Peshawar: IUCN

Ahmed Maqsood, May 2006. *Socio-economic Baseline Survey of Hudur Valley*. Gilgit: IUCN

Haq Rafiul, September 2006. *Baseline Study on Socio-economic Conditions and Fish Resource Assessment in D.I. Khan*. Peshawar: IUCN

Yusuf, Muhammad, September 2005. *Baseline Survey of the PSNP-IPRP Model Project on Poverty Reduction and Livelihoods Improvement through Sustainable Management of Chilghoza Pines in Shishi Valley, Chitral*. Peshawar: IUCN

Yusuf, Muhammad, August 2006. *Baseline on Socio-economic Conditions of the Local Community and Environmental Challenges from Marble Mining and Status of Pollution*. Peshawar: IUCN

Yusuf, Muhammad, February 2007. *Support Tenure System that Secure Access to the Chilghoza Resource by Poor People of Shishi Valley, Chitral*. Peshawar: IUCN

Zaman, Saeeduz, n.d. *A Report on Land Tenure and Ownership in Village Narhotar, Union Council Lora, District Abbottabad*. Abbottabad: IUCN

Zaman, Saeeduz, May 2006. *Study on Exploration of the Potential of Management of Non-Timber Forest Products in Narhotar Village, Union Council Lora, District Abbottabad*. Abbottabad: Sungi

## Annexure I: Guidelines for Innovative Natural Resource Management/Livelihoods Model Projects

**P**rogramme Support for Northern Pakistan (PSNP) would like to engage in innovative model projects where poor communities can be the main beneficiaries of sustainable natural resource management, in close collaboration with select partners from government, civil society and the private sector.

This paper catalogues some guidelines on the selection of topics and implementation modalities, especially the role of PSNP in these projects.

### **PSNP seeks to:**

- Address sustainable natural resource management and livelihood issues of poor communities, including marginalized groups and women
- Be demand-driven
- Remain innovative and effect tangible benefits for local stakeholder communities
- Work in partnership with implementing agencies rather than as the main implementer of projects
- Develop model projects with a potential for replication in a broader format and area
- Operate on limited budget and human resources

### **In addition:**

- Definition of Natural Resource Management: NRM has to be understood in a broad sense, including agriculture, a clean and healthy environment and scenic landscapes.
- Identification of topics: These were demand-driven and included priorities expressed by local communities in the process of IDV formulation and strategies for sustainable development, IUCN national and regional priorities with potential for synergy among different programmes, project ideas generated in the earlier stage of PSNP planning and issues of special interest of partner organizations.
- Selection of field sites and communities: These were selected keeping in mind the interest of communities and partner organizations together with considerations of good demonstration potential such as accessibility for selected topics and availability of socio-economic databases, for example in Union Council Salhad, Abbottabad and Union Council Kuh, Chitral.
- Share of responsibility between PSNP and partner organizations: The distribution of roles between PSNP and partner organizations was determined on a case-to-case in the Terms of Partnership.

### **Possible tasks for Programme Support for Northern Pakistan**

- Compiling relevant experiences, including techniques and approaches, in the selected topic
- Conducting baseline studies, if required
- Studying community rights, including government legislation and customary rights, of respective natural resources
- Supporting the formulation of project documents
- Facilitating linkages among institutions.
- Supporting institutions assume key functions with a multi-stakeholder approach
- Supporting devolution of government functions and fiscal devolution
- Training of partners
- Mobilization of specialized expertise through IUCN or external consultants
- Maintaining limited role in implementation.
- Monitoring changes in living conditions of beneficiary communities
- Special monitoring of impact on disadvantaged groups and woman
- Providing input for policy formulation and legislation based on field experiences
- Documentation and knowledge sharing
- Capitalizing on PSNP strengths
- Ensuring merger of NRM with poverty and livelihood
- Accessing cutting edge knowledge
- Providing expertise in policy and legislation and strategy development
- Convening relevant people from different backgrounds on common platform
- Networking with people and institutions from government, civil society and the private sector
- Participating in policy dialogue
- Forming interdisciplinary teams
- Facilitating entry points

### **Tasks for Partner Organizations**

- Participating in project planning
- Assuming primary responsibility in project implementation
- Monitoring and reporting project progress

### **Financial Resources**

- Financial contribution to partners for implementation of model projects has to be defined on a case-to-case basis
- Additional funds to be sought from partners, beneficiaries (in kind) and other sources, if required

### **Human Resources of Programme Support for Northern Pakistan**

- It is important to be realistic in defining the share of responsibilities between PSNP and partner organizations
- The main focus of PSNP staff for the years to come will be on model projects
- Engage PSNP's internal expertise, where needed and available
- Engage qualified consultants for specific tasks

## Annex II: Criteria for the Identification/selection of NRM/Livelihoods Projects

Criteria	Rating					Ranking	
	Low	Medium		High		Rating x Ranking	
	1	2	3	4	5		
Relevant to environmental conservation, and/or potential for sustainable management of critical natural resource base						5x	
Potential for livelihoods improvement for local communities (tangible benefits)						5x	
Potential for livelihoods improvement specially for disadvantaged groups and woman						5x	
Responding to an important need (demand) expressed by the local population						4x	
Innovative project with potential for replication in a broader area						4x	
Availability and interest of appropriate partners for implementation, IUCNP member as potential partner						4x	
Comparative advantage for IUCN and partner organization						4x	
Capacity for IUCN and partner organization to mobilize the necessary expertise (cutting edge technology and approach)						4x	
Potential for mobilizing the needed financial resources from partner organizations, PSNP, local funds and other sources, potential for sustainability after project ends						4x	
Legal security, allowing participation in decision making and benefit sharing by involved communities or potential for improvement of policy and legal framework						3x	
Potential for field-testing of new conducive policies and legislation						3x	
Potential for involvement of devolved institutions according to their key role and in a transparent manner (Governance)						3x	
Potential for involvement of the private sector						2x	
Potential for identification of project sites with special comparative advantages (where socio economic studies have been done, accessibility etc.)						2x	
Interesting learning field for IUCN and partners about NRM and poverty/livelihoods nexus							
Relevance for IUCNP and Region, potential for synergy with country programme and regional initiatives of IUCN						2x	
Interesting field for exchange of experiences and knowledge management						2x	
Supportive for the consolidation of IUCN reputation						1x	
Total points:							

## Annex III: Criteria for the Selection of Local Meso-level Partner Organizations

Criteria	Relevant specially for		
	CSOs	Gov. Org	Private Sector
Renowned organization with good working record in the area	X		
1. Shared values with IUCN regarding environment, development, social justice, gender, equity, governance, sustainability etc.	X	X	
No religious or political bias	X	X	X
2. Official registration as per the legal requirements of the Government of Pakistan	X		X
Functional policy making and executive body	X		
3. Clear strategic orientation and organizational structure. Proposed project fits within the mission/mandate of the organization	X	X	X
4. Capacity to implement the proposed project in a cost efficient and effective way	X	X	X
5. Professional expertise in the field of collaboration or capacity to mobilize the needed expertise	X	X	X
6. Capacity to mobilize funds for the implementation of the proposed project	X	X	X
7. Good coordination and networking capacity including with government agencies (Multi-Partnership approach)	X		X
8. Capacity to provide input for policy discussions	X	X	X
9. Sound monitoring and reporting systems, capacity to document and share experiences and learningX	X	x	
10. Reliable and transparent accounting and auditing procedures	X		x
11. Innovative and learning oriented (system and initiatives for staff learning)	X	X	X

## Annex IV: Projects

Project & Location	Objective	Partner
Poverty Reduction and Livelihoods Improvement through Sustainable Management of Chilghoza Pines in Shishi Valley, Chitral	To demonstrate the potential of chilghoza pine management for improving the livelihoods for rural communities including disadvantaged groups and women, while at the same time ensuring the sustainability of the resource base.	Intercooperation-Innovation for Poverty Reduction Project
Storage and Equitable Distribution of Water Resources for Improved Rural Livelihoods in Kiramatabad, Mulkhow Valley, Northern Chitral	To make optimum use of the scarce water resources and ensure mechanisms of equity in distribution of water amongst the community members including disadvantaged groups and women for reducing poverty and improving livelihoods.	Sarhad Rural Support Program
Environment-friendly and Safe Marble and Granite Mining for Sustained Livelihoods in Chitral	To promote and introduce environment-friendly, minimum waste and safe mining/quarrying by building the capacities of the mine owners, investors, workers and others involved in or dependant on stone quarrying in Chitral district for making optimal use of the mineral dimensional stone resources (marble, granite, serpentine, slate) and enhancing sustainable livelihoods.	Aga Khan Rural Support Programme, Chitral Chapter of the Frontier Mine Owners Association
Equitable and Sustainable Utilization of Natural Assets in Narothar Village, Abbottabad	To demonstrate the equitable and sustainable utilization of natural assets for improving the livelihoods of villagers including women and marginalised groups.	Sungi, Forest and Agriculture Departments
Sustainable Management of River Based Fish Resources for Poverty Alleviation in D.I. Khan	To establish a replicable model for sustainable management of river-based fish resource for poverty alleviation of rural community groups including marginalised and women of part of river Indus in D.I. Khan.	Sustainable Education, Rural Infrastructure, Veterinary Care and Environment, district-level staff of the Fisheries Department
Promotion of Mushroom Farming Enterprise Amongst Rural Women of Peshawar District	To demonstrate the potential of mushroom farming as a tool for improving the livelihoods of women and marginalised groups in rural communities and to generate knowledge about culturally compatible sustainable income generation opportunities for women based on natural resources.	Sarhad Rural Support Program
Sustainable Management and Harvesting of Trout Fish Resources for Poverty Reduction in Freshwaters of Gupis Area in District Ghizer, Northern Areas	To demonstrate a community-based conservation and sustainable use model in managing trout fish in freshwater resources; to create economic and income generation opportunities for marginalised groups including women and the ultra-poor through enhancing local skills; and enhancing the local knowledge base about trout fish conservation and community-based nature tourism experiences in Ghizer district and sharing the knowledge with the global community.	Aga Khan Rural Support Programme, Northern Areas Fisheries Department, local communities
Community-based Chilghoza Pine Conservation and Management for Income Generation in Hudur Valley, District Diamer, Northern Areas	To demonstrate the potential of chilghoza pine for improving the livelihoods of rural communities including disadvantaged groups while at the same time ensuring the sustainability of the resource base.	World Wide Fund for Nature Pakistan, Wildlife Conservation Society, local communities



Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

Swiss Agency for Development  
and Cooperation SDC

**IUCN**  
The World Conservation Union

House No. 109, Street 2  
Defence Officers Colony  
Peshawar, Pakistan

Tel: 091-5271728/5276032

Fax: 091-5275093

[cro@iucnp.org](mailto:cro@iucnp.org)

[www.iucnp.org](http://www.iucnp.org)

**Sarhad Programme Office**