

Community-Based Natural Resource Management

Selected Experiences and Practices in Afghanistan



Editors

Mamet Magno and Mark Dripchak

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Published in Kabul in 2010 by the USAID-funded Biodiversity Support Program for the National Environmental Protection Agency (BSP/NEPA).

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Contributed papers were edited by Mamet Magno, Mark Dripchak, Charles R. Hatch, Smita Malpani and Cheryl Hatch.

Cover image by Mark Dripchak – Villagers at Sare Ahangaran, Bamiyan Province build contour rock walls along sloping areas to increase water retention and to reduce soil erosion.

Design and layout by Deakadah Chap
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AFGHANISTAN



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Acknowledgements

The Biodiversity Support Program for the National Environmental Protection Agency acknowledges the support of the following groups and individuals for making the publication of this book a reality:

The United States Agency for International Development for its financial support. From the inception of this book through its printing, BSP/NEPA had the privilege of working with three very supportive Contract Officer's Technical Representatives: Ms. Catalina Jensen, Mr. Mohammad Aslam Amiri, and Mr. Mumtaz Ahmad Ahmadi.

The organizations who willingly shared their experiences on Community-Based Natural Resource Management in Afghanistan: Afghan Conservation Corps of the United Nations Office for Project Services; CRS; Concern Worldwide; Helvetas; Lapis Lazuli Sky; Ministry of Agriculture, Irrigation and Livestock (MAIL); Pastoral Engagement, Adaptation and Capacity Enhancement; Poor Empowerment Organization; The Aga Khan Foundation; and United Nations Environment Program.

The participants in the May 28-19, 2010 Forum on Community-Based Natural Resource Management for sharing their selected experiences and practices and for their valuable comments on the papers contained in this book.

His Excellency Mostapha Zaher, the Director General of the National Environmental Protection Agency (NEPA), for endorsing this book.

Deputy Director General Najibullah Yamin of NEPA, Director Sulaiman Shah Sallari of the National Heritage Protection Division of NEPA, Deputy Minister Abdul Ghani Ghuriani of MAIL, Director General Hashim Barikzai of the Natural Resource Management Division of MAIL, Dr. Mohammad H. Emadi (Senior Policy Adviser to the Minister of MAIL), Director Ghayor Ahmad Ahmadyar of the Protected Area Division of MAIL, and the dedicated technical staff of NEPA's National Heritage Protection Division and MAIL's Natural Resource Management Division for providing significant inputs on the conceptualization of this book.

Foreword

In The Name of Allah, The Most Merciful, The Most Compassionate.

I am pleased and especially proud to be associated with this book on selected experiences and practices that have been identified with Community-Based Natural Resources Management (CBNRM) in Afghanistan. The 12 experiences shared and discussed in this book affirm two important points: that Afghanistan's wealth is directly related to its natural resources and that Afghanistan's rural communities are capable of managing their natural resources.

A fundamental principle under Afghanistan's Environment Law states that local communities should be involved in decision-making processes regarding sustainable resource management. In a country that is still in the process of rising above the rubble of war, the participation of communities in natural resource management is both an appropriate and a necessary strategy to address poverty and environmental restoration. Rather than viewing communities as recipients of assistance, through CBNRM we view them as partners for change and development. CBNRM encourages and empowers communities to take responsibility for managing both their own and the nation's natural resources.

The Biodiversity Support Program for NEPA's initiative to compile community-based experiences gained during the management of natural resources will strengthen CBNRM in Afghanistan. This book identifies challenges people of Afghanistan face in working with government and in managing their watersheds, rangelands and forests. Importantly, it also showcases the community's resilience and ingenuity in coping with the many uncertainties associated with the management of natural resources.

The National Environment Protection Agency (NEPA), the government agency mandated to monitor the impact of development projects on the environment in Afghanistan, must understand how communities implement CBNRM projects. This book will help NEPA promote sustainable management of the country's renewable natural resources, and also assess the potential impacts of CBNRM activities on the environment.

I would like to congratulate and thank all those who contributed to the content and to the development of this book. Your experiences should be used as learning tools for all individuals and organizations involved in natural resource management.

Afghanistan still faces a lot of challenges before communities are fully empowered to implement CBNRM programs. But, as I stated as a Laureate at the Champions of the Earth 2010 ceremony - *We have a moral duty to preserve, to rehabilitate and to protect our environment, and hand it over to the next generation in the most pristine condition possible. Not in words but in deeds.* CBNRM is a tool Afghanistan can use to achieve this objective.

H.E. Mostapha Zaher
Director General
National Environmental Protection Agency

Editors' Note

How the book came about

The Biodiversity Support Program for NEPA¹ (BSP/NEPA) is a United States Agency for International Development (USAID) project being implemented by ECODIT, LLC. The goal of BSP/NEPA is to strengthen the National Environmental Protection Agency's (NEPA) capacity to implement its mandates under the Environment Law. One of the components of BSP/NEPA is a Community-Based Resource Management (CBRM) grants program launched in October 2008. The objectives of the grants program were to:

1. Support biodiversity conservation in natural and managed ecosystems of Afghanistan, and
2. Build capacity of communities to manage Afghanistan's natural heritage in a more sustainable manner.

While implementing the CBRM grants program, BSP/NEPA realized that the enabling conditions for community-based natural resource management (CBNRM) implementation are not yet fully established in Afghanistan. Organizations and government agencies refer to activities with community participation as CBRM, but community participation was often defined as individuals being willing to work as laborers or willing to attend meetings. Policies that provide communities' rights to use resources and to have long-term security over resources were seldom addressed.

To help generate an international understanding of CBNRM, and to facilitate discussions of conditions that will enable the sustainable implementation of CBNRM programs, BSP/NEPA decided to compile experiences of organizations and government agencies involved in implementing natural resource management activities in Afghanistan that have elements of CBNRM. Since the number of organizations supported by BSP/NEPA through its grants program is limited, BSP/NEPA also included organizations that are supported by other programs.

To capture these experiences, Mark Dripchak, a CBNRM specialist, was hired by BSP/NEPA to identify organizations implementing activities that have elements of "CBNRM", to interview individuals in these organizations to better understand their programs, and to visit selected sites to get an initial assessment of CBNRM implementation. In October 2009, BSP/NEPA issued an invitation to organizations to write a book chapter on their CBNRM experiences. Of the 25 organizations invited to write book chapters, 11 responded.

A national conference was organized on May 18-19, 2010 to allow the organizations to present their papers and exchange ideas. The key objective of this conference was to determine which practices were working in Afghanistan, and which were not, so lessons from the existing projects could guide government agencies and nongovernment organizations in designing better CBNRM projects. This book captures the discussions from this national conference.

Contents of the book

Chapter 1 discusses the principles and elements of CBNRM. Chapter 2 highlights CBNRM initiatives to date. Chapter 3 showcases experiences of nongovernment organizations and government agencies in implementing CBNRM-type activities in Afghanistan. Chapter 4 discusses the implementation of CBNRM in

¹ This program is implemented by Ecodit under USAID PLACE IQC EPP-I-02-06-00010-00, Task Order #02.

Afghanistan in the context of international CBNRM enabling conditions. It identifies policies and programs that might be strengthened to enhance implementation of CBNRM programs in Afghanistan.

Because of limitations on the scope of sites that were covered due to resource constraints and the availability of organizations interested in sharing experiences, this book does not claim to present a comprehensive review of CBNRM-like activities in Afghanistan. Rather, it showcases experiences of organizations that responded to the BSP/NEPA call for papers in October 2009 and includes ideas from organizations that shared their experiences in the conference. The goal is to generate a better understanding of CBNRM implementation in Afghanistan with respect to general principles of CBNRM, and to identify how the Afghan people might move their CBNRM agenda forward.

It is recommended that the sharing of CBNRM experiences be repeated periodically to further facilitate Afghanistan's implementation of CBNRM.

Acronyms

ACC	Afghan Conservation Corps
ACC/RCO	Afghan Conservation Corps/Regional Coordination Officers
AIMS	Afghanistan Information Management Service
AKF	Aga Khan Foundation
ANDMA	Afghanistan National Disaster Management Authority
BDC	Bazaar Development Committee
BOD	Board of Directors
BPWR	Big Pamir Wildlife Reserve
BSP/NEPA	Biodiversity Support Program for National Environmental Protection Agency
CBNRM	Community-based Natural Resource Management
CFC	Community Forestry Committee
CDC	Community Development Councils
CLDC	Cluster Level Development Committee
DAIL	District Agriculture, Irrigation and Livestock
DDA	District Development Authorities
DFR/MAIL	Department of Forestry and Range/ Ministry of Agriculture Irrigation and Livestock
DRRC	Disaster Risk Reduction Consortium
DTS	Development and Training Services, Inc.
EC	European Commission
FAO	Food and Agriculture Organization
FFS	Farmer Field School
FMC	Forest Management Committee
GIS	Geographic Information System
GPS	Global Positioning System
GL-CRSP	Global Livestock Collaborative Research Support Program
IDK	Independent Department of Kuchi
ICIMOD	International Centre for Integrated Mountain Development
LEWS	Livestock Early Warning System
LMIS	Livestock Market Information System
LPG	Liquefied Petroleum Gas
MAIL	Ministry of Agriculture, Irrigation and Livestock
NAC	Norwegian Afghanistan Committee
NADF	National Agriculture Development Framework
NEPA	National Environmental Protection Agency
NIRS	Nutritional Profiling System
NGO	Non-government organization
NRM	Natural Resource Management
NRMC	Natural Resource Management Committee
NSP	National Solidarity Program
PA	Peace Ambassador
PEACE	Pastoral Engagement, Adaptation and Capacity Enhancement
PEO	Poor Empowerment Organization
PRA	Participatory Rural Appraisal
RAADA	Rehabilitation Association and Agriculture Development for Afghanistan
SDO	Sanayee Development Organization
SEC	Sayed Jamaluddin Afghan Education Center
SMILE	Sustainable Management of Integrated Livelihood and Environment

SWC	Soil and Water Conservation
TDH	Terre des hommes
VDF	Village Development Fund
WC	Watershed Committee
WCS	Wildlife Conservation Society
WFP	World Food Programme
WMC	Water Management Committee
WOCAT	World Overview of Conservation Approaches and Technologies
WPA	Wakhan-Pamir Association
UNEP	United Nations Environment Programme
UNOPS	United Nations Office for Project Services
USDA	United States Department of Agriculture
USAID	United States Agency for International Development

1

What is CBNRM?

By Charles R. Hatch, Mark Dripchak and Mamet Magno

Although local communities have been using and managing natural resources in and around their villages for centuries, only recently has this practice been formally recognized as Community-Based Natural Resource Management (CBNRM). CBNRM programs grant communities the responsibility and authority to use and manage natural resources and allow the community and its members to directly benefit from their management of those natural resources. Typically, three sectors are considered in CBNRM programs: (1) the private sector made up of individuals, local organized community groups and private enterprises; (2) the public sector which includes government and government services; and (3) the civil society sector, which is composed largely of nongovernmental, not-for-profit organizations (NGOs) that support the private sector's access to the services provided by the public sector.

There are many factors of a successful CBNRM program. One critical component is land tenure security, or resource user rights, that provide communities secure access to, as well as the responsibility for, the management of the natural resources in their areas. Community participation in a CBNRM program depends on the benefits derived by individuals in the community, as well as by benefits derived by the community at large. Training programs are also important to the implementation of CBNRM programs because this management system requires that communities have both technical and managerial skills. It is important to note that, even with a strong enabling environment, CBNRM can be a lengthy and complicated process. CBNRM programs that iteratively incorporate lessons learned over time will recoup benefits for both local communities as well as the sustainable management of natural resources.

Background

In much of the developing world, local communities continue to rely on natural resources to provide the base for their economic growth. In many cases communities that have had greater access to markets have developed and utilized their natural resources more intensively. Therefore, communities with abundant natural resources tend to lie in more remote areas with limited access. This does not imply that local people in less accessible areas do not use natural resources. Rather, it is more a matter of how natural resources are used and to what extent they are used.

Local communities have been using and managing natural resources in and around their villages for centuries, but only recently has this practice been formally recognized as Community-Based Natural Resource Management. These villagers usually lived in small, tight-knit communities, and were acutely aware that overexploitation or inequitable use of natural resources could be catastrophic for their individual livelihoods, as well as for the community

at large. In the absence of formal government regulation, communities developed local management systems to govern the use of these resources.

As nation-states became stronger, more formally established responsibility for natural resource management shifted from local community practice to policy and regulations controlled by centralized government. The level of interest in the natural resource by communities and by the government often depended on its potential value in the market place and the cost of getting it to market. Consequently, the sustainable use of natural resources varies greatly within a nation.

The increased presence of government services also brought about other major changes in a community's use and management of natural resources. Through improved access to healthcare services, populations increased in size and this added significant pressure on natural resource use. Improved infrastructure and communication networks resulted in the migration of people from resource-poor areas to

places where resources were more abundant. Communities now found themselves under increased pressure to provide their members local access to natural resources, but to do so in ways that provided for their sustainable use.

CBNRM Principles

As governments and their development partners began placing increased importance on the sustainable management of natural resources, their interest in the historical involvement of communities in the use and management of natural resources increased. Since the 1990s, CBNRM has been formally identified as a way to address the problems of poverty and natural resource degradation, provided certain principles are respected and certain enabling conditions are present. An Internet site (www.cbnrm.net) was established in the latter part of that decade to promote the exchange of information on implementation and on CBNRM practices. The website has defined CBNRM in the following way:

CBNRM is a resource management model that assigns all or a proportion of ownership, rights and control over natural resources to a designated group of local people or a designed local institution. CBNRM is embracing the theory and principles of decentralization of control and decision-making and community participation and empowerment.

The main assumptions behind the CBNRM approach are that communities are interested and willing to engage in CBNRM as long as the total benefits exceed the total cost of participating, and secondly, that control and responsibility over natural resource management is given to the local communities.

A key principle in the above statement is “local people and communities are given the rights and responsibilities of management.” If this is done, communities will ensure the success (sustainable management) of the resource. If rights and responsibilities are not granted, it encourages the failure (degradation) of the local natural resource base.

Many local organizations, national governments and international agencies currently promote the application of CBNRM practices. The Food and Agriculture Organization (FAO) of the United Nations describes CBNRM as follows:

The Community-Based Natural Resources Management approach (CBNRM) is people-centered, community-oriented and resource-based. It starts from the basic premise that people have the innate capacity to understand and act on their own problems. It begins where the people are i.e. what the people already know, and build on this knowledge to develop further their knowledge and create a new consciousness. It strives for more active people's participation in the planning, implementation and evaluation of natural resource management programs. It involves an iterative process where the community takes responsibility for the assessment and monitoring of environmental conditions and resources and the enforcement of agreements and laws. Since the community is involved in the formulation and implementation of management measures, a higher degree of acceptability and compliance can be expected. CBNRM allows each community to develop a management strategy which meets its own particular needs and conditions, thus enabling greater degree of flexibility and modification.

The key principles in the FAO explanation of CBNRM are:

- *It is people-centered.* The villagers have direct access to and directly benefit from natural resources, and have accumulated a wealth of experiential knowledge concerning the causes and effects of their management decisions. They should play an active role in all planning and implementation decisions regarding the management of the local resources. This will, in addition, go beyond developing their knowledge on management issues and create a heightened awareness of the impacts of their actions.
- *It is community-oriented.* Given their active participation and their assumption of responsibilities, villagers usually establish improved communications amongst themselves. They are made more keenly aware of what the management strategy is aiming to achieve as they monitor and assess the effects of people's actions, so that accountability in the community is improved.
- *It is resource-based.* As villagers' knowledge and awareness increases, so too, does their understanding of the management strategy and how it may need to be modified in order to achieve sustainability of the resource base over the long term.

A USAID ENCAP Program document¹ also identifies principles that create an environment for a successful CBNRM program. It states that CBNRM is premised on the idea that communities will sustainably manage local resources if they:

- are assured of their ownership of the natural resource
- are allowed to use the resources themselves and/or benefit directly from others' use of them
- are given a reasonable amount of control over management of the resources

As you can see, the principles of CBNRM may be stated slightly differently but they all have the same common themes. Successful CBNRM programs grant communities the responsibility and authority to use and manage natural resources and allow the community and its members to directly benefit from their management of those natural resources.

Roles of CBNRM Partners

Typically, three sectors are considered in development programs, including CBNRM programs. The first is the private sector which includes individuals, local organized community groups and private enterprises. This sector generally is interested in using and directly benefits from natural resources in their area. The second is the public sector which includes government and government services at the local, regional and national levels. The third is the civil society sector, which is composed largely of nongovernmental, not-for-profit organizations (NGO) that support the private sector's access to the services provided by the public sector. All three sectors generally participate in establishing and implementing CBNRM programs. The private and the public sectors' interests and objectives are primarily focused on the use and management of natural resources while the NGO sector has, and continues to serve as, a catalyst and facilitator.

To facilitate the equitable and just management of resources, government must address land tenure security, or resource user rights, based on clear legal

and administrative frameworks that provide communities secure access to, as well as the responsibility for, the management of the natural resources in their areas. This is often one of the first and most critical challenges faced in establishing a successful CBNRM program. Large international NGOs have helped several countries throughout the world establish national programs to help address these and other challenges. Traditionally, government has maintained legal authority and regulatory powers, although village-level councils often use time-honored processes to resolve conflicts at the local level. Under CBNRM, government must grant decision-making authority to the community level. Once the community management system is legally recognized and established, conflict resolution and decision-making procedures must be adapted to local conditions using processes acceptable to the government. Resource disputes will occur so the private, public and NGO sectors must work to resolve such disputes using these legally recognized and established systems.

Training programs are an important enabling activity associated with the implementation of CBNRM programs because this management system requires that communities have both technical and managerial skills. As CBNRM programs mature, communities will likely require greater skills in organizational development activities related to income-generation that is compatible with the long-term sustainable management of natural resources. Organizational development topics may include basic financial management skills, negotiation skills, fund raising or grant development skills, and literacy training. Historically, NGOs and government services have provided extension, outreach and training programs in support of their strategic development initiatives. Although the continuation of government services will be important, the availability of local NGOs to provide community's technical and managerial assistance will likely be an increasingly important characteristic of successful CBNRM programs.

In the public sector, community participation in a CBNRM program depends on the benefits derived

¹ USAID, "Environmental Guidelines for Small-Scale Activities in Africa," Part II, Chapter 2, CBNRM. March 2009.

by individuals in the community, as well as by benefits derived by the community at large. Although a “benefit,” or the motivation to participate, is often described in financial or monetary terms, other forms of motivation also affect an individual's decision to participate in a CBNRM program. One is a socially-based, or tradition-based motivation, where the individual's status in the community is elevated because of his or her participation or leadership in the program. Another is derived from an individual's personal belief that participating in the program will be good for the community in the longer term, ensuring good health and livelihoods for generations to come. All three sectors should identify how individuals in the community respond to these three forms of motivation and utilize that knowledge to facilitate the implementation of the CBNRM program.

Factors that Contribute to CBNRM Success

The USAID ENCAP Program document referenced earlier discusses and summarizes several CBNRM enabling conditions and elements that contribute to successful CBNRM programs. More than a decade of experience implementing CBNRM programs in Africa has shown that a CBNRM program is most likely to be successful when the following enabling conditions exist:

- clarified land tenure and resource use rights;
- local community commitment and capacity, strong local institutions, and participants with adequate skills;
- experienced NGO partners and functional government bureaucracies;
- targeted technical assistance;
- regional resource management plans with set “limits of acceptable use” or “carrying capacity”;
- a workable environmental mitigation and monitoring program;
- access to markets and credit;
- social cohesion both within and across communities adopting CBNRM practices in a region;
- effective resource monitoring and policing; and
- genuine economic benefits to the community.

It is important to note that, even with these enabling

conditions, establishing a CBNRM program “can be a lengthy and complicated process” and its sustainability components “may require more than a decade to take root”.

Central, provincial and district level governments can implement policies, regulations and programs that help contribute to a successful CBNRM program. At the central and provincial levels, these elements include: long-term security for local community property rights; clear legal, regulatory and administrative frameworks; rights of communities to define themselves, their membership and their boundaries; devolution and decentralization of authority to the lowest levels; functional government services; adaptive management; absence of corruption; proper program scale; economic returns to the community; functional information and knowledge management systems; local input into land use planning; national NGOs to represent CBNRM and community interests; strong involvement by the tourist industry; open discussion of environmental issues by local media; and disaster planning. Not all of these elements need to be present for any given CBNRM project. However, a given project is more likely to be successful if many of the government policies, regulations and programs listed above are in place.

At the project level, a CBNRM program is more likely to be successful if the project's emphasis is placed on: ecologically significant areas or those with potential economic benefits for the community; development of common or complementary objectives; activities that are most likely to be economically viable; ensuring that the community has the authority to make decisions; genuine community participation and benefit; use and application of local knowledge; not imposing organizational structures from the outside; recognition of the importance of women's access to decision-making processes; effective technical assistance; access to credit; long-term, dependable government, donor and NGO commitment to the project; developing mutual trust between communities and partners; ensuring that community members are functionally literate; and independent project evaluation and monitoring. A given CBNRM project is more likely to be successful if these elements are considered during its design and implementation.

2

CBNRM in Afghanistan

By Charles R. Hatch, Mamet Magno and Mark Dripczak

Historically, communities have had access to, and used, natural resources to sustain their livelihoods. Today, the Islamic Republic of Afghanistan has developed, and is implementing, a philosophy that communities should be able to formally use and manage natural resources. The foundations for this philosophy are in the Environment Law that was enacted in 2007 and the Afghanistan National Development Strategy that was approved in 2008. Currently more than 21 organizations are implementing CBNRM-like activities in Afghanistan. A CBNRM National Conference in May 2010 provided an opportunity for some of these organizations to showcase their experiences implementing CBNRM programs and for many of these organizations to share their CBNRM experiences in formal and informal sessions.

Historical Background

Afghanistan communities, especially those that were not influenced by formal governance structures, often assumed responsibility for the management of their community resources. Traditionally, the local shuras decide on what resource could be used, how they could be used, and who could use them. Unfortunately, the decades-long war weakened the customary systems for village-based resource management.

The significant entry into Afghanistan of donor organizations in the early 2000s further changed the social landscape by which resource management was done. The National Solidarity Program¹ introduced the creation of Community Development Councils. Non-government organizations implementing resource-based activities created forest management councils, water users groups, and watershed management councils. In some cases, these new social structures reinforced the old social structures; but, in other cases, new social structures competed with the old social structures.

Legal Basis for CBNRM

Today's philosophy that Afghanistan communities should be able to formally use and manage natural resources has its foundation in the Environment Law of Afghanistan, enacted in 2007, which states:

Local communities should be involved in decision-making processes regarding sustainable natural resource management (paragraph 10 of Article 5).

In Article 7 (Rights and Duties of Persons) of the same law, it further states that individuals have the rights and duties to:

Paragraph 1 - Legally use natural resources in accordance with customary traditions and practices which encourage community-based sustainable natural resource management.

Paragraph 2 - Create and legally register civil society organizations which advocate sustainable management of natural resources and conservation and rehabilitation of the environment.

In 2008, the Afghanistan National Development Strategy (ANDS) was approved and ministries began developing and implementing programs to achieve its goals. Since agriculture has historically provided the majority of Afghanistan's economic outputs and Afghanistan's population continues to reside largely in rural areas, the Ministry of Agriculture, Irrigation and Livestock (MAIL) formulated an Agricultural Development Strategy that included components which promote the transfer of responsibility for natural resource management to communities. In the draft Natural Resource Management Program document developed by MAIL, dated April 2009, it states:

Consistent with the tenets of Afghanistan's Environment Law and a suite of upcoming natural

¹ The National Solidarity Program was established in 2003 by the Ministry of Rural Rehabilitation and Development. It aimed to develop the ability of Afghan communities to identify, plan, manage and monitor their own development projects.

resource laws and regulations, and as an integrated part of the comprehensive Agriculture Development Strategy, a natural resource management program with a community-based approach has been elaborated. This positions communities throughout Afghanistan to assume responsibility for practicing productive and environment-enhancing management of natural resources for their own benefit. The value of this approach hinges crucially on the involvement of communities, not just in the implementation of natural resource management, but also in its management planning, with facilitation from the Government and other partners, including NGOs, to promote replication and uptake of best practice examples throughout the country.

It is in this setting that government organizations, NGOs and international partners have been collaborating with the Islamic Republic of Afghanistan to initiate CBNRM programs throughout the country.

CBNRM Initiatives in Afghanistan

In an attempt to understand how “community-based resource management” is viewed in Afghanistan, the Biodiversity Support Program for NEPA (BSP/NEPA) initiated an activity to compile Afghanistan experiences that have elements of CBNRM. Because of limitations on the scope of sites that were covered due to resource constraints and the availability of organizations interested in sharing experiences, this book does not claim to present a comprehensive review of CBNRM-like activities in Afghanistan. Rather, it showcases experiences of organizations that responded to the BSP/NEPA call for papers in October 2009 and includes ideas from organizations that shared their experiences with us. The goal is to generate a better understanding of CBNRM implementation in Afghanistan with respect to general principles of CBNRM, and to identify how the Afghan people might move their CBNRM agenda forward.

Although not all organizations with CBNRM initiatives have been identified and evaluated, the following list is indicative of the numerous organizations in Afghanistan that have elements of CBNRM associated with the projects they are implementing. In alphabetical order these are:

Afghan Conservation Corps under the United Nations Office for Program Support – ACC

has initiated numerous conservation projects in Afghanistan, including their recent program to reestablish pistachio forests and establish Forest Management Committees in three provinces in northern Afghanistan.

Aga Khan Foundation – AKF has implemented several community-based watershed management programs in central and northern Afghanistan.

Biodiversity Support Program for NEPA – The BSP/NEPA Project initiated a CBRM Grants Program to provide NEPA an opportunity to work with communities and NGOs that were engaged in public awareness and natural resource conservation activities. Although the central mandate to operationally implement CBNRM programs is MAIL's responsibility, this grants program facilitated inter-ministry collaboration while strengthening NEPA's capacity to monitor CBNRM environmental conservation and rehabilitation projects under its Environment Law mandate. Twelve CBRM grants were awarded to international and Afghanistan NGOs in 9 provinces in Afghanistan.

Concern International – Concern is implementing a community-based soil and water conservation project in a northern province.

CRS – CRS is implementing community-based integrated water management, soil and water conservation, and restoration of community lands projects in northern and western Afghanistan.

FAO-UNDP – The SAISEM Project is implementing community-based rangeland restoration projects in western Afghanistan.

Green Afghanistan Initiative under the World Food Programme – GAIN/WFP is a joint UN programme aiming to improve Afghanistan's devastated environment. Administered by WFP, the three-year project helps widows and other vulnerable groups build a sustainable livelihood by starting their own nurseries. It also increases natural vegetation and forest cover, trains local officials in environmental protection, and boosts environmental awareness through education (*Source: WFP website*).

Global Partnership for Afghanistan – GFPA is a nonprofit organization that provides Afghan farmers with planting supplies, tools and training to revitalize and rebuild the vast network of farmer-owned nurseries, orchards, vineyards and woodlots. It has established a presence in central and northern Afghanistan since 2004 (*Source: GPEA Facebook*).

Helvetas – Helvetas is implementing community-based watershed management projects in central Afghanistan.

Lapis Lazuli Sky – LLS is implementing a community-based watershed management and rangeland restoration project in northern Afghanistan

MADERA – MADERA is implementing community-based reforestation and erosion control projects in eastern Afghanistan.

MAIL, Forest Department – The Forest Department has initiated programs to reestablish and restore pistachio forests and rangelands throughout Afghanistan with the assistance of local communities in provinces throughout western, central and northern Afghanistan.

MEDA – MEDA is implementing a community-based agroforestry project targeted at women farmers in central Afghanistan.

MercyCorps – MercyCorps has been active in Afghanistan since 1986. It implements a wide range of community-based agriculture and economic development programs in northern, southern and eastern Afghanistan.

Ministry of Rural Rehabilitation and Development (MRRD) – MRRD implements the National Solidarity Program (NSP) which was created by the Islamic Republic of Afghanistan to develop the ability of Afghan communities to identify, plan, manage and monitor their own development projects. Through the promotion of good local governance, NSP works to empower rural communities to make decisions affecting their own lives and livelihoods. (*Source: MRRD website*)

Norwegian Afghanistan Committee (NAC) – NAC is a nonprofit organization established in 1980 to address the humanitarian crisis created in the

wake of the Soviet invasion of Afghanistan. NAC implements projects related to nurseries, flood protection, forest management and women's park in the northeast and eastern parts of Afghanistan. (*Source: NAC website*)

PEACE Project – PEACE is implementing training programs in the use of conflict resolution for nomad herders to facilitate their ability to resolve land use disputes at the local community level throughout provinces in southern, central, eastern and northern Afghanistan.

Poor Empowerment Organisation – PEO is a local nongovernment organization based in Faizabad, Badakshan. It works with communities in Argu, Badakshan in restoring degraded pistachio forests.

Solidarites – Solidarites is implementing community-based pasture and irrigation management projects in central Afghanistan.

United Nations Environment Programme – UNEP, in collaboration with MAIL, has initiated 28 projects to begin pilot testing the CBNRM model under the Natural Resource Management component of MAIL's National Agricultural Development Framework.

Wildlife Conservation Society – WCS is implementing community-based programs to establish and manage protected areas in central and northern Afghanistan.

CBNRM National Conference

In May 2010, a national conference was held where CBNRM practitioners in Afghanistan got to discuss their local experiences vis-à-vis globally accepted principles and elements for CBNRM. Mark Dripchak, the CBNRM Specialist contracted by BSP/NEPA to facilitate this activity, presented the principles and elements of CBNRM. Hashim Barikzai, the Director General for the Natural Resource Management Division of the Ministry of Agriculture, Irrigation and Livestock, discussed the Natural Resource Management Framework under which CBNRM is being implemented. Eight organizations then presented case studies that they developed based on specific CBNRM implementation experiences.

The presentations were followed by group discussions on: (a) the roles of communities, NGOs

and government agencies in CBNRM, and (b) the strategies to ensure sustainable management of natural resources beyond the life of the project with minimal or no external (financial) assistance. Fifty-nine representatives from local and international NGOs and donor groups participated in the group discussions. A list of the participants to the national conference is shown on Chapter 5-3.

3-1

The Qonoq Micro-Area Development Program

An Area Based Approach to Watershed Management

By Ghulam Sakhi Ahmadi
Watershed, Rangeland and Forestry Coordinator
The Aga Khan Foundation

Qonoq lies in the southern most part of Bamyan provinces' most southerly district. It is drained by a single water course, the Qonoq river. The watershed is characterized by a number of upstream and down stream relationships, involving interconnected natural resources. With human habitation ranging between 2500 and 3300 meters, the region experiences prolonged winter conditions, has few cropping options, and relies on snow melt for the significant proportion of its water. While the area is ethnically and religiously homogenous, competition over diminishing resources and inter-familial rivalry has meant that coordinated natural resource management possibilities at the community level have historically been limited.

Background

The Aga Khan Foundation (AKF), Afghanistan initiated its Qonoq-based Micro Area Development Program, in the spring of 2004, adopting a community-based watershed management approach on the basis that specific, non-integrated, activity-based interventions, such as stand alone forestry projects, the introduction of improved wheat or water harvesting technologies, fail to acknowledge the true extent of socio-physical linkages between resources. To that end, the program was designed with the flexibility to acknowledge a broad range of social, natural, physical and economic activities, coupled with the piloting of various interventions such as soil and stone bunds, percolation ponds and brushwood structures for soil and water conservation.

As such, the program was based on the idea that the formation of strong management institutions, at both the community and cluster level, was a necessary component in order to ensure the long term sustainability of the program. Therefore, the successes or failures of the program, while not underestimating the significance of technical interventions, rested not only on the soil and water harvesting structures but were seen as a direct function of the inclusiveness of institutions participating in the process.

The Program Area

Conflict in Qonoq derived in large part from competition over scarce land, resources such as shrubs, and from divisions within the area based on political affiliations. This has created situations which in some cases were violent and led to people losing their land or being forced to leave the area. Given the extent of conflict, it became important to focus on the facilitation of stable groups with common interests, regardless of their location in the upper or lower divisions in the catchment. Over time, this has led to a longer term vision of the collective management for the productive use of the watershed.



Figure 1. Qonoq, Waras, Bamyan/ Photo by AKF

The initial phase of the program targeted four communities in one watershed. The area, or *manteqa*, was characterized by highly denuded rangelands, limited access to water resources, extensive soil degradation and widespread conflict over land ownership. The extent of the conflict was such that those in the lower catchment were unable to pass through the centrally located bazaar to the upper catchment, a result of tension which has led to the killing of members of the upper catchment during the anarchic *mujahedeen* period. This mistrust of one another was set against a back drop of broader mistrust of outsiders, with NGO's having frequently surveyed the area, made promises, but very rarely acting upon them.

As a result, the intervention coupled the Micro-Area Development Program with the National Solidarity Program (NSP) in its efforts to develop representative democratic bodies at the community level, focused its initial efforts on social mobilization, working closely with community members on conflict resolution, group formation, the election of community representatives and the capacity building of individuals and newly formed institutions.

Crucially, though emphasis was given to institutional development, it was recognized that other activities were necessary in order to address the many issues such as lack of education, poor health, inefficient farming practices and limited access to agricultural inputs. It was also important to illustrate a tangible commitment by AKF which addressed livelihood issues throughout the area.

The Intervention

Site selection in 2004 was carried out through simple visual identification. Initial meetings with the community were poorly attended and it was difficult to obtain useful information. The AKF team was still in the process of formation and often lacked the ability to engage successfully with communities. However, as the team

After each meeting we got closer to the NGO people, but still they were doing nothing and we did not know what they wanted.

Bazaar Development Committee representative, Qonoq

developed, they became increasingly capable of working with communities to identify problems in the past, elicit visions for the future, and facilitate community plans to resolve their own problems.

They came then left after the survey. The community was not sure they would return and we did not trust them. When they started work we started to trust them....
CDC member, Qonoq

A basic livelihood baseline survey was carried out with the intention of gathering information on wealth status, incomes, education levels, natural resources, land ownership and population. This baseline highlighted issues like erosion and land loss, limited access to income, land-based conflicts, poor education levels, and inadequate fuel and fodder sources. These findings provided the basis for future activities.

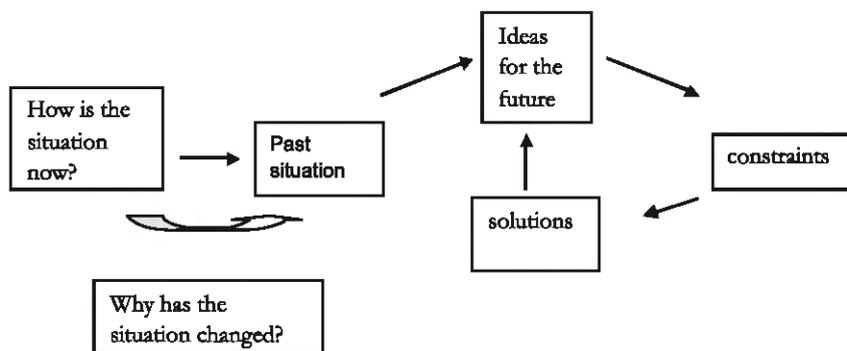
Interventions were initiated in 2005. Staffing remained an issue and new personnel were eventually recruited. It became apparent that it was necessary to base a team permanently in the area so that they could develop relationships with community members. A visiting team did not generate sufficient trust from the community. This move, and the increased capacity of AKF staff members, allowed a diverse set of initiatives (including land treatment measures, income generation projects, education and health initiatives, amongst others) to go ahead.

The Planning Process

Initial planning with the community sought to identify specific themes around natural, physical, human and social issues and assets through a structured probing process. The diagram below illustrates the basic pattern of questioning.

Community ideas shaped the initial interventions. These ideas included river bank stabilization activities, the planting of fruit trees, teacher training, and water harvesting structures. The Micro Area Development Program was also keen to pilot and demonstrate activities and technologies not necessarily immediately known or identified during the community planning process. These

Figure 2. Flow of questions during the planning stage



As an over arching body, the CLDC was not intended as an engine of business development. However, over time, the community proposed a sub-committee of the CLDC to look at the development of the additional markets and enterprises addressed earlier. The Qonoq watershed lies on the trade route between isolated Dai Kundi (then Uruzgan) province and Bamyan centre. The people of Qonoq understood their potential to

interventions related mainly to land treatment (using both vegetative and mechanical means), alternative technologies such as greenhouses and solar cookers, and new composting techniques.

Initial Interventions

In the spring, land treatment measures started in the upper reaches of the watershed, with the community receiving training on specific soil and water conservation structures such as bunds, pits, terraces and gully plugs. Access to markets and enterprise development was identified by communities as a key constraint to development in the area. In order to address this, carpet weaving, a skill known to some, was introduced. Bee-keeping followed soon thereafter. In later years, the program would facilitate the expansion of a local hotel and agricultural input shop.

Clustering and Communal Management

As these activities became more varied, steps were taken to consolidate the gains made under the National Solidarity Program to form Community Development Councils (CDCs). As a watershed approach, which took the entire area as a single contiguous and mutually affected area, it was necessary to respect the legitimacy of such institutions, whilst creating a forum for broader discussion at the watershed level. By mid-2005, the four CDCs were clustered to form the Cluster Level Development Committee (CLDC), with the objective of creating a forum for discussion about the watershed as a whole, dealing with conflict at the watershed level and creating structure for planning.

exploit their geographic position. A proposal was written by the newly formed Bazaar Development Committee (BDC) to the CLDC for toilets, a butcher shop, a hotel and a protection wall against flooding for the bazaar itself. Once approved, the CLDC lent money to the BDC to implement these activities and a revolving fund was created. Money was also loaned to widows for the purchase of sheep. Two people borrowed money to start mechanic shops.

The CLDC

The CLDC took active steps to work towards the resolution of conflict in their watershed. This process was reinforced by training from the Micro-Area Development team on project planning,



Figure 3. Planning soil and water conservation structures with the community. Qonoq, Waras, Bamyan / Photo by AKF

conflict resolution, leadership and accounting. The period seemed to spawn community-based innovation at many levels. As a direct result of community plans at the CLDC level, widows were able to take loans for the purchase of sheep; and a parent teacher association was formed and invigorated through health training for women and community literacy courses. Teacher training was linked to a farmer field school and a child to child program which saw children trained in such areas as bee-keeping and basic horticulture. Plays were put on by children to encourage hygiene and literacy. Seed collection and cultivation supported the on-going infrastructure work on the upper catchment and interested community members were trained as mechanics and bee-hive makers, with an agricultural shop being opened for the provision of inputs necessary to support agricultural growth.

There was no unity in the area. We fought. The Micro Program brought the community together. After we got together we realized we could achieve something as a community.
Community member-
Qonoq

Exposure visits for the bee-keeping groups, carpet weavers, and watershed workers helped to bring new ideas to the area. Inter-community training in greenhouse making and vegetable production, solar verandahs to reduce the need for fuel wood, spring source irrigation projects and composting complemented the burgeoning natural resource management strategy which was becoming increasingly solidified at the CLDC, and therefore at the watershed level.

Over the course of 2006, the training of teachers continued, awareness campaigns on nutrition and cooking classes were launched, shepherds participated in Farmer Field Schools (FFS), children under the child to child program received an introduction to subjects that included horticulture, greenhouses, bee-keeping, nutrition, health and hygiene. A proposal by the CLDC was successfully submitted to the Food and Agricultural Organization (FAO) for more greenhouses, fruit trees, solar verandahs and child to child programs.

Time has since filtered the successes from the failures. It has shown how things can be improved, what was relevant, what was not. The child to child

program has continued, but communities have noted that local teachers need more subject matter training in order to run such a diverse set of classes. The value of composting was recognized by the community, but there was such a paucity of manure and valuable green leafage in the area that only three worked properly.

Greenhouses have been very successful, have been replicated widely and have had a marked impact on both household nutrition and, to a certain extent household income. More training on construction and management is necessary, however, and the area still lacks sufficient access to plastic and seed.

Money from the FAO grant was useful in increasing the number of fruit trees. When some of the trees died, community members pooled their resources to procure seedlings from other areas. There are now approximately 4000 apple trees in the watershed of Qonoq, owned by 200 families (roughly 60% of the community). This is impressive given that prior to that, only two families had fruit trees.

However, it was the land treatment and water harvesting component in the upper watershed which proved to be the most galvanizing force of the program. It represented the power of collective action, of the need for a longer term perspective for a communal vision, the potential gains of managed protection of specific areas, and most crucially, the importance of strong, representative institutions. The structures, which included bunds, pits, terraces, hession bags and trenches were complemented and reinforced with a seeding campaign using local varieties of plants. The process necessitated intensive labor, forcing dialogue between groups which historically had strained relationships.

The water harvesting structures have generally been successful, effectively increasing moisture levels and reducing the incidence of flooding. While germination of cultivated seeds in the first two years

Before we never thought it was possible to have the place with so many flowers. In the past the children used to bring the some the flowers to school because they were rare. Now they don't do that. They want to keep them on the mountain....
Community member-
Qonoq



Figure 4. Land treatment, Qonoq, Waras, Bamyan / Photo by AKF

was limited at 30% due to late planting, 2007 and 2008 have seen, anecdotally, up to 70% success.

Community members agreed not to harvest shrubs in areas adjoining the treated lands for the next seven years. Poplar stems and cow dung are promoted as fuel sources by the CLDC. In addition, each family planted significant numbers of poplar and other fuel sources. This is a remarkable change because, in the past, people tried to bring as many bushes as possible to their houses. This destructive practice has now been stopped.

When asked what ideas the habitants of the watershed had for the future it was stated that *"...we are waiting for eight to ten years because we are waiting for the trees to grow and the shrubs to develop before we cut them."* No one can harvest grasses from the slopes and animals are not allowed to graze in the watershed. *"We must be patient. We are facing some problems because no one can go to the watershed to take the fodder, but we must be patient and we are waiting for the watershed to yield more results."*

As a sub-committee of the CLDC, the watershed committee engineered a system for the long term sustainability of the upper catchment treatment site. The committee convinced the laborers to return 30 Afs of the 180 Afs they were earning on a daily

basis. These savings, now quite significant, are used to pay two guards (one to patrol the treated site and another to guard the entrance of the watershed) to ensure that shrubs are not removed from the area.

In addition, a thresher was purchased for \$15,000. The farmers rent the thresher from the CLDC for one ser for every 15 ser run through the thresher. Last year, 1400 ser of wheat was earned by the CLDC, which they sold for cash in the bazaar earning them \$1250. The salary of the thresher driver and the maintenance for the equipment are paid for out of earnings. Currently, the CLDC claims to have saved \$6600.

Neighboring communities have started to replicate elements of the land treatment activities. The CLDC of Qonoq reported that *"the area is now greener than before and there is more water in the springs and the economic standing of the area has been increased. We used to grow barley and mung bean. Now we have started growing wheat"*.

What if the structures like check dams and gully plugs break? We will fix it by ashar. These are our structures and now we understand we are responsible for them.
Head of the Watershed Committee

Summary

Once representative institutions were in place, planning for the watershed at the household, community, and cluster level commenced in conjunction with a range of complementary activities, including literacy, self-help groups, child to child education, and institutional capacity building. These programs comprised the social dimension upon which the soil and water conservation work, which sought to augment the level of biomass cover, reduce erosion, and increase the availability of water for agriculture, was built. The soil and water conservation work involved community planned and demonstrated/piloted structures such as bunds, terraces, trenches and pits in the watersheds' upper catchment.

This process, of extensive social engagement, community planning and the integration of socially inclusive activities, both created the conditions for, and encouraged community members to overcome past differences and work effectively together. By planning at the watershed level, addressing holistically the diverse inter-related connections that describe the watershed, and by focusing on the dynamics between upper and lower catchment areas, the community contributed significantly to the regeneration of their upper catchment.

Over four years into the program, the communities in Qonoq created non-grazing conservation areas, significantly rehabilitated large tracts of upper rangelands through both social management,

biological and mechanical structures, reseeded extensive upper catchment areas, and planned further watershed management work in their area. 30 Afghans of 180 earned by communities as daily labor is voluntarily paid to the cluster level watershed management committee for the further sustainable management of the area.

Conclusions

- Watershed projects should adapt their methods to reflect customary institutional arrangements and create incentives for interest groups to participate
- In order for watershed management projects to be sustainable, they cannot ignore land tenure, institutions and the culture of watershed inhabitants. More emphasis is needed on the development of human resources rather than infrastructure.
- The approach must be affordable and replicable
- It must appreciate the different linkages between people and their environment, as well as between income/health/education and natural resource management.
- Watershed management differs from single activity based interventions such as tree-planting, wheat production, soil and water conservation, because it is necessarily holistic and looks at all the different elements on the watershed. As such, programs should be multi-dimensional and reflect the relationship between different livelihoods in the watershed.



Figure 5. Earthen and stone bunds at Qonoq, Waras, Bamyan/ Photo by AKF

3-2

Sustainable and Productive Management of Watersheds to Prevent Downstream Flood Damage in Kahmard District, Bamyan Province

By *Sanjeev Bhuchar, Technical Advisor, Watershed Management and Khalid Azami, Program Manager, Disaster Risk Mitigation Helvetas Afghanistan*

Kahmard valley is prone to flash floods, which threaten people's livelihoods. The intensity of the flash floods has been increasing over the years due to non-stop degradation of upland catchments. The flash flood risk can be mitigated by reversing the process of land degradation. This requires a strategic shift from a relief approach to a sustainable development approach. Within the sustainable development framework, it is important to promote sustainable watershed management for organizing the use of watershed resources so that people get the desired goods (fodder, fuel wood, non timber forest products) and services (flood and drought risk mitigation) sustainably without adversely affecting soil and water resources. Management possibilities at the community level have historically been limited.

Background

Helvetas' experience in Kahmard shows that before implementing watershed management in Afghanistan, a clarification and agreement on land tenure/use/access is essential. Encouraging stakeholder participation so that local actors own and maintain project assets is important. It is also crucial to focus on developing capacities of human resources, local communities (men and women) and local institutions (e.g. Community Development Councils (CDCs), Watershed Committees) in integrated watershed management. Organization of Watershed Committees, embedded within their respective CDCs, can serve as appropriate local units to take lead in planning, designing, implementing and monitoring interventions, and prioritizing activities that strengthen local livelihoods. Involvement of women in watershed management is a must and female CDCs can play a lead role in facilitating this process. District Development Authorities (DDA), district government and non-government entities should also be involved in the project cycle. This will help in building local ownership.

Watershed management in Afghanistan must have participatory, good governance, conflict-sensitive and gender-sensitive approaches, must build on sound local and new land and water management

practices considering upstream-downstream linkages, must promote energy efficiency/renewable energy options, and must encourage sharing of costs and benefits. Projects should conform to national strategies, support existing legislation and contribute to the development of future legislation. This requires forging good institutional linkages (e.g. with Ministry of Agriculture, Irrigation and Livestock) and knowledge sharing with national (e.g. Afghanistan National Disaster Management Authority (ANDMA), Disaster Risk Reduction Consortium) and international (e.g. World Overview of Conservation Approaches and Technologies) networks. It is also essential to provide long-term technical backstopping both during and after the project. A network among permanent stakeholders (civil society, public and private sectors) who will continue the process started by a project and ensure sustainability should be established.

The Challenge and Existing Situation

In Bamyan, rural communities are becoming increasingly vulnerable to natural hazards, particularly flash floods. As a direct effect of war, the natural resources in the uplands have been overused. Overgrazing, cutting and uprooting of shrubs for fuel wood, and cultivation of wheat on steep slopes without soil conservation measures have led to increased occurrence of floods in the valleys

causing loss of land, infrastructure and lives. The local population has recognized that the degradation in the watersheds combined with observed changes of rainfall pattern (more erratic but intense rainfalls) is responsible for the flash floods which are increasingly threatening their livelihoods.

Helvetas' project on "*Sustainable and productive management of degraded watersheds to prevent down-stream flood damage in Kahmard district, Bamyan province, Afghanistan*" aims to reverse this process of degradation in selected watersheds and contribute to improved livelihoods of poor rural population in Kahmard district by reducing flood damages and increasing long-term land productivity through holistic watershed management. The inception phase of the project was launched in 2008 using Helvetas' own funds. In 2009, it was funded by the International Resource Award for Sustainable Watershed Management. Six Community Development Councils (CDCs) are participating in the project, which is embedded in Helvetas' "Disaster Risk Mitigation" program comprising the following three components:

- Community-based disaster preparedness and response
- Sustainable land management (which includes watershed management)
- Protective infrastructure

It is hoped that the lessons learned will be useful for the Afghan Government in dealing with the increasing natural disasters and land and water degradation, and development of new policies to promote sustainable, community-based rangeland and forest management.

Why was the project initiated in this particular site?

In Kahmard district, the rural population sustains itself on limited fertile land in the valley bottom. Farmers make cash primarily through the cropping and sale of potatoes and fruit (apricot, walnut, almond, apple). Black cumin (*Bunium persicum*) and hing (*Ferula assafoetida*) are collected in the mountains and sold as "non-timber forest products" at an attractive price. Unfortunately, these valuable products are under threat by uncontrolled use of the natural resources. Plowing of pasture areas for rainfed wheat production (during 'the bad times') and uncontrolled overgrazing by increasing numbers of sheep and goats have degraded vegetation in

mountainous areas to an alarming extent. Woody biomass is used for fuel wood but this is becoming very scarce; thus, people resort to burning manure and cutting out ephemerals in the mountain pastures in a destructive way.

This combination of factors (increased dry land farming, cutting of ephemerals, non-sustainable use of non-timber forest products) is leading to an avalanche of problems, including:

- flooding and destruction of irrigated land in the valleys because water retention in the mountains is decreasing;
- reduced income for farmers from collection of "non timber forest products";
- less forage for sheep and goats, leading to decreased *Quroot* (marketable milk products) and meat production;
- a decline in soil fertility because manure is being used as fuel.

The Initiative and Response

To solve these problems, the villagers proposed the construction of water dams in three different areas to control flash floods. Helvetas realized that flooding can only be prevented in the long term if management in areas where runoff and erosion originate is improved.

Improved management would also restore the productivity of rapidly degrading, and already degraded, land in the watersheds, thereby contributing to the solution of other major problems that concern the communities in Kahmard district. In view of predicted climate changes (higher probability of heavy precipitation and/or prolonged dry spells), improved watershed management is all the more important in reducing the occurrence of floods on one hand and ensuring more stable base flows on the other.

The broad objectives of the project are:

- Reducing the threat of devastating flash floods and regaining production potential of three watersheds through a combination of structural measures in critical water courses (quick remedies) and re-vegetation in the watersheds (mid- to long-term effects).
- Re-establishment of vegetative soil cover supported by soil and water conservation (SWC)

- measures, management options and complementary activities will increase the infiltration of rainwater and water storage in soils, thus buffering water flow downstream and simultaneously boosting the production potential in the arid environment.
- Increased skills of organization and cooperation with supportive institutions will help to anchor the proposed strategies and approaches in the local communities.

Project activities

- Establish Watershed Management Committees (WMCs) associated with existing Community Development Councils (CDCs) and District Government to elaborate agreements clarifying land tenure and access/use.
- Identify critical water courses/gullies and respective measures to be implemented.
- Discuss the type of interventions with land users.
- Elaborate re-vegetation and land use concepts.
- Elaborate project plans; organize process for implementation and monitoring.
- Implement identified interventions aiming at fodder, fuel wood and cash crop production in designated areas.
- Successful control and maintenance of soil and water conservation measures.
- Disseminate lessons learned for implementation in other watersheds.

In the historical and cultural context of Afghanistan the project follows a gender-sensitive approach and screens interventions with the “Do no harm” tool, in order to de-escalate prevailing conflicts.

Methodologies used

The approaches applied during the project cycle can be summarized as follows:

- **Watershed selection and planning:** PRA tools (transect walk; participatory resource mapping); Group works; Log frame analysis; Participatory 3-Dimensional Modeling (P3DM) is planned for 2010.
- **Land user's approval:** All households with traditional ownership in the watersheds give their approval (in writing) to Helvetas for project implementation based on participatory planning.

- **Organizational setup:** Watershed Management Committees are appointed by the participating communities/CDCs in a transparent and democratic manner. Decision is communicated to Helvetas.
- **Orientation and training:** Helvetas staff and community representatives participate in watershed/soil and water conservation related training programs in country and abroad (e.g. ICIMOD training in Nepal). Female community facilitators who are involved in community-based disaster risk mitigation planning with the female CDCs are also trained.
- **Watershed planning:** Technical, financial, environmental and social feasibility studies are conducted. Technical and financial plans are prepared based on joint field surveys by watershed committees and Helvetas' technical staff. National standard rates are applied for technical works and daily wage.
- **Plan implementation:** In mobilizing skilled and unskilled workers, preference is given to

Figure 1. Communities preparing a participatory watershed map showing critical gullies, areas used by CDCs and their names.



- participating communities. People from other areas are invited to participate depending on the work. During implementation, Helvetas technical advisers, engineers and agronomist provide constant technical backstopping. For infrastructure (IS) project components, Helvetas' IS manual is applied. Each Watershed Management Committee appoints a guard for watershed protection. One supervisor supported from project funds is appointed for coordination and recording on behalf of the communities. Helvetas' technical staff are supported by a local watershed worker who has a good knowledge of the watersheds and communities. The salary of this local watershed worker is paid for by Helvetas.
- **Monitoring and evaluation:** Monitoring is done in a participatory way. The Watershed Management Committees, CDC members, DDA office bearers, watershed workers and Helvetas' staff visit the watersheds and assess progress and quality of the work. Funds are released to the watershed committees on an installment basis after satisfactory completion of work and acceptable social audits. The watershed committees, in the presence of CDCs, disburse payments to the watershed workers. "Social audits" are carried out to ensure financial transparency. A participatory strength and weakness analysis is conducted at the end of each year. In 2010, a beneficiary assessment and external review is also planned.
- **Conflict resolution:** Disputes are normally resolved by the communities themselves with the help of their councils. Only in extreme cases will the District Development Assembly or the governor be approached.
- **Dissemination:** Watershed visits for other interested organizations and communities are organized. In 2009, staff from Terre des hommes (TDH), Solidarites and communities from Kahmard, Tala wa Barfak and Saighan districts visited the project sites to inquire about the project activities. Project updates are shared through national (e.g. Afghanistan National Disaster Management Authority ANDMA, Disaster Risk Reduction Consortium (DRRC); interagency meetings; and regional (e.g. Himalayan Conservation Approaches and Technologies) and international fora. A documentation of land

- management technologies and approaches is going to be carried out using WOCAT (www.wocat.org) tools for wider dissemination.
- **Incentives:** The project has a "cash for environment" approach. Communities work for daily wages, but from a sustainable development approach and not out of relief. They contribute 20% to the total cost. Capacity building and plantation of improved forage, fruit and non fruit/cash crop species are indirect incentives for community collaboration.

Conservation Measures Applied in the Watershed

The following soil, water conservation and watershed management measures are being applied in the three selected watersheds:

Structural measures: These include check dams (gabion and loose stones) placed in a series in critical gullies; improving earthen reservoirs (lined with soil-covered plastic sheets) to reduce seepage losses; building underground water harvesting tanks carved in rocks (*kandas*); as well as hand dug wells, contour trenches (continuous and staggered type), soil bunds along the contours, half-moon pits, and T and Arrow shaped trenches on degraded slopes/rills.

Vegetative measures: These include plantations of alfalfa, agropyron, sanfoin for forage; pistachio, bitter almond and walnut for fruits; acacia, Russian willow and *arghawan* for fuelwood and gully stabilization; black cumin, *hing* for cash and safflower for oil.

Management measures: These include grazing and shrub cutting restrictions in the watersheds.

Complementary activity: This includes construction of community bakeries in the valleys for reducing mountain shrub consumption for fuel. Biobriquette training for women groups are also conducted.

The New Situation, The Changes Observed

Flash floods from two treated watersheds were reduced due to soil and water conservation measures applied in the critical areas.

The project's "cash for environment" approach has provided opportunities to more than 500 families to earn extra income by working in the watersheds. This, in turn, helps buy wheat and other edibles and provide improved food security for a family.



Figure 2: A gabion check dam was built in Sourkhak watershed to retain sediment and runoff.

Restrictions on grazing and shrub cutting improved natural vegetation in the watershed. As a result, runoff velocity and erosion was reduced and water infiltration improved.

More than 1000 families use community bakeries to obtain bread or *nan*. Women in these families do not have to bake bread at home and they are able to save 3-4 hours each day for other works and are less exposed to smoke pollution. Shrub consumption at the household level has gone down significantly.

Unintended outcomes of the project

The purpose of the community bakery project was to reduce shrub consumption so that people cut fewer shrubs in the watersheds. This project is serving this purpose but at the same time reducing women's workload.

Mismatch between what was expected (Objective) and what happened (Results)

The project has been executed in three sites (Bqa Kushta, Sourakhak and Passe Sourkhak). In Passe Sourkhak, progress has been hampered by misuse of funds by CDC members responsible for the purchase of materials and payment of salaries to the workers. Helvetas stopped the work in this

watershed. This project site will be reconsidered if new watershed representatives are appointed and if the misused money is returned.

Recommendations

Based on Helvetas' practical experience, the following suggestions could be useful for effective watershed management projects in Afghanistan:

- Invest in capacity-building of Watershed Management Committees, CDCs and DDAs for project management.
- Assist communities in development of by-laws for watershed management aimed at equitable distribution of benefits.
- Engage organizations working in the same area/topic in discussions to create synergies in methodologies, approaches and resources.
- Raise awareness of women, men and youth highlighting the importance of shrub and grazing management and soil and water conservation.
- Integrate energy efficiency and renewable options so that shrub consumption is reduced. Have



Figure 3. Social auditing in Passe Sourkhabak

- provisions within the project to support communities staying in the watersheds during fieldwork in terms of using cleaner energy options (*e.g.* solar cookers; Liquefied Petroleum Gas (LPG), *etc.*) so that they do not have to cut shrubs for fuel wood.
- Avoid constructing check dams/gully plugs without soil and water conservation, and grazing and shrub cutting management measures, on critical slopes. Apply measures following a ridge to valley approach.
- Consistently monitor the grazing and shrub cutting trends so pressure will not shift elsewhere, leading to conflicts. If necessary, design measures with the communities to reduce pressure on other areas.
- Give emphasis to work quality, and not just quantity. Stop the project if the quality and principles of good governance are compromised.
- Try to learn from the experiences of other organizations working on similar issues in Afghanistan to improve performance.
- Finally, inform the relevant government entities, especially MAIL and District and Provincial Governors, about project progress for transparency and support.

Conclusions

Helvetas' project on watershed management is in its early phase but positive results can already be seen.

A combination of various soil and water conservation measures has reduced flash floods in the valleys. Establishment of fruit, non-fruit trees, forage grasses and alternative crops (*bing*, cumin and safflower) will help address people's fodder, fuelwood and other needs and, at the same time, preserve natural assets.

Energy efficiency projects for reducing shrub consumption (*e.g.* the community bakery projects in Kahmard) are important for sustainable watershed management and should be promoted. They also help in improving the standard of living of women.

Female and male community participation is a fundamental aspect of sustainable watershed management. Watershed Management Committees, embedded within the Community Development Councils and appointed by the communities, can become significant players in local watershed governance.

Community's willingness to contribute 20% to the project cost is an indication that they can move beyond the "relief" approach and play a larger role in the development process. Their technical and management capacities should be continuously improved through awareness raising training and exposure visits.

Afghanistan's new forest and rangeland laws are under discussion. It is hoped that Helvetas' experience will help to inform future legislation that will affect disaster risk mitigation across the country.

3-3

Restoration of Arable Lands in Sare Ahangaran Watershed

*By David Gandhi, Technical Advisor, Agriculture & Watershed
and Chad Dear, Program Manager, Natural Resource Management
CRS Afghanistan*

Sare Ahangaran watershed is located close to the Koh-i-Baba mountains in eastern Bamyan district. Less than 10% of the total area is presently under cultivation. A significant area located below existing canal systems were previously under irrigated agriculture but subsequently abandoned due to heavy erosion, high incidence of boulders on the surface and migration during the war. During 2008-09, CRS supported the farmers to restore a section of these lands by implementing contour stone walls. This has the dual benefit of once again enabling farmers to cultivate these lands, while creating an effective barrier across the slope to conserve soil and water. This approach has the potential of bringing about a threefold increase in the irrigated area from the existing 50 ha to 150 ha.

Background

CRS is supporting a community-based natural resource management project in Sare Ahangaran watershed since October 2008. The project seeks to address the following issues which pose a serious threat to biodiversity conservation and sustainable livelihoods in Sare Ahangaran, which are almost entirely dependent upon natural resources:

- Degradation of slopes due to biotic pressures such as cultivation, overgrazing and extraction of bushes for fuel.
- Lack of soil and water conservation measures on slopes, contributing to low production from agriculture and from pasture lands.
- Livelihood options limited to basic agriculture and livestock rearing, both of which have been implemented using traditional approaches that do not emphasize soil and water conservation methods and an overall sustainable natural resource management approach.
- Low capacity of the Cluster-Level Development Committees (CLDCs), Community Development Councils (CDCs) and the community as a whole to collectively plan and manage their natural resources on a sustainable basis.

Sare Ahangaran lies at the head of a long valley close to the Koh-i-Baba mountains, at a distance of 26 km from Bamyan town. The watershed has an area of around 4300 ha, and is located between 67.70 deg E

– 68.0 deg E and 34.40 deg N – 34.50 deg N. The altitude ranges from 2500 m at the lower end to over 4000 m near the mountains.

Climate

Due to its proximity to the Koh-i-Baba mountains, the area experiences long winters of around 5 months (mid-November – mid-April), during which temperatures drop well below freezing and the land remains covered with snow. Spring months are April and May followed by a brief summer from June to September. Fall is generally during October to early November. Precipitation is mainly in the form of snow received during winter months, though there is some rainfall during the early stages of winter and spring. In addition, the area receives year round inflows from snowmelt in the mountains.

Topography and Drainage

Sare Ahangaran drains into the Bamyan Rod which forms part of the Kunduz watershed of the Amu Darya river basin. There are four main drainage lines: the main Sare Ahangaran stream which originates in the higher reaches of the Koh-i-Baba mountains and flows in a south – north direction; while the other three originate in the lower reaches of the mountains and flow from the south-eastern part of the watershed to join the main stream.

Land Use

Detailed resource mapping exercises were carried out with the communities to determine the various types of land use in the watershed.

- **Rangeland.** Over 90 % of the watershed area is mountainous and comprises private and common grazing lands. These lands are also extensively used for meeting the fuel needs of the community through uprooting of shrubs and bushes, which has left the slopes heavily eroded and largely devoid of vegetation except for coarse and unpalatable species. During summer months, the livestock are moved to the grazing grounds on the upper slopes known as *ailoq*.
- **Rainfed agriculture (*lalmi*),** mainly wheat, is carried out in small patches on the high slopes where there is sufficient soil depth. The total rainfed area is estimated to be around 250 *jeribs* (50 ha). As can be expected, due to the steep slope of the land these fields are subject to high rates of erosion and soil loss.
- **Irrigated agriculture.** Irrigated agriculture is the mainstay of the economy of the community. Currently the total irrigated area is estimated to be around 250 *jeribs* (50 ha). Most of the valley lands on the banks of the streams have been levelled into small terraced fields where potato, wheat and barley are cultivated. Due to the abundance of water from snowmelt, most of the lower slopes have been brought under irrigation. The water is diverted from the mountain streams and conveyed across the lower ridges and slopes to the fields lower down. Major crops cultivated on these lands are wheat, barley and alfalfa. Most of these fields are unprotected and the application of irrigation results in accelerated rill and gully formation. In addition, around 100 ha of land previously under cultivation have been lying unused for the past three decades.

Community

Information about the community was collected through a series of participatory rural appraisal (PRA) exercises (*i.e.* social mapping and focus group discussions) and a survey using the Beneficiary Registration Form used by CRS for the cash-for-work programme.

History. The people living within the Sare Ahangran watershed belong to the Hazara community. They migrated from Bihsud in Wardak province (south of Bamyan province) around four centuries ago.

Governance. Traditionally, the community was governed by two *shuras*. However under the

National Solidarity Programme, two Cluster-Level Development Councils (CLDC) and 19 Community Development Councils (CDCs) have been established.

The total number of households living within the watershed is 330.

Literacy. Until recently, students from Sare Ahangran had to travel to the main road near Dahane Ahangran to attend school. The Provincial Reconstruction Team based at Bamyan district centre established a Tent School in the village two years ago. A new school building was constructed during 2009, and the school has since shifted there. Classes are offered up to standard VIII.

Economic status. As per the baseline survey carried out by CRS in early 2009, 80% of the households belong to the middle income category (own between 7-20 *jeribs* rainfed land and/or between 4-15 *jeribs* irrigated land; 4-20 sheep or goats) while 20% of the households have been identified as poor (own up to 6 *jeribs* rainfed land and/or 3 *jeribs* of irrigated land; 1-3 sheep or goats) and very poor (sharecroppers or manual laborers with no other income sources in households that do not own any land or livestock).

Existing conflicts in the community: The transition from the traditional *shura* to the CLDCs was seemingly smooth and no visible signs of tension were apparent during the pilot phase of the project in 2008. However, during 2009 there was a serious setback when the head of the old *shura* who had been ousted during the CLDC elections, tried to take control of the project. As a result, at the peak of the working season, the project had to be suspended until the issue could be sorted out with the help of the Governor.

Constraints to project implementation: The main constraint is accessibility during winter. The road that links the village to the Bamyan – Kabul main road was repaired with support from Save the Children during 2009. However, the upper valley is still inaccessible to motor vehicles from December – March.

Project/Activity

During early visits to the village and based on initial discussions with the village leaders, the main need that emerged was that the limited area available for cultivation was insufficient to meet the needs of this



Figure 1. Resource mapping with community/ Photo by CRS

agricultural community. While there is sufficient water available year round due to snowmelt from the mountains and an extensive canal system is in place to carry the water across the slopes to the valleys, large areas of private land with good soil depth are in fact lying unused. Discussion with the community revealed that a few decades ago these lands were under irrigated agriculture, but subsequently had to be abandoned due to a number of reasons such as heavy erosion, high incidence of boulders and stones on the surface (probably moraine debris) and migration during the war. At present, the dominant vegetation on these sites is an unpalatable grass locally known as 'donkey grass' (possibly *Agropyron afghanicum*). As a result these lands are unfit for either cultivation or grazing. During fall 2008, in a pilot effort, approximately 4 ha of these lands were treated with contour stone walls, wherein the boulders and stones were used to build the walls. The walls provide an effective barrier across the slope to conserve soil and water, while the land between the walls can now be used for cultivation.

The technology of building stone walls was not new to the community and in many places crude walls

had already been built. It was observed that these walls did not run diagonally across the slope. It appeared that their main purpose was to clear the area of stones and demarcate the fields rather than to control erosion. During the pilot intervention, CRS was able to successfully introduce the use of the A-frame for the layout of contour lines and the construction of stone walls along the contour lines.

During 2009, based on demand from the farmers, the technology was extended to cover an additional 16 ha, which were brought under cultivation in spring 2010.

Awareness generation and mobilization

Initial activities included PRA exercises (social and resource mapping), joint meetings of CLDCs to discuss the project and meetings at CDC level to broaden community participation. Community members also visited the watershed project area of Aga Khan Foundation at Waras to have a firsthand exposure to the community-based approach to natural resource management (CBNRM). These measures have resulted in the active participation of the community in the project.

Strategy to motivate participation

Farmers are provided incentives through cash-for-work in order to undertake these labor intensive and time-consuming soil and water conservation measures. Beneficiaries contribute a percentage of the earnings to the Village Development Fund (VDF). The VDF is managed by the Watershed Committee and the money is deposited in a savings bank account. The funds are to be used for activities benefiting very poor households, women's enterprise groups and maintenance of community-owned assets developed by the project.

Watershed Committee

Over the past year the CLDCs have played an important and effective role in initiating the project. However, as the project is being scaled-up, the CLDCs were required to meet more frequently in order to make the necessary decisions and resolve issues as they emerged. Hence, an executive body

was created from amongst the members of the two CLDCs. This executive body, known as the Watershed Committee (WC), has taken over the day-to-day management functions of the project.

Agreements signed with community

- CRS and the CLDCs have signed an agreement specifying the roles and responsibilities of both the partners.
- The Watershed Committee has agreed to encourage the farmers to maintain a 'no plough' buffer zone extending 1 m above and 1 m below the stone walls. This will help protect and stabilize the walls and also serve to establish a vegetative barrier where grasses, shrubs and trees will be grown. The project will supply seeds of grasses, poplar cuttings and apple seedlings to be planted in this zone.

The role of MAIL and NEPA

CRS staff have briefed MAIL and NEPA officials in

Figure 2. CRS Watershed Technical Advisor training the villagers on the use of A-Frame to delineate the contours of a sloping mountain/Photo by CRS



Bamyan about the plans and progress of the project during the regular district level coordination meetings. Officials from Bamyan and Kabul have also visited the watershed and offered valuable suggestions and feedback to CRS and the community.

Relationship with other organizations in the project area

- Jesuit Refugee Services which had been organizing training for the school teachers at Sare Ahangaran facilitated the initial meetings between CRS and the CLDCs.
- CRS has collaborated with AKF for organizing exposure visits to the AKF project area in Waras.

Training given to beneficiaries

- **Trainings for Watershed Committee:** At present WC meetings are being facilitated by CRS staff with a future intent that members develop their own agendas for these meetings, conduct the meetings efficiently and record the proceedings. Formal trainings are also planned to build WC and CLDC capacity including: project planning and monitoring, organizational management, conflict resolution, strengthening linkages with the district level planning process and understanding of national policies for rangeland management among others.
- **Training of Farmers on Soil and Water Conservation,** use of A-Frame for layout of contour lines and construction of stone walls.

Existence of a long-term plan

A detailed NRM plan (2009-12) has been developed based on a series of meetings with the WC. The plan comprises of a matrix which lays out the activities along a time-frame with a detailed resource cum treatment map of the watershed. Supporting resolutions and agreements have been recorded in the WC meeting register.

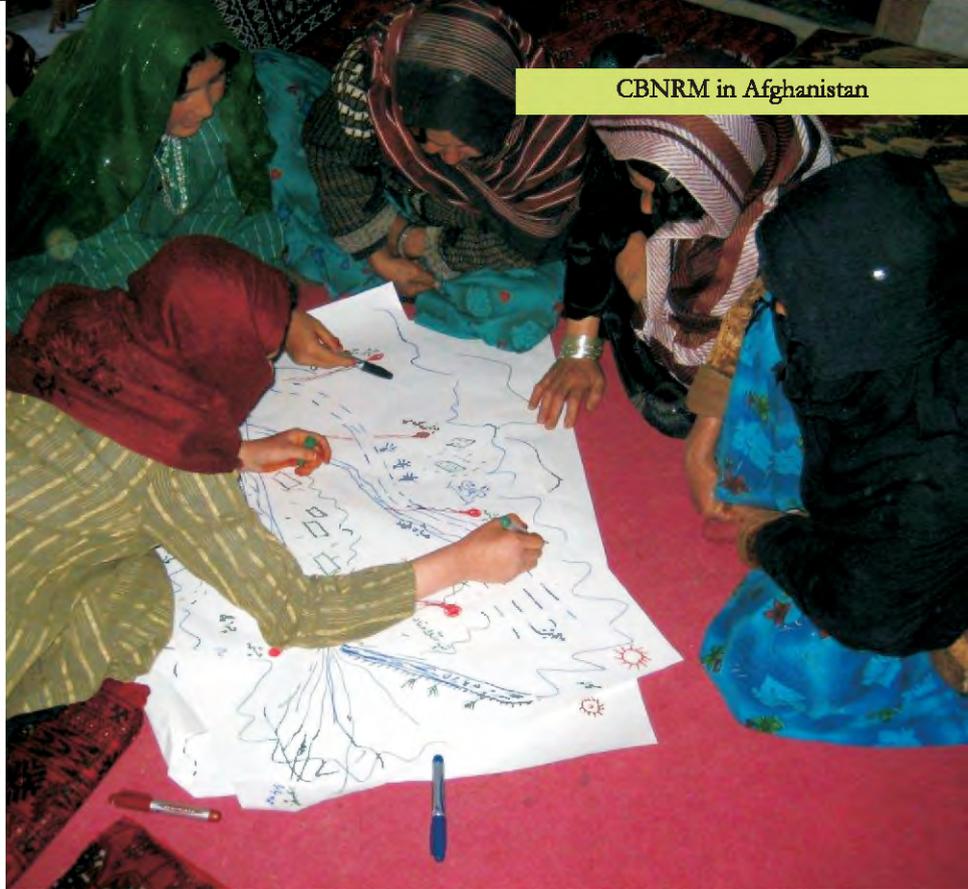


Figure 3. Women participated in the participatory rapid appraisal facilitated by CRS/ Photo by CRS

Results and Analysis

Around 20 ha of land located on the upper portion of a ridge have been treated with contour stone walls. This area will directly benefit from SWC and is being brought under cultivation. The lower slopes of the ridge are expected to stabilize as well due to reduced runoff from the upper slopes and will benefit from increased soil moisture seeping from the fields above.

The 4 ha of land restored during 2008 was brought under cultivation in 2009. The farmers have reported good yields of wheat and alfalfa from these fields. Cuttings of Poplar and Pseudoacacia that were planted during spring 2009 are now well established and will be an important source of wood for timber and fuel in a few years.

The issue of increased demand on irrigation systems and water resources to meet the needs of these new fields was discussed in the WC. However, the members were of the view that during years of normal precipitation water supply would be assured and that an upstream canal could be diverted to bring water to the new fields. During periods of low water supply, the community had a system of

managing the available water, wherein one outlet from the canal was provided for every five farmers along its route.

Recommendations

- SWC technologies should build on traditional technologies so that the community can easily identify with them and implement them without too much technical support.
- Latent leadership conflicts may re-surface once benefits from the project become apparent. Hence community-leadership dynamics both past and present need to be studied during the community mobilization process with a view to understand and resolve these issues before conflicts emerge.

Conclusions

The case study presents a simple approach to CBNRM. Through a single intervention viz. implementing simple stone walls along the contour, the project has successfully demonstrated that it is possible to have a multiple increase in the area under cultivation in Sare Ahangaran, while effectively conserving soil and water.

3-4

Integrated Water Resources Management in Khush Rabat Watershed, Herat Province

*By David Gandhi, Technical Adviser, Agriculture & Watershed,
Mobsen Nadiri, Project Officer, Watershed Unit, and
Ahmed Shah Siddiqui, Project Manager, Watershed Unit
CRS Afghanistan*

CRS, with field implementing partner Rehabilitation Association and Agriculture Development for Afghanistan (RAADA), is implementing a community-based natural resource management project in Khush Rabat watershed of Herat province. The project has demonstrated a model of community-based integrated water resources management. A traditional but inefficient irrigation canal was converted into an improved water system encompassing catchment area development, zero-loss transmission from source to supply points and a reservoir which meets drinking water needs of livestock and other domestic needs of the community. This has resulted in increased productivity of food, fodder and fuel and also helped resolve existing conflicts amongst the watershed villages over sharing of land and water resources.

Background

CRS, in partnership with RAADA and with funding support from the Biodiversity Support Program for NEPA, is implementing a community-based natural resource management project in the Khush Rabat watershed of Kushk district in Herat province of northwest Afghanistan.

Project Objectives

Objective 1: Promoting greater biodiversity protection and conservation of natural resources in the watershed.

Intermediate Results by which Objective 1 will be achieved are:

- Communities protect designated areas of biological importance, and implement improved soil and water conservation measures in upper-catchment common lands.
- Communities adopt productive and profitable livelihood practices that reduce pressures on forest and pastureland resources.

Objective 2: Enhanced local capacities for sustainable community-based and joint natural resource management.

Intermediate Results for Objective 2 are:

- Increased local knowledge of conservation issues and skills in organizational management,

leadership, and conflict resolution among community members, organizations, and partners.

- Community actors from target villages demonstrate the ability to plan, organize themselves and collaborate with external actors for conservation of natural resources and biodiversity protection.

Situation on the Ground

The selected project area comprises five villages, located in individual micro-catchments, running parallel to each other in a south-north direction. This case study covers Baghcha Abdul Hakim village which is one of the five villages in the watershed.

The topography of the area is mountainous. The village is located at the lower end of an elongated micro-watershed. The upper catchment is highly eroded and gullied, draining into the main stream which flows for a length of 4 km before reaching the village.

Land Use

The total area of the micro-watershed is approximately 325 ha.

- Irrigated area - Approximately 100 *jeribs* (20 ha) of fields are located in the lower slopes and valley portion and are irrigated by a system of stream-fed canals. Of this, 75 *jeribs* (15 ha) receives reliable, year round irrigation, while the remaining

25 *jeribs* (5 ha) receives partial or no irrigation depending on availability of water. Main crops include wheat, chickpea and barley. Melons and some high value vegetables (tomato, onion, carrots, squash, *etc.*) are grown as cash crops. Trees such as willow (*Salix* sp), poplar (*Populus* sp), and ash (*Fraxinus* sp) are grown along stream banks and field boundaries, as well as shrubs and grasses (*Stipa* sp, *Festuca* sp, *Cousinia* sp, *Poa* sp, *Hordeum* sp) for fodder and fuel purposes.

- Rain-fed land – Approximately 500 *jeribs* (100 ha) located in middle to upper parts of the catchment (above irrigated areas) are primarily used for the cultivation of wheat, barley, chickpea and cumin crops. A good portion of rainfed areas are found on steep slopes or what can be considered to be marginal land.
- Rangeland, forest, and common lands: Approximately 500 *jeribs* (200 ha) of lands in the upper part of the catchment are used for grazing and harvesting of bushes for fuel. These lands are a common resource shared with Baghcha Qurban village.

Due to limited water resources available for irrigation, local livelihoods depend heavily on rainfed agriculture and livestock rearing. This puts considerable pressure on upper-catchment ecosystems and contributes to land degradation. As a result, the upper-catchment areas show signs of severe erosion and loss of vegetative cover.

The area receives an average annual precipitation of 250-300 mm in the form of rain and snow during the period November – March. However, due to the steep slopes and lack of vegetative cover on the surface of the soil, the water is unable to infiltrate and the rate of runoff is high. The stream runs dry by April, while there is limited water available for drinking and irrigation from a perennial spring located in the upper-catchment. During the months of June – September the village faces a period of water stress.

Social structure of the community

The village has 40 households belonging to the Tajik community (Firoz Koochi and Jamshedi tribes). Governance is by the traditional *shura*. So far, the Cluster-Level Development Committee (CLDC) under the National Solidarity Program has not been established. Under the BSP/NEPA project, natural

resource management (NRM) committees were established in each of the five villages to mobilize the community for planning and implementing project interventions. An association of the five NRM committees is to be established soon.

Existing conflicts in the community

The community faced occasional conflicts with neighboring Baghcha Qurban village for sharing of common pasture lands. During months of water stress, there were also conflicts with Baghcha Ghulam Mohammad village (which lies downstream of Baghcha Abdul Hakim) over the sharing of water.

Constraints to project implementation

Uncertainty over security has affected the pace of project implementation. Some of the incidents reported were insurgent activities on the Kushk-e-Khona border, explosive devices on the Tourgundy road and smugglers on the border area.

Project/Activity

Improved Irrigation System

The main need expressed by the community of Baghcha Abdul Hakim was to renovate their existing irrigation canal leading from the spring in the upper catchment to the village. In April 2009 CRS technical staff undertook technical surveys of the existing canal and suggested a comprehensive system comprised of:

- Construction of a diversion weir located in the upper catchment to efficiently divert runoff water from the main stream and springs into the irrigation system



Figure 1. Construction of diversion weir



Figure 2. Diversion weir with catchment area

- Replacement of the earthen canal by a buried PVC pipeline to convey water from the diversion weir up to the reservoir located near the village in the lower catchment
- Construction of a reservoir near the village for collection and storage of water to enable regular supply through the distribution network

Development of Catchment

As part of the Natural Resource Management plan developed for the watershed, the community has agreed to develop the upper catchment of the micro-watershed.

- Soil and water conservation (SWC) measures including contour trenches and gully plugs are implemented to capture runoff, increase infiltration and enhance spring-flows.
- Rangeland management practices introduced to enhance bio-mass production and provide the community with a source of fodder and fuel on a sustainable basis.
- Training of farmers on practices such as contour cultivation and crop rotations on rainfed fields.

Community contribution

The community was actively engaged in assisting the CRS technical staff during the technical survey. The community provided locally available material such as stones and sand for the construction work and contributed free labor for excavating the 4 km trench for the pipeline. The community also contributed free labor for construction of the 4 km mountain road from the village to the project site to facilitate transport of materials and access to the construction site.

CRS provided the technical support, pipes and cement and paid wages for the masons and labor engaged in construction of the improved water system. SWC activities such as contour trenches and gully plugs were implemented through a cash-for-work program.

Agreements signed with community

- After the initial meetings and before the onset of physical works, an agreement was signed between CRS and the *shura* that specified the roles and responsibilities of both parties.

- Technical designs and estimates were discussed and approved during formal meetings of the NRM Committee.
- The NRM committee agreed to implement pasture management in selected areas.
- The NRM Committee accepted responsibility for maintaining the improved water system.

Relationship with any other organizations in the project area

The project is implemented in partnership with RAADA (a local NGO) which is responsible for field-level implementation. Officials from MAIL and NEPA have also been closely associated with the project.

Capacity Building

CRS Watershed staff attended various trainings conducted by the International Centre for Integrated Mountain Development (ICIMOD) on community-

based natural resource management, low cost soil and water conservation measures and rangeland management. CRS staff, in turn, conducted intensive formal and in-field training for staff of RAADA.

CRS and RAADA organized a series of capacity building events for the members of the five NRM committees in the watershed on the following subjects:

- Integrated watershed management
- Soil and water conservation measures
- Rangeland management
- Leadership
- Conflict management

Officials from MAIL and NEPA as well as the Khushk District Governor actively participated in these training programs.

Figure 3. Gully control measures in catchment area



Development of Natural Resource Management Plan

As part of the project, CRS and RAADA facilitated the process of developing a long term natural resource management plan for the Khush Rabat watershed involving the *shuras*, NRM committees and communities of all five villages. These plans were initially developed for each village and subsequently consolidated to prepare the watershed plan. The process involved:

- Social and resource mapping and participatory planning, as a tool for community mobilization, was carried out in all five villages
- Baseline surveys at the household level.
- Exposure visit to a CRS project area in Guzara district where soil and water conservation measures such as contour trenches, gully plugs and check dams were implemented.
- Training programs for committee members to develop the capacity to plan and manage the project over the long term
- Watershed transects to record GPS coordinates, and record primary data on land use and ownership, to plan appropriate SWC measures.
- Community meetings to share findings and discuss problems and solutions with men and women in each village.
- Facilitating visits of officials from MAIL, NEPA and other district functionaries to the watershed on a regular basis to meet with the community, participate in the planning process, monitor ongoing work and help resolve issues of ownership of common lands.

Results and Analysis

The project achieved the following outcomes:

Improved Water Supply System:

- The community now has an efficient system to meet their needs for irrigation.
- The weir in the upper catchment is able to capture maximum runoff and spring water for diversion into the pipeline
- The pipeline ensures zero water loss during transmission up to the point of storage
- The reservoir is able to release water into the distribution network at a constant head. The

stored water is also used to meet drinking water needs of cattle and for domestic purposes.

During months of reduced flows, the reservoir will be able to store 240 cubic meters of water.

- During fall 2009, as a result of the improved water supply, around 25 *jeribs* (5 ha) of fields which previously did not receive sufficient water are now under full irrigation. In addition, surplus water was released to supply Ghulam Mohammad village as well.

Protection and SWC measures in the upper catchment area are expected to contribute to increased inflows into the irrigation system for a longer period of time by recharging springs and reducing runoff rates.

Significant increase in availability of biomass from lower catchment areas was reported during fall 2009. SWC and protection activities in the upper catchment are also expected to significantly improve biomass yields to meet the fuel and fodder needs of the community.

The village depends on two hand-pumps for meeting drinking water needs especially during summer months. The SWC measures in the upper catchment are expected to recharge ground water and raise the water table.

The creation of NRM committees along with the capacity building efforts and the NRM planning process helped the communities of the five villages develop a shared vision and objectives for their development. As a result, long standing conflicts such as sharing of pasture lands and water resources are now being resolved in a constructive manner.

Both community members and officials from MAIL and NEPA interacted closely during project implementation. The MAIL officials were helpful in resolving the issue of ownership of common lands, preparing and approving the development plans and monitoring field work.

The project has had a positive effect on the conflict of shared water resources between Baghcha Abdul Hakim village and Ghulam Mohammad village which is further downstream. The latter lacked an irrigation system of its own and depended on surplus flow from Baghcha Abdul Hakim. However, since the farmers of Baghcha Abdul Hakim were unable to meet their own needs there was constant tension over water supply for irrigation. The Kushk

Rabat watershed project was able to resolve this problem by converting the existing irrigation system at Baghcha Abdul Hakim into an improved system capable of generating surplus water which could be supplied to Ghulam Mohammad during years of good precipitation. Simultaneously, a separate improved water system was constructed in the adjoining micro-catchment for Ghulam Mohammad to meet their needs.

Recommendations

CBNRM is a long-term process and hence requires a time frame of at least five years to allow for awareness generation and mobilization of communities, formation and capacity building of village institutions, demonstration of different technologies and models, preparation of NRM plan, implementation of planned interventions in a phased manner, monitoring of impacts, incorporating learning back into the plans and developing an exit strategy which will ensure sustainability of the assets developed.

The process facilitated by CRS and RAADA since February 2009 under the BSP/NEPA grant should be viewed as a pilot effort which needs to be scaled up over the entire Khush Rabat watershed over the next four years.

Conclusions

- Communities do not readily link reduced water availability to environmental degradation. Awareness generation is required through exposure visits and training programs to convince the leaders and community members of the effectiveness of the CBNRM approach.
- The integrated water resources management approach is an effective means of linking catchment management to water supply, thereby ensuring sustainability of both and meeting the needs of the community for food, fodder and fuel.

Figure 4. Beneficiaries contributing labor for installing pipeline



3-5

Community Based Natural Resource Management in Takhar, Afghanistan

*By Pralbad Shirsath, Programme Coordinator, Concern Worldwide
Sustainable Management of Integrated Livelihood and Environment (SMILE) Project*

The SMILE project has adopted an integrated approach for natural resource (NR) development. It promotes conservation of resources and its use through improved agronomic practices. It develops links with other programmes outside the project and links with livelihoods of people. Understanding of the given situation, creating peoples organizations, building their capacities, providing them a key role in implementation and building on local culture and strengths are key factors contributing to the project's success. Processes developed for the implementation of natural resource management interventions such as tree planting, bunding and trenching, and water conservation are appreciated by the people. Technology options provided by the project helped people to choose the technology of their choice and replicate it on their own.

Background

Overall, this project contributes to improved food security in Afghanistan. It is designed in line with the European Commission's (EC) overall support for development in Afghanistan. For the last few years, Afghanistan has experienced severe food shortages, prompting the World Food Programme (WFP) to distribute hundreds of thousands of tons of food. This year alone, WFP plans to distribute 247,000 metric tons of food¹. One of the primary contributing factors to Afghanistan's food shortages is the dependence of farmers on irrigation water to cultivate their crops. Floods, drought, and other disasters often affect irrigation schemes.

Moreover, in the Kunduz and Amu River basins in northern Afghanistan, irrigation schemes have been weakened by decades of war and neglect, and there are no formal mechanisms for communities to participate in resource management. These areas were once "the bread basket" of Afghanistan, but now they no longer produce at their historic levels.

This project is being implemented in the Rustaq district of Takhar north, which is one of the upper catchment areas of Amu River. People from this area are mainly dependent on rainfed land, which

has led to poor control of the natural resource management processes (woodcutting, nut harvesting, livestock grazing). The ensuing degradation of the land, and loss of widespread forest cover, has led to intensive flooding, soil erosion and mass movement. This, in turn, has led to the destruction of the infrastructure and loss of valuable top soil and agricultural land, resulting in problems for downstream water users (less reliable water flow, high silt loads in plains' irrigation schemes, poor water distribution).

The following needs and constraints were identified:

- General lack of firewood, contributing to a complete deforestation in some areas. A UNEP assessment states: "*In 1977 woodlands were detected on ... 37% [of the land base] in Takhar'. In 2002, the density of woodlands had decreased ... to the point where they could no longer be detected by satellite instruments.*"²
- Intense water runoff after melting of snow leading to landslides, mudslides, flash floods, and rapid soil and water erosion.
- High numbers of landless people. Concern Worldwide research in three villages of Yangi Qala and Rustaq districts put the percentage of families in each district that are landless at 36%

¹ WFP, 2006. http://www.wfp.org/appeals/Projected_needs/documents/by_countries/004.pdf (Accessed on November 1, 2007)

² UNEP, 2003. Afghanistan: Post-Conflict Environmental Assessment

and 30% respectively.

- Diminished income and lack of regular off-farm employment opportunities.
- Conversion of pastures and former woodlands to rainfed agriculture and over-grazing of the remaining pasture grounds.
- Low capacity of government agencies in terms of human, financial and physical resources to manage the uplands.
- Limited water resources for upland rehabilitation/reforestation.
- Vulnerability to disasters. A *mirab* in Yangi Qala lamented: "We are often hit by flash floods at the beginning of the irrigation season, destroying the canals."

Therefore, SMILE project aims to improve natural resources management (NRM) by establishing management institutions at the government and community levels and providing support for the rehabilitation of uplands. The project recognizes that natural resources do not follow political boundaries, but watershed boundaries. Within watersheds, the upland sections of a watershed have an impact on the lowland environment.

Project/Activities

Identification of focus communities and watershed catchments
Following discussions with Local Government and the Director of WRD on possible villages to include in this project, 23 focus communities were selected. Villages were selected based on secondary data and on Concern Worldwide information. Potential villages were surveyed using the indicators Table 1 in order to ensure that the most needy communities were selected.

Once focus communities were identified, a baseline survey was conducted in 23 villages. The survey looked into various problems related to the NRM and the livelihoods of people using various socio-economic indicators, including those in the project's logical framework.

Selected communities were grouped into sub catchments using GIS data and the survey. Figure 1 outlines the targeted catchments.

Based on outcomes of the baseline survey and PRA, the project designed interventions for each catchment. The process started with meetings and

workshops that increased the awareness among targeted communities and stakeholders about the goals and objectives of the project. Subsequently, Natural Resources Management Committees (NRMC) were formed in each community with representation from each sector of the community (farmers, herders, landless and women).

Community mobilization

Community mobilization was a key focus during the initial phase of the project. The SMILE team helped the community understand the project framework, the current status of their natural resources, how these natural resources are linked to their livelihoods, and the possible impacts of more degraded resources in future. This helped in forming village, catchment and district level community organisations and project steering committees. Capacity building through well-developed training modules, use of audio-visual technology and demonstrations helped communities better understand the need for natural resources management.

Establishment of NRM committees

The CDCs that were established under the NSP programme and the village communities initiated the formation of NRM committees. On average, over 150 people in each village participated in the selection of NRM members. The number of members selected ranged from 4 to 11, depending on the size of the village. The selection process ensured that in each NRM committee there were female members. Then, all members together selected the chairperson, cashier and documentor. In the 23 NRMCs, 21% of the members were female.

Planning and decision on detailed project activities

The SMILE team (together with NRMCs) developed detailed village micro plans which included NRM, livelihood, and capacity building interventions. These micro plans are incorporated into the project's geographic information system (GIS). The micro plans are updated on a regular basis addressing community needs within the framework of the project.

Detailed agreements in writing on project activities and mutual responsibilities

After forming NRMCs, detailed by-laws and charters for each committee were developed. These documents define the committee's roles and

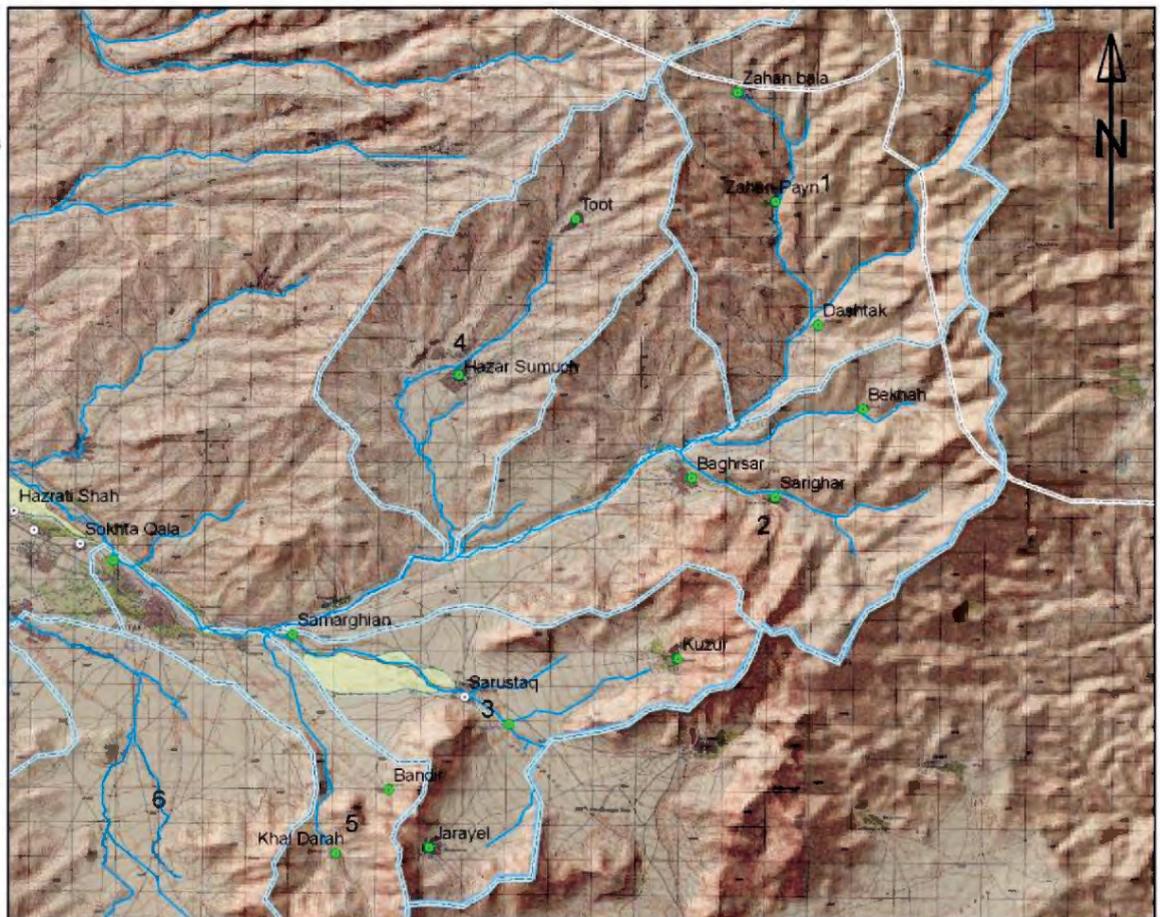
Table 1. Indicators used to select focus communities

Criteria	Considered when?	Methods of Assessment
1. Erosion	There are frequent riverbank problems, landslides, and flash floods affecting agriculture land and irrigation systems and gullies are formed, <i>etc.</i>	Site visits, observations, people's perception
2. Income levels – lower income levels for the majority of families	More than 50% families have less than Afs 10,000 annual income	Poverty ranking
3. Location	Villages are directly dependent on the canal systems and/or reside within the catchment areas	GIS
4. Migration level	More than 30% of families or their members migrate in search of livelihood	PRA - social map
5. Natural resources	Low productivity, poor soil and water conservation, poor vegetation, overgrazed lands, poor irrigation systems	PRA – resource mapping, site visits, perceptions, <i>etc.</i>
6. Willingness to work	Community explicitly express their interest to work with Concern Worldwide and were ready to give in-kind or cash contributions	Written letter from the community
7. Landless	Population in upper catchment areas that depend on rangelands and farm labour	Secondary data/ PRA - social map
8. Potential for demonstration plots	There are potential site demonstration plots and they are easily accessible	Visits/ observations
9. Women-headed families	Relatively high proportion of women-headed households/families	PRA - social map
10. Public health	Poor public health indicators – outbreaks, poor access to drinking water, flooding, waterlogging, poor latrines, malnutrition among children and women, <i>etc.</i>	PRA – social mapping, interviews
11. Population	At least 30 households	Secondary data
12. Number of NGOs in the area	No other NGOs in the project area with similar activities/objectives	Secondary data/ PRA
13. Communication	No weekly/daily markets, poor road access especially in winter, <i>etc.</i>	Visits/ observations
14. Disaster history	Villages have suffered from multiple disasters	PRA – risk and hazard mapping
15. Livelihood options	Majority of population solely depend on agriculture and there are no other livelihood options available	PRA – social mapping
16. Recommendation of local government/WRD	Local government recommended the villages and introduced Concern Worldwide to the village community.	Meeting with the Governor

Figure 1. SMILE Project Micro Catchments

Legend

- Intakes
- SWIM Villages
- SMILE Villages
- Drainage lines
- MicroCatchments
- District Boundaries
- Watershed



responsibilities in relation to natural resource management, organizational development, and institutionalization of the natural resource management processes. For each intervention, specific agreements are made between individuals and the NRMC detailing their contributions and social responsibility for that intervention. Copies of this agreement are kept in the project office as well as in the NRMC offices. These documents are also shared with relevant government officials.

Initiation of intra- and inter-village agreements on natural resource management and disaster risk reduction

Before starting any community level intervention, the project team developed agreements on aftercare and maintenance of the project interventions, on controlled grazing and on the project's contributions to the NRMC. For individual level interventions the NRMC developed an agreement with the individual family benefiting from the project.

Training for stakeholders

The team has developed training modules on project management and a training was organized for NRMC, CDC members and government representatives. Because of this training, all participants successfully learned about time management, monitoring of activities, planning, organization of task forces and logistics, etc. These trainings enhanced stakeholder participation and effective monitoring by the various community organisations, and the Provincial Water and Energy Department.

Capacity building of beneficiaries

The project has developed consistent approaches to building the capacities of communities, NRMC members, and government officials in various technical and non-technical aspects. To achieve consistency in a capacity building programme and to institutionalize these processes, the project has developed local language training modules on soil

and water conservation, grain (wheat) production in rainfed conditions, agroforestry, integrated NRM, vegetable production, after care and maintenance of trees and tree planting in rainfed conditions. Demonstrations of documentary films on NRM have been found to be very effective and well-appreciated by community members.

Similarly, community and government representatives were exposed to projects implemented in other locations within Afghanistan, India and Tajikistan. This helped broaden the vision of the NRMC about NRM.

Building on local culture and strengths

As well as participating in natural resource restoration and management, it is very important that all people living in the catchment understand the importance of soil and water conservation, tree planting and use of eco-friendly agriculture technologies in NRM projects. But a project is unlikely to support all people and all lands that fall in the given catchment. Therefore, the project team adopted a *hashar*, or joint community action, approach and mobilized all communities to undertake soil and water conservation in their areas. The project provided, on a one-time basis, food and technical support. This has been very effective in most targeted villages where the people themselves, under the guidance of the NRMC, are planning to cover all areas.

Introduction of technologies

Land and people within the targeted catchments are different and they have different needs and opportunities. Hence the project introduced a number of technologies so that people can choose the technology that is most appropriate for them.

The project established demonstration plots that showed restoration by (1) planting tree saplings, (2) using seed dibbling techniques, and (3) naturally protecting the area. Depending on location, lands have also been treated with contour bunds, trenches, seeding of grasses, farm

ponds, gully plugs and check dams. These activities were done with community members to create awareness about each technology and demonstrate the use of locally available resources. It is observed that in most villages, farmers have started adopting these technologies on their own.

Generally, poor families cannot afford the cost of tree saplings. Therefore, the project promoted nurseries in each community, with the objective of reducing the cost of saplings and to make planting materials available locally. This is expected to further boost the NRM programme.

Integration

The project is committed to the integration of the various sectors in the community and in developing stronger links with other initiatives. During the flooding in April–May 2009, the project undertook emergency response interventions using resources from other donors ensuring the effectiveness of NRM interventions and consistent community involvement. Similarly, other needs of the community involving roads, electricity, schools, health and sanitation are being addressed through links with National Solidarity Programme (NSP) and raising funds from other donors.

The project helped the poorest and most disadvantaged people – women-headed households, landless and marginal farmers – by providing income-generating activities that included carpentry, leather processing, grocery shops, tailoring, blacksmithing, bakeries, *etc.* These income-generating activities helped reduce the dependence

Figure 2. Counter Bunding at Bandir Village





Figure 3. Farm pond at Bandir Village

of these people on natural resources (collection of timber, roots, shrubs, firewood).

Results and Analysis

Natural Resource Management Committees (NRMC)

Twenty-three (23) of the most vulnerable and needy communities were identified based on well-developed criteria. These communities were divided into five catchment areas using GIS information and surveys. This helped the project team understand the current status of the area, formulate NRMCs through democratic processes, and develop plans for each catchment based on the local strengths and opportunities. All 4867 households living in these areas have members on the NRMCs.

The community's awareness about the existing status of the natural resources, and the link of natural resources to their livelihoods helped in developing a written agreement with each community for their active participation in the project. It was especially important in obtaining their agreement to control grazing and to sustain project interventions during and beyond implementation.

All project activities are implemented through NRMCs. These community-elected representatives have taken a proactive role in developing village NRM plans and identifying roles and responsibilities for each member. Under the NRMC's leadership the project implemented controlled grazing agreements on 181 ha of community land; 53 families established nurseries that are currently growing over 100,000 saplings; over 500 ha of land were treated with soil and water conservation measures; two

irrigation canals were reinforced with trees planted along their sides; silvo-pastoral systems were established on over 80 ha of land; and over 1000 farmers planted fruit and non fruit trees on their lands. All this was done through active participation and contribution of communities and through *hasbar*.

Soil conservation

People living in these areas lack knowledge about the current status of the resources and are not aware of technologies that could control further degradation such as contour bunding, trenching and gully plugging. Once farmers understand the value of these technologies they pick them up very quickly and start using them on their lands.

A simple methodology is used by the project to introduce these technologies. The method consists of the following steps:

1. Awareness-generation about current status of resources and its links with livelihood.
2. Trainings on technologies for effective, low-cost soil and water conservation measures.
3. On field demonstrations.
4. The Project provides guidelines, and the Project and NRMC agree on complete responsibility for further actions.
5. NRMC organizes *hasbar* ensuring maximum community participation, while the project provides lunch and the project team guides the process.
6. Joint monitoring of the impact by NRMC, community members and project staff and feedbacking of the findings to the community.

These steps result in the rapid implementation of soil conservation technologies by farmers. In Bandir and Jairali villages, most private and community land has been treated with soil and water conservation measures. Through February 2010, over 500 ha land is completely treated with contour bunds and trenches. According to the villagers and our own observations, there were no floods in the treated areas in spite of heavy rains during February. The treated area can easily be differentiated from other nearby areas.

Water conservation

Another innovation implemented by the project is the development of farm ponds to conserve water

for irrigating crops and for promoting vegetable cultivation in rainfed conditions. The community from Bandir village was introduced to the concept of farm ponds, and then trained in developing them. Within two months time, under the overall guidance of the NRMC and technical guidance of the project team, villagers created 13 farm ponds that were 15 m x 10 m x 2.5 m in size. These ponds were able to collect and store over 4,000,000 liters of water from the recent rains. Some farmers have started planting vegetable seeds and trees around farm ponds on their own. Farmers who never thought of planting vegetables in rainfed conditions have done so and are expecting to reap a harvest. Farmers are now planning to construct small shelters near their ponds and grow vegetables regularly.

The project contributed 600 USD towards the construction of each pond, but the cost of creating each pond was over 1000 USD. This shows the people's interest in water conservation and their desire to further develop their resources and livelihoods.

Tree plantation

Another key activity implemented by the project is tree plantation. The project team identified, together with NRMCs, trees which they would like to plant. The project procured good quality saplings that included both non-fruit and fruit trees (almond, walnut, poplar, mulberry, cherry, and apple). The saplings were planted on community lands, as well as private lands, under the overall responsibility and guidance of the NRMC. Community members interested in tree planting were instructed in their roles and responsibilities and were trained in tree planting techniques. Knowing that survival of trees on community land is a challenge, the project implemented processes that included:

- Developing written agreements with each community about care and maintenance of saplings prior to supplying them;
- Community members and NRMC taking responsibility for dead saplings and paying for the replanting of these saplings;
- NRMC developing an agreement with each individual interested in planting trees in the event that individuals were required to pay for dead saplings;

- Prohibition of planting in private and community lands unless the land has been treated with soil and water conservation measures such as contour bunds and trenches; and,
- Provision of saplings upon treatment of pits with the required biomass and manure.

Through this process, 62000 tree saplings were planted on sloping rainfed lands, both private and community owned. The survival rate was 88% at the end of December 2009.

Improved agriculture

Over 90% of the land in the targeted catchments is rainfed and livelihoods are dependent on these lands. Mainly wheat, pulses, and some oilseeds are grown on these lands. Baseline information showed that the amount of food grown in these areas is not enough to meet the needs of the population. Often, crops did not grow well due to the erratic nature of rains and the degraded state of the soil.

Therefore, the project team organized several trainings and demonstrations (Farmer Field Schools) to educate farmers on improved agriculture technologies. A new crop, soybean, was introduced successfully. Farmers who received seeds in 2009 are continuing with the same crops in 2010. Farmers in downstream areas were trained in improved rice cultivation practices. Similarly, training was provided on the use of fertilizers, pest and disease management, vegetable cultivation, and organic waste recycling.



Figure 4. Contour Bunding and Tree Plantation at Jairali Village

Each selected farmer was given 7 kg of soybean seeds, from which he/she produced an average of 350 kg of soybean. From improved rice cultivation methods, farmers started producing over 8.4 tons/ha of paddy compared to 3.5 tons/ha from traditional methods. Similarly, farmers started cultivating alfalfa on rainfed sloping lands.

Recommendations

- In the context of Afghanistan, people's needs and priorities are very different. Food, income and employment are immediate priorities. People do not easily understand that NRM interventions target long-term commitments and benefits. Hence, it takes time. Therefore, it is important when designing an NRM project, to include interventions that give benefits in the short term (cash for work, irrigation, agricultural inputs, *etc.*) and interventions that offer benefits in the long run (soil and water conservation, tree planting, nurseries, check dams, *etc.*).
- There is further need to develop technologies for producing low cost, but quality saplings within the targeted areas.
- It is encouraged to work first in private lands because the survival rate of trees in this area is higher than in community lands.
- Building capacity within communities to implement NRM practices requires a consistent approach. Due to illiteracy and lack of exposure, people are slow in understanding the importance of sustainable NRM practices.
- NRM projects need a longer time frame for implementation from both a physical point of view (time it takes to grow a new resource) and from a community organization point of view. In particular, time is required to build community consensus over how to undertake activities, how to look after new resources, and how benefits should be distributed.
- Activities should not be undertaken until there is a clear agreement on community contribution and the community's roles and responsibilities during and after implementation.
- Demonstrations are a good way to educate and convince people of the need for different affordable technologies, to discuss results with

them, and to provide them support for further planning and action.

- Tree planting must not be undertaken without land preparation such as contour bunding, trenching, pit digging, and treatment of pits with good compost and soil. Appropriate agreements between NRMCs and beneficiaries must also be drawn up.
- In NRM projects both quality and scale of operation is important. Proposed interventions should target complete catchments based on an agreed upon NRM plan that addresses activities during and after implementation of the project.
- Percentages of landless population is relatively high, sometimes up to 60% in some communities, and these people are mainly dependent on natural resources for their livelihoods. Therefore, there is a need to develop strategies to provide them with alternative livelihood support and mainstream them into the development process.

Conclusions

Developing natural resources, with community participation and ownership, is a strategic need of people living in upland area catchments in order to secure their livelihoods and those of future generations. The work undertaken by this project addresses short and long term needs of people and has already started producing positive results. But there is need to continue support for these communities beyond the end of the project in 2010 as their current capacities to independently manage natural resources are very limited.

3-6

Watershed Management in Karasti Village

By Abdul Momin, Mamet Magno, Ma. Cleofe Pablo-Bernardino and Charles R. Hatch

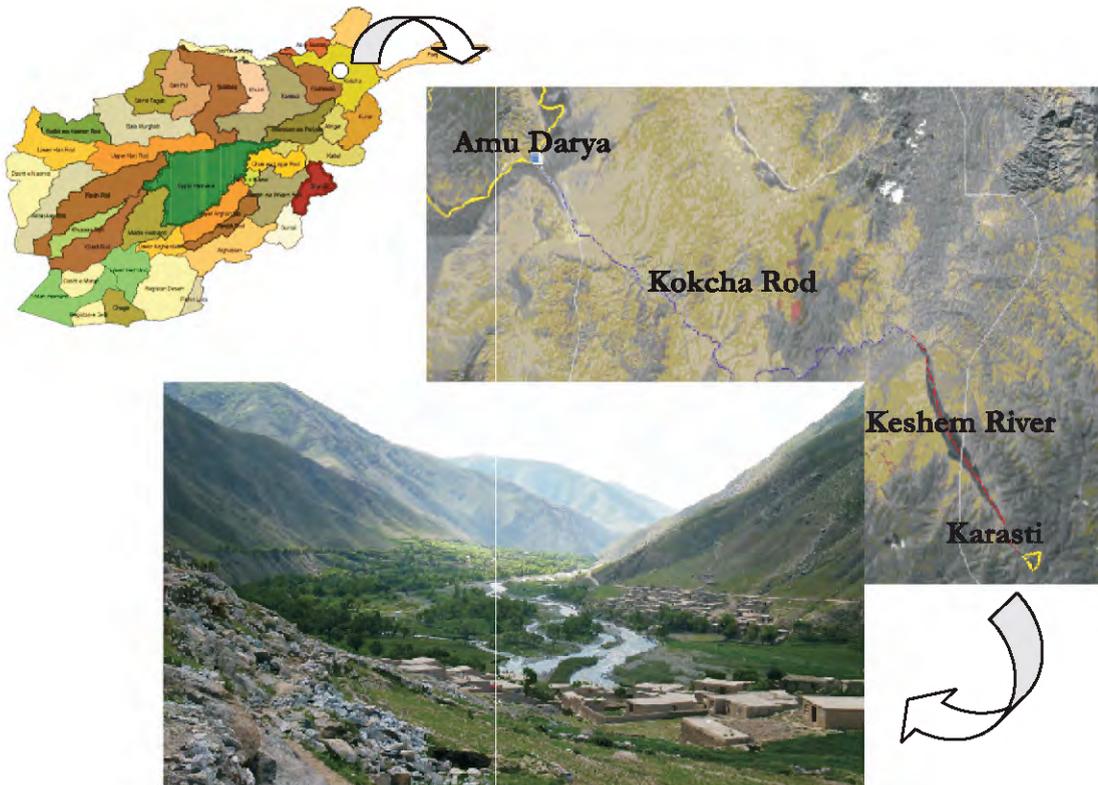


Figure 1. Location of the project area

The people of Karasti village, in collaboration with Lapis Lazuli Sky, developed a watershed management plan for community lands in an upper catchment area of Keshem River. Participatory planning activities were used to identify six separate zones within the watershed. Each zone had a separate land use objective. Conservation activities associated with the implementation of the plan were undertaken by hiring local community members to construct soil conservation structures; raise, graft and plant seedlings; and build terraces and check dams in the watershed. Environmental campaigns were also conducted to deepen understanding by the wider community for conservation concepts. The development of watershed management plans will be strengthened as extension workers expand their skills and increase their experience using participatory management methodologies. The lack of a formal instrument that officially assigns user-rights to the to the community, of government-owned land in the watershed, was a significant issue. The absence of such an agreement significantly reduces the community's confidence that they will realize the benefits of the watershed management plan. It also reduces their willingness to invest personal time in undertaking conservation activities within the watershed. The development and implementation of the watershed management plan was supported through a BSP-NEPA Community-based Resource Management grant.

Background

Karasti Village is located on the upper catchment of Keshem River which connects to Kokcha Rod and Amu Darya Basin (see Figure 1). It is one of the 67 villages of Tagab-e-Keshem District (otherwise known as Kishmi Bala). The elevation in the area is between 1,400 to 3,000 meters. The number of households is approximately 3,000.

According to the Watershed Atlas of Afghanistan¹, 60 percent of Kokcha Watershed is rangeland. Permanent snow cover accounts for 12 percent. Irrigated land accounts for 3 percent and the rain-fed cultivation accounts for 18 percent.

The people in Karasti are mainly of Tajik descent. They maintain herds of sheep and goats as their major source of income. They graze the animals on the mountain slopes in summer and hand feed them in stalls during winter. The families also grow wheat along the narrow valleys. Further up the valleys, they grow grapes, mulberry, cherries, apricots, apples, peaches, walnut, almond and pistachio. During harvest seasons, poor families seek employment as farm workers.

As the population in the lower areas expanded, the communities on the mountain slopes moved their cultivation higher up the mountains. The farming and grazing activities along the mountain slopes has left the upper catchments of Kokcha Rod in poor conditions. The degradation of the area decreased the productivity of the farms and made the villages

more susceptible to flooding. Soil from the slopes is also being washed off and deposited into Keshem River.

The development activities initiated by the National Solidarity Program, USAID and the Norwegian Afghanistan Committee increased the productivity of Badakshan Province through the production of licit crops, the rehabilitation of water sources and the restoration of degraded mountain slopes. Haji Awrang, who eventually became Tagab-e-Keshem's representative to the Parliament, banned hunting, cutting and fishing in the area. The Karasti *shuras* hired *Mamoori Jungle* (forest guards) to monitor activities in the area and to ensure that illegal activities are stopped.

While people in Karasti continue to enforce the ban on hunting, cutting and fishing in their village and to plant trees within their land claims, the damage to their mountains, valleys and rivers are so extensive that they continue to seek external assistance for the restoration of these ecosystems. (See Figure 2).

The Initiative and the Response

Lapiz Lazuli, a non-government organization operating in the area, saw the need to convince the local *shuras* to shift from pure protection work to a more proactive approach to watershed management. Specifically it aimed to:

1. Enhance the capacity of local *shuras* in Karasti to develop a watershed management plan that will define activities according to the appropriate use of the land,



Figure 2. Photograph of the area taken in October 2009. With assistance from World Bank, USAID and the Norwegian Afghanistan Committee, development activities were initiated in Karasti / Photo by Fazli, NEPA

¹ FAO and AIMS. 2004. Watershed Atlas of Afghanistan.



Figure 3. The local shuras and selected representatives from the community conducted a site visit of the area to better appreciate

2. Increase awareness of communities for the watershed management plan and to get communities' cooperation for the implementation of the watershed management plan, and
3. Restore the plant and animal communities on 10,000 hectares of the mountain area.

Watershed management planning

Using participatory rural appraisal tools², personnel from Lapis Lazuli, the National Environmental Protection Agency and the Ministry of Agriculture, Irrigation and Livestock worked with villagers in analyzing the situation in Karasti. Eight-eight representatives from the community were gathered for two days to help identify the actual use of the land from Naw Shack to the flood plains and river area. The community members also listed problems in the use of resources and tried to trace the causes of these problems. Based on the information generated, the local shuras from 11 sub-villages in Karasti (*Now abad, Zeri Bagh, Aarifan, Khailayi, Sari Tal, Maghzar, Payan Dih, Biani Dih, Sari Qushlaq, Dibi Ziarat and Shaista*) partitioned the area into zones and identified development activities for each zone (see Figure 3). Heavily eroded areas that were not good for farming and grazing were declared protection areas (Zone A). These areas are currently being used as grazing area and still has patches of wild trees and bushes like *akbman* (small cherries), almonds, redbud, *matruq*, *zarang*, *arghawan*, *zira*, *lalah*, mountain onion and wild grapes. By closing the area to further

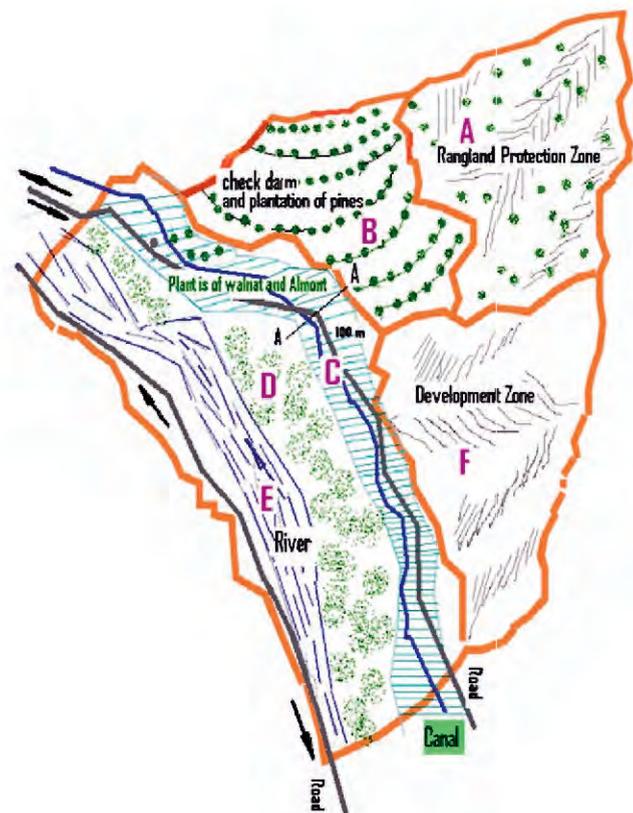


Figure 4. Zoning Plan for Karasti Watershed

grazing and farming, the local shuras hope to revive the original vegetative cover. Areas with slopes of <30% were earmarked for terrace farming and reforestation (Zone B). Pine trees will be planted in this zone while check dams will be constructed along the gulleys to reduce run-off and to increase water infiltration. Zone C is the area immediately

² Fazli. 2009. Field Activity Report on the Participatory Rural Appraisal in Karasti. BSP/NEPA document.



Figure 5. Check dams built in Zone B of the watershed/Photo by Lapis Lazuli Sky

surrounding the Karasti canal. Walnut and almonds will be planted along the canal. Zones D and E are the irrigated farms below the canal. Trees will be planted along the river bank and gabion walls will be constructed to protect the farmlands from flooding. Zone F is located near the settlements and the Karasti High School. This zone will be planted with almonds, pistachio and apricot. The wild grapes growing in this zone will be grafted with better producing varieties. The sloping lands will also be treated with soil and water conservation measures.

Getting social acceptance for the watershed management plan

Lapis Lazuli Sky presented the watershed zoning map and the list of proposed development activities prepared by the 11 local shuras to the residents of Karasti³. The meeting was also attended by the local shuras of neighboring villages. The discussions aimed to increase community awareness for the proposed activities as well as to gain support for the implementation of the activities.

Implementing the watershed management plan

The construction of check dams, the planting of trees and the construction of gabions were all made possible with financial assistance from USAID. The community also rendered free labor and planting materials for selected activities like riverbank protection. Labor for the nursery and the planting of trees on the upper slopes was paid for through a grant from the USAID-funded Biodiversity Support Program. Lapis Lazuli Sky played a major role in organizing and supervising the activities.

Communities participated as wage laborers. The local shuras made decisions with respect to

employment of workers. In most cases, the decision to hire was based on the economic status of the family. Priority was given to the poorest households in the community. The local shuras were also instrumental in identifying the preferred species for planting.

The 11 shuras in Karasti committed to protect the area for five years. Each of the 11 villages hired two local guards to keep animals and people away from the zones that were closed for protection and that were allocated for planting of pine, almond and walnuts.

Creation of an Environmental Committee

The village shuras in Karasti created an Environmental Committee composed of 11 representatives from the sub-villages to oversee the implementation of the watershed management plan. At this stage, the role of this committee is not well defined. However, Lapis Lazuli Sky envisions that this Committee will eventually be their link for future field activities.

The Environmental Committee meets every Friday to discuss issues and concerns related to the implementation of their watershed management plan. Problems related to the use of the land that are not consistent with their zoning plan are also discussed.

Capacity-building activities for communities

To enhance the capacities of community members to do watershed rehabilitation, Lapis Lazuli brought village leaders to the project sites of the Norwegian Afghanistan Committee in Tagab and Keshem Districts to learn about grafting and watershed restoration. Lapis Lazuli also conducted demonstrations on grafting, check dam and gabion construction, terrace farming and nursery establishment.

Environmental campaigns

Lapis Lazuli Sky conducted 4-day seminars on the environment for village leaders, students and teachers from the different villages. Students and teachers were engaged in discussions on the impact of human activities on the environment and how they can help reduce the negative impacts on the environment.

³ Lapis Lazuli Sky. 2009-2010. Progress Reports to BSP/NEPA project. BSP/NEPA document.

Results and Analysis

The Karasti community has been involved in watershed rehabilitation efforts since the late 1990s; however, activities in the past were focused on a specific project such as a canal, a nursery or an orchard. With the development of the community watershed management plan, the local shuras now have a more integrated approach to watershed management. They also have a visual reminder of the proposed development activities in the area. With the watershed management map (see Figure 3), the local shuras can guide community members and assisting organizations in the desired development activities per zone.

Sharing the watershed management plan with the neighboring villages encouraged the local shuras of some villages to adopt the planning process undertaken by Karasti. However, with the limited local technical expertise on participatory planning processes, the outcome from the planning activities of neighboring villages might not necessarily achieve the same results.

Even the planning process in Karasti had some difficulties that need to be corrected in the follow-on

activities. The engineering background of Lapis Lazuli personnel was an asset during the design of check dams and gabions. However, their lack of experience in community organization, and in facilitating community discussions, may have affected the quality of discussions during the planning stage.

Lapis Lazuli, for example, invited the shuras and selected male members of the Karasti (as well as the local shuras of neighboring villages) to participate in the planning activity. Two hundred eighteen representatives from both Karasti and neighboring villages participated in the discussions. The large number of participants, the imbalance in the representation of the different sectors of the community (no separate discussions, for example, were held for women), and the condensed format of the planning process might have diminished the effectiveness of the planning process. If not corrected in the succeeding activities, the community acceptance of the watershed management plan might be jeopardized.

Lapis Lazuli Sky needs to organize follow-up discussions with small groups of community



Figure 6. The local shura heads, in collaboration with Lapis Lazuli Sky forestry experts, supervised the planting of pine trees in 5 hectares of land / Photo by C. Magno/ECODIT, LLC

members to help them understand the components of the watershed management plan. Lapis Lazuli Sky also needs to explore ways to encourage a higher percentage of volunteer labor from the community for planting activities to increase the community's stake in planting trees. The watershed management plan can be treated as a work in progress which can be modified as better information is obtained.

At the moment, communities have reservations about investing time and materials in areas which are perceived to be common or government-owned. The first issue raised was the possible backlash from the government that might occur for encroaching on government-owned areas. The second issue was the uncertainty about short-term and long-term benefits that they will get from rendering free labor in developing common or government-owned land. The third issue was whether they would have continued access to areas that they have developed.

Although the Environment Law of Afghanistan already provides for community participation in natural resource management, no specific laws, regulations or procedures have been issued with respect to issuances of user rights for communities working in government-owned rangelands, forests and watersheds. Until the policy environment for community-based natural resource management is improved, efforts to convince communities to provide counterparts for development activities within government-owned land will remain an uphill struggle.

Recommendations

- Train local non-government organizations like Lapis Lazuli Sky on participatory planning approaches.
- Encourage local non-government organizations like Lapis Lazuli Sky to strengthen their personnel with community and watershed expertise.
- Strengthen the extension services capacity of the local offices of the National Environment Protection Agency and the Ministry of Agriculture, Irrigation and Livestock to facilitate participatory management activities.
- Improve the policy environment for community-based natural resource management by developing regulations that assign user-rights to communities.
- Continue community discussions and dialogues as a means of strengthening understanding on watershed management issues.
- Use strategies that will invoke higher participation of communities in planning, decision-making, management and monitoring.
- Explore what the local shuras can do under the existing laws of Afghanistan with respect to the formulation of village laws to enforce the watershed management plan.
- Develop a pool of village-based experts on forestry, water system construction and



Figure 7. Lapis Lazuli Sky conducted seminars on the environment for village leaders, teachers and students to increase their awareness on the importance of the sustainable use of forests and pasturelands / Photo by Lapis Lazuli Sky



Figure 8. An agriculturist from Lapis Lazuli Sky guided the villagers in preparing the almond, pistachio and walnut seeds for germination/ Photo by Lapis Lazuli Sky

maintenance, agriculture and orchard management.

Conclusions

Is community-based management of natural resources a viable alternative approach for Afghanistan?

Recognition and acceptance of community participation as a viable alternative, and supplementary approach for natural resource management in Afghanistan is worth pursuing. The watershed management planning activity in Karasti has clearly demonstrated how communities can work on their own with little support and assistance. The village people's ability to plan and set management schemes for the protection of their watershed area is a very good example of a community-based approach to natural resource management. While the Environment Law of Afghanistan provides for community participation in natural resource management, it is far from complete. The traditional concept of government fully controlling the management of natural resources must be revisited.

Giving the community some legal instruments to help define the management, ownership and use of resources can give these communities a heightened sense of security with regards to the enhancement, protection and conservation of natural resources. Recognition of their rights can facilitate and encourage a deeper sense of responsibility towards sustainable use of these resources on which their livelihoods are highly dependent.

The Karasti experience showed four factors that made the participatory watershed management planning activity possible:

1. A community – who gave strong participation in the activity that they believe would have a direct impact on their everyday lives and livelihood sustainability;
2. Government Agency – agency staff equipped with skills in the use of PRA as a tool in trying to understand and help the people in the analysis of their situation and their relationship to the environment;

3. Non-government organization - presence of an organization like Lapid Lazuli and its dedicated staff whose long presence in the area helps in organizing and assisting the community through the years in trying to protect and conserve the resources;
4. Grant Giving Program - support from the CBNRM Grant Program of the BSP/NEPA being implemented by ECODIT, LLC.

We have to believe that village people and communities understand their environment much better than anybody else. With the right support, and by allowing the community to have a sense of security and ownership over the resources they manage, the pursuit of sustainable development in Afghanistan will be more successful. Establishing a fully operational road map for community-based natural resource management must start NOW.

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3-7

Pistachio Restoration and Protection

*By Sayed Aminullah (Fakbri)
Head of Forest Protection and Utilization
NRM General Directorate – Forest Department
Ministry of Agriculture, Irrigation and Livestock*

Since 2009 this project has been implemented in Badghis, Samangan, Baghlan and Takhar provinces using the government's regular development budget. The Forest Department of the Natural Resource Management Directorate of the Ministry of Agriculture, Irrigation and Livestock provides technical and financial assistance to communities in the rehabilitation of pistachio forests. The areas covered by the project are 150 hectares in Badghis, 120 hectares in Samangan, 120 hectares in Baghlan and 120 hectares in Takhar. The project activities involve 15 community committees per province.

Background

In Afghanistan, most of the people in the villages rely on natural resources for their livelihood. According to the Islamic Republic of Afghanistan's Constitution, all natural forest and range lands are government properties. But for centuries, the local people have traditionally been using these natural resources even though the government remained responsible for the protection and management of the natural resources. Since 1978, due to fighting, instability in the country and improper management, the country's natural resources have been rapidly and continuously degraded.

The Islamic Republic of Afghanistan recognized that local communities must be involved in the effective and sustainable management of natural resources. To change the current situation, the Forest Department of MAIL formulated its policy and strategy in 2003 based on community participation, and started to initiate community-based forest management activities.

The proposed policies for forestry and rangelands state that:

1. There is a need to strike a balance between conserving natural resources and restoring and maintaining their productive use to meet the needs of the people of Afghanistan; and,
2. Communities dependent on natural resources should be granted rights over those resources in order to manage them at the local level. The

proposed forest law was drafted based on this concept. The law is now being reviewed by Parliament.

Current Situation and Main Challenges

Eighty percent of Afghans rely on agriculture and natural resources. Most of these people are landless. Those who own land generally have around 2 or 5 *jeribs*. Since water is scarce, agriculture production yields are low in terms of quality and quantity. Extreme poverty drives people to harvest natural resources for domestic and commercial purposes in an unsustainable way.

The presence of powerful individuals, who use the natural resource for their greed and benefit, aggravates the situation. Even though a number of national, international and government organizations are working to improve natural resource management, the lack of coordination among these organizations weakens the development interventions.

Project objectives

To engage communities in the restoration, protection and conservation of forests to promote sound environmental management and to improve rural livelihood.

Strategies

- Organize community committees and engage them so they develop a sense of responsibility for the natural resources.

- Use participatory approaches.
- Design and implement livelihood projects for local communities so dependence on natural resources is reduced.
- Strengthen coordination and collaboration among government organizations mandated to implement Afghanistan's natural resource use laws and regulations.
- Strengthen coordination and collaboration among relevant government and non-governmental organizations that implement natural resource management projects.
- Initiate a uniform approach for natural resource management based on an approved policy and framework.

National Agriculture Development Framework

Natural Resource Management is the first component of the National Agriculture Development Framework (NADF). The main objective of NADF is to provide food security, improve the environment and provide national economic development. This project can assist the nation in achieving the objectives of NADF.

Project Implementation Limitations

In some areas, local communities are afraid they will lose their pasture or that government may make it difficult for them to use the land in the future. Many individuals also expect monthly subsidies.

Activities and Processes to Mobilize Communities

Since 2008, the NRM-Forest Department of MAIL has implemented community forest management activities in four provinces: Badghis, Takhar, Baghlan and Samangan.

Before implementation of field activities, MAIL personnel undertook the following steps:

1. Each Provincial Forestry Department of MAIL selected one district in each province based on the following criteria: security, poverty, and the interest of local people in forestry, soil and water conservation activities.
2. The NRM Department in the national headquarters of MAIL at Kabul sent a technical team to each of the provinces. These teams met with the provincial District Agriculture,



Figure 1. A team from the Forestry Department of MAIL meets with committee members from Dulkhaki Village, Eibak

Irrigation and Livestock (DAIL) officer and the Governor Shura to understand the current situation of the forests and the requirements for protecting and managing these forests. The teams also discussed the objectives of the project.

3. A working group from DAIL and the Provincial Government was formed. The working group visited the site. Together with the *woloswal* (governor representative in the district) and the representatives from the Community Development Council, the working group met with the local representatives to discuss the current situation of the forests. They also oriented the community on NRM policy and strategy, where Community-Based Natural Resource Management is promoted as a national strategy for natural resource management. The working group obtained the community's ideas and suggestions on forest protection and management.
4. After an agreement was reached on proposed project activities, the working group facilitated the creation of a community forestry committee (CFC) in each village. The government (represented by MAIL) and the CDC entered into an agreement regarding the implementation of these activities. The agreement defined the roles and responsibilities of each party.

Fifteen CFCs were created in each province using the above process. Each CFC has 10 members. Each

of the committees keeps a record of its members' profile including photographs and the committee's job description.

Technical Rehabilitation Activities Implemented since 2009

1. Badghis province: terracing and direct seeding in Moqhor and Abkamary districts (150 hectares)
2. Samangan province: terracing and direct seeding in Eiback and Khoram wa sarbagh (120 hectares)
3. Baghlan province: terracing and direct seeding in Pule khomri and Doshi (120 hectares)
4. Takhar province: terracing and direct seeding in Talooqhan (120 hectares)

Table 1 lists the villages that were involved in the reforestation activities in each of the above provinces.

MAIL contribution

The relationship between MAIL and other organization is cooperative, and includes entities like NEPA, provincial *shura* and NGOs.

MAIL provides funds to pay for the labor for terracing and direct seeding. The cash-for-work strategy creates opportunities for employment for local people. However, the intent is to design and implement livelihood activities for the local people that will continue as cash incomes are generated over time.

Table 1. Location of Direct Seeding Activities in Takhar, Baglan and Samangan Provinces

Village	Project Site	
	District	Province
Qhabr e Qhazi	Taluqhan	Takhar
Khatayan	Taluqhan	Takhar
Malekan khatyan	Taluqhan	Takhar
Masjed abdurraheem	Taluqhan	Takhar
Pule qhaq bala	Taluqhan	Takhar
Eshan haa	Taluqhan	Takhar
Chashma e Sher	Taluqhan	Takhar
Kabuli haa	Taluqhan	Takhar
Pule qhaqhe Payeen	Taluqhan	Takhar
Taka toy mas bala	Taluqhan	Takhar
Taka toy mas wosta	Taluqhan	Takhar
Taka toy mas sufla	Taluqhan	Takhar
Poza e eshan	Pol e khomri	Baghlan
Zarugha	Doshi	Baghlan
Temor	Doshi	Baghlan
Jan ali	Doshi	Baghlan
Sabza kan	Doshi	Baghlan
Madrasa	Doshi	Baghlan
Zagag	Doshi	Baghlan
Zenory	Doshi	Baghlan
Maidanak	Doshi	Baghlan
Zargaran	Doshi	Baghlan
Tahte haqhan	Khuram and Sarbagh	Samangan
Masjede hazrate khalid	Khuram and Sarbagh	Samangan
Shelecto	Khuram and Sarbagh	Samangan
Masjede khalifa ha	Khuram and Sarbagh	Samangan
Masjide sufee ha	Khuram and Sarbagh	Samangan
Dalkhaki Kalan	Khuram and Sarbagh	Samangan
Tota and Habash	Khuram and Sarbagh	Samangan
Dalkhki khord	Khuram and Sarbagh	Samangan
Masjede hazrate belal	Khuram and Sarbagh	Samangan
Kata qhashlaq	Khuram and Sarbagh	Samangan
Larghan	Khuram and Sarbagh	Samangan
Boriqhul	Khuram and Sarbagh	Samangan
Masjede hazrte oumar	Khuram and Sarbagh	Samangan
Surkhak cheshma	Khuram and Sarbagh	Samangan
Shurabak	Khuram and Sarbagh	Samangan
Shurabake pushte band	Eibak	Samangan

Training for Beneficiaries and Project Implementers

MAIL contracted CENESTA to give a 3-day training-workshop for provincial technical staff and community representatives on Community-Based Natural Resource Management Planning. MAIL



Figure 2. Workers building contour terraces at Delkhaki Village, Eibak, Samangan

- Local communities are poor and rely on natural resources for survival. Thus, there is a need to support them and to create income-generation activities that they benefit from to support them in the protection of natural resources.
- Local communities have high expectations that government and non-government organization will assist them.
- Patience is needed when working with local communities. Continuous interaction with communities is needed to develop trust and obtain their support.
- Technical assistance groups should refrain from giving too many promises to local communities.

envisions that community committees in all provinces will implement livelihood projects and take on responsibility for the conservation and protection of the forests.

Plans for the Future

- Prevent illegal cutting and smuggling of timber
- Expand CFCs in all provinces
- Enhance local awareness and educate local people on the proper techniques for harvesting pistachio nuts
- Coordinate all stakeholders so they use a uniform approach for participatory CBNRM

Results and Analyses

The reforestation activities in the four provinces brought government closer to the communities. These projects also generated employment for local people, thus, preventing out-migration.

Lessons Learned

- Local communities are interested in sustainable use of natural resources for their existence and prosperity.
- Local communities are ready to protect natural resources.

- Some powerful individuals can play an important role in natural resource protection. Government, NGOs and local communities need to work with these individuals to obtain their cooperation.

Recommendations

- Be honest with the people.
- Do not give promises that can not be fulfilled.
- Be a partner with communities, not a manager of communities.
- Maintain a relationship with local people.
- Incorporate livelihood activities in CBNRM so local people will have an incentive to protect and care for forests.
- Provide local communities the opportunity to directly benefit from their investment in the protection and conservation of natural resources.
- Organizations should coordinate with MAIL at all times during the implementation of their CBNRM projects.

3-8

Community-Based Natural Pistachio Woodland Management in Northern Afghanistan

By *Simonetta Siligato, Noorullah Malang,*
and *Linda Norgrove*

During the past 30 years, the forested areas of Afghanistan are estimated to have decreased by over half. The pistachio belt, which originally spanned over 2,000 km from Badakhshan in the north to Badghis and Herat in the west, has been widely converted for wheat production and grazing. Unsustainable use and mismanagement of forest resources threaten the ecological integrity of pistachio woodlands. The destruction of this ecosystem has resulted in a significant loss to communities who rely on pistachio forests for income, food and materials. The sustainable management and conservation of the last remaining natural pistachio forests in the world is essential to ensure a sustainable supply of timber and non-timber forest resources to the people living in and around the woodlands. In particular the pistachio nuts are an important economic resource for the local population, and the forests supports a rich associated biodiversity and many environmental services.

The sustainable management of pistachio forests is being pioneered by the Department of Forestry and Range (Ministry of Agriculture, Irrigation and Livestock, DFR/MAIL), the National Environmental Protection Agency (NEPA), the Afghan Conservation Corps (ACC) and local communities in Samangan and Takhar provinces of northern Afghanistan. Pistachio forests are being managed through the development and implementation of pistachio forest management plans by local communities organized in informal multi-communal Pistachio Forest Management Committees (FMC) based on village-level Community Development Councils (CDCs).

Activities include reforestation of degraded areas, forest protection, enrichment planting with high-value medical plants, and various soil and water conservation measures implemented by local communities. These activities created employment opportunities for the most vulnerable members of the population. Other project activities include intensive training on forestry and soil and water conservation for local community members and local government employees and environmental education and awareness raising in schools and villages in and around the natural pistachio woodlands. Challenges being faced include a lack of technical knowledge on forest management, little communication between villages and government officials, and limited funds to support the community based management committees and conservation measures.

Support of community-based pistachio woodland conservation started in 2003 and focused on reforestation. As of 2006, this program evolved to take an increasingly comprehensive community based natural pistachio woodland management approach. Financial support is provided by the United States Agency for International Development (USAID) and technical assistance from the United States Department of Agriculture (USDA). Projects are being implemented by the ACC as a project of the Afghan Government managed by the United Nations Office for Project Services (UNOPS).

Characterization of the Pistachio

The pistachio, Pistacia vera L is in the Anacardiaceae family that includes the cashew nut, mango and poison ivy, and is the most valuable member of the *Pistacia* genus. Three other species of *Pistacia* occur in Afghanistan. Although each has intrinsic ecological value, some have medicinal or

horticultural applications, and all should be recognized and appropriately conserved, none compares with *Pistacia vera* for their potential to benefit local communities.

The pistachio tree grows to a height of about twenty feet. Trees are dioecious, producing only either male

or female flowers on an individual tree. Pollen is spread by wind to the apetalous female flowers, which precede the leaves in early spring, making them susceptible to damage by early spring frosts. Fruit is an ovoid dry drupe 10 to 20 mm long, 6-12 mm broad, with a dehiscent outer hull (mesocarp) and a dry, thin shell (endocarp) that splits upon drying to expose the greenish kernels (the edible and very tasty seed). It takes the trees approximately nine years to reach significant production. Pistachios tend toward biennial bearing so that every second year the harvest is heavier. Peak harvest is reached between the 15th and 20th year and the average yield for trees of this age is 30 kg.

Characteristics of pistachio woodlands in Afghanistan

The center of crop origin and genetic diversity for the pistachio is in the area of Afghanistan, Iran, and Central Asia. Pistachio trees are capable of withstanding cold and drought and grow on steep hillsides where they help prevent erosion. The woodlands have historically served as seasonal pasture for nomadic flocks, providing shade, browse and forage, while receiving the benefit of manure fertilization. The tree is a valuable source of firewood in an area with cold winters where people depend on wood for fuel. Pistachio harvest was once a time of community festivals, known as *Shole-e-Pista*. Families participated in the collection of the crop for personal use and sold the surplus, which contributed significantly to family income. Pistachio was once a major export product of the region, and Afghan nuts are recognized on the world market for their intense flavor and dark green color. Pistachio nuts are rich in heart-healthy oil, low in saturated fat, and are high in dietary fiber, vitamin B6, thiamine, phosphorus and copper. Pistachio oil is used both medicinally and cosmetically as are so many other parts of the tree and its fruits.

Years of war with the Soviet Union resulted in extensive cutting of the woodlands, as people stockpiled wood for fuel, and as military forces eliminated cover for their opponents. Severe drought beginning in the late 1990's resulted in further losses. The United Nations Environmental Program (UNEP), in cooperation with Afghan advisors, evaluated the condition of the northern pistachio and juniper woodlands in 2002 and compared the actual status with satellite images from 1977 (UNEP,

2003). In 1977, woodlands were found on 55 % and 37 % of the land base in Badghis and Takhar provinces, respectively. Tree densities of 40 to 100 trees per hectare were observed. In 2002, satellite imaging no longer detected woodlands in either province, indicating a reduction in tree density to below 40 trees per hectare, if not complete deforestation.

Despite recognized diversity and unique value, the pistachio woodlands of Afghanistan are poorly represented in germplasm collections, either at home or abroad. Destruction of the woodlands will result in an ever increasing fragmentation of this dioecious, wind-pollinated species. It is important to develop effective strategies of both in situ and ex situ conservation, along with improved systems of local utilization, to ensure the sustainable use of this multifunctional tree.

Identification of Project Sites

In 2005 a team consisting of ACC technical staff and USDA technical specialists conducted satellite image analysis, over flights, and visited several areas in northern Afghanistan to assess the current status of natural pistachio woodlands in the country. In most of the visited areas (Samangan, Baghlan and Takhar) little seedling regeneration was found. This was attributed to a combination of drought and overgrazing. Together with continuing destruction of the woodland for firewood and timber, with continuous reports of illegal felling of trees in most areas, this valuable resource is being lost.

The process of site visits and imagery analysis facilitated the identification of large degraded and fragmented pistachio forests in relatively secure areas where there were high levels of community interest in sustainable forest management, and where community based management approaches could be piloted, i.e. in Samangan and Takhar provinces.

Project Strategy

The strategy of the ACC has been to facilitate the empowerment of local communities to implement reforestation of degraded pistachio forests. Initially, payment for labor provided the community an incentive for involvement but, over the longer run, it has been found that common commitment and strong leadership within the local communities and Forest Management Committees (FMC) are the key to sustainable management. Education is critical to



Figure 1. FMC members and ACC technical specialists discuss grazing management when monitoring the forests/ Photo by

increase community awareness of the benefits of sustainable resource management, so that returns to management become the incentive. Therefore, ACC has placed an emphasis on environmental education to raise awareness about the importance of common commitment for multiple long-term benefits associated with sustainable use.

Today, ACC works together with locally elected Community Development Councils (CDCs), *shuras* (traditional elders) and inter-communal Pistachio FMCs in two of the last remaining stands of natural pistachio forests in central Afghanistan. Under this initiative, over 3200 hectares of pistachio forests are being managed by 50 villages. Protection guards have been designated, control posts constructed, forest boundaries marked, and demonstration rehabilitation plots established.

This pioneer initiative is generating employment for poverty-stricken, rural, semi-nomadic Uzbek, Tajik,

Hazara and Pashtu people in Samangan and mainly Tajik, Hazara and Uzbek people in Takhar province whilst conserving a highly valuable natural resource base that provides the national and international communities with high-quality pistachio nuts. This initiative is being combined with the production of a plant called Devil's Dung (*Ferula asa-foetida*) which is traded on the local markets and to neighboring countries thereby further increasing the value of the forest to local people.

ACC Project Implementation Methodology

As a project of the Government of the Islamic Republic of Afghanistan, ACC has several components. Financial support is provided by the United States Agency for International Development (USAID), and technical assistance by the United States Department of Agriculture (USDA). The United Nations Office for Project Services (UNOPS) provides administrative and operational

support through its main office in Kabul and the regional office corresponding to the ACC project locations. Within the Government, ACC works with the National Environment Protection Agency (NEPA) and the Ministry of Agriculture, Irrigation and Livestock (MAIL). The Pistachio Forest Management sub-project, as all other sub-projects, is implemented in extremely close coordination with these two Governmental bodies.

Activities with the community were initiated with the participatory identification of major problems in the pistachio woodlands by community elders. This discussion involved nearby communities and focused on surrounding government land affected by deforestation, upon which the community was also interested in establishing forest management, protection and reforestation activities. The benefits and threats associated with sustainable and unsustainable natural resource use were analyzed. Following the confirmation of community interest, a series of training courses was set up to provide community members with the basic technical knowledge necessary to realize pistachio forest protection, reforestation, enrichment planting with medicinal plants and environmental education and community awareness raising.

Community-based contracts for pistachio management were signed together with a community leader (frequently the traditional *shura* and/or with CDCs) that was selected in a participatory manner by community members. The leaders helped mobilize the community to strengthen local management of the forest.

ACC's regional coordination officers (RCO) and government officials from either NEPA and/or MAIL worked together with community members in realizing the monitoring and supervision of project implementation.

Participatory appraisal of project sites

Participatory methodologies such as the Participatory Rural Appraisal (PRA) were used by local Afghan staff together with community *Shura* and villagers to identify appropriate locations for the establishment of the pistachio reforestation and enrichment activities. Key factors that were discussed with the communities included the historical location of the pistachio forest, proximity to rural settlements, ability of the community to provide labor, local interest in pistachio forest

restoration, and ecological conditions. The DFR/MAIL and NEPA were fully involved in this process. The extent of deforestation was so great in some sub-project sites that they were actually on denuded land.

Selection of community Shura and elaboration of contracts

Following the identification of appropriate sites and villages with which to develop community-based pistachio forest management activities, participatory meetings were held at a village level to select the local community *shura*. Following the designation of the forest management committee by community members, a bill of quantities was elaborated for the reforestation activities together with a program of training and awareness raising. Included within the bill of quantities was the purchasing of necessary equipment (e.g. shovels, pickaxes, seeds) and labor days for pit digging, seeding, and protection. A contract was then signed between the community *shura* and ACC for the activities. The *shura* hired vulnerable community members to work as laborers.

Activities

Forest Management Committees for sustainable forest management

In undertaking community based development and securing the sustainable management of the pistachio forest, it is necessary to consider the following:

- First, local communities are more aware of their problems and needs than the government or an outside expert, and do a better job of allocating resources, enforcing rules, and targeting the most needy. It is therefore important that the local communities become central actors in any attempt to secure sustainable management of Afghanistan's pistachio forests.
- Second, it is important that a real long-term benefit flows to the communities. In the case of the pistachio forest, the real benefit flow comes from the harvesting and sale of pistachio nuts, but there is also possible benefit from controlled grazing and high-value medicinal plants.
- Third, a representative group from the community, that is capable of implementing and managing resources, be identified and established – in this case the Pistachio Forest Management Committees (FMC). This group should play a key role in planning the management of the forest, in

receiving technical assistance and training, and in making critical decisions concerning forest use and management in consultation with the communities.

- Fourth, control over resources is devolved to the local level and the implementation of forest management is undertaken together with technical assistance from the DFR/MAIL. The role of the government in the support of sustainable pistachio forest management is very critical.
- And fifth, the more information that is available at the local level, the greater the accountability of the representative group selected from within the community. Every member of the Pistachio FMC should report on a regular basis to community members concerning the decisions made about the pistachio forest.

Reforestation activities in pistachio woodland areas

In the six years of the existence of ACC, a total of 17 direct pistachio seeding projects have been supported on 186 ha of government land. These projects are located in the provinces of Herat (2 projects), Badghis (1 project), Faryab (1 project), Balkh (2 projects), Samangan (4 projects, one of which was carried out in Shareek Yaar, Baghlan (2 projects) and Takhar (5 projects). Highly valuable medicinal plants were also promoted within the pistachio forest so as to increase the value of the forest to local communities.

Seed collection and cleaning

The success of reforestation activities depends upon the availability of viable seeds. Previous reforestation experience in Afghanistan illustrated that germination rates obtained from seed purchased in the market are generally low – attributable to a number of factors including, for example, the harvesting of pistachio seeds prior to the appropriate time. DFR/MAIL and ACC carried out several trainings on proper seed collection and cleaning to assure that good quality seeds harvested from local trees will be available for reforestation activities.

Monitoring and evaluation

For all activities carried out monitoring and supervision was provided by site supervisors from the DFR/MAIL and NEPA. The local government offices sent personnel to the field to realize the

technical monitoring of project implementation together with ACC RCOs.

Training activities

A range of training activities were provided to technical personnel of MAIL and NEPA, FMC members and villagers. This ranged from seed collection to more general forest management.

For example, six community forest stewardship and five forestry management workshops were held for communities and Ministry staff associated with reforestation activities. The two-day workshops included both in-class lecture and practical fieldwork on seed quality and collection, planting techniques, monitoring and reporting, community liaising, and soil and water conservation techniques (i.e. check dams and hillside planting). The community forest stewardship workshops were conducted with the assistance of MAIL staff. The workshops consisted of basic conservation and reforestation education, together with the introduction of the provincial Ministry staff as a source of information and technical assistance to the communities. Such workshops were complemented by ongoing community-level awareness raising and capacity strengthening activities. In some communities, these activities were developed together with local religious leaders who are very highly respected by community members.

Challenges and Recommendations

During implementation of the activities leading towards a community-based management and protection of the native pistachio woodlands, the following challenges were encountered:

1. *Lack of staff members within the Ministries at the regional level with detailed technical knowledge.* This proved particularly problematic during the initial stages of project implementation. This was solved by initiating a number of training workshops at a regional and national level that aimed to rapidly bring regional DFR staff up to speed in sustainable community-based management of pistachio forests.

Recommendation: Continue with the capacity building of Ministry staff through the co-management of projects, regular workshops and longer-term technical training. Support improved communication and operational support from the DFR/MAIL in Kabul to the Provincial Offices.

Establishment of the Pistachio Forest Management Committee in Samangan

Mid-February 2006, a team from ACC and the Head of DFR/MAIL Samangan visited Dokoh and Biman villages, both located in the Province of Samangan, District of Shareek Yaar, to discuss the possibilities of establishing a FMC. People from villages surrounding the pistachio forest and inside the forest area were invited to attend a meeting in Shareek Yaar village, the biggest village amongst all of those surrounding the pistachio forest.

The meeting was attended by more than 20 people. The participants were introduced to the idea of community based sustainable forest management and the concept of a FMC was discussed. The community members even suggested the active involvement of additional villages located around the pistachio forest so that a note was sent to invite surrounding villages to a multi-village meeting.

All villages showed high levels of interest. Members of distant communities and from villages around Shareek Yaar arrived by donkey, horse and foot. During the multi-village meeting, seven communities were identified as principal users of the pistachio forest. The attendees to the meeting identified the following measures to secure the sustainable management of the forest:

1. Cutting of live branches and trees must stop;
2. No agricultural activities should be done within the forest, and grazing should be limited to certain areas and certain time periods;
3. New houses should not be constructed within the forest;
4. Strong social organization;
5. Collaboration between the government and people;
6. Establishment of functional of check posts for the protection trees and forests;
7. Harvesting of pistachios at the right time;
9. Construction of new roads within the forest must be limited;

10. Assistance from the government in pistachio harvesting and implementation of protection groups is required.

The process of electing the members of the FMC was extremely interesting. All of the communities were keen on having at least one village representative as member of the committee. An intensive discussion of several hours followed and the names of the candidates were collected and ranked in a matrix using the PRA methodology.

All members who were nominated for the FMC membership were asked to leave the meeting room. Each villager left in the meeting room was asked to score each FMC candidate. The scores were noted in a table. The FMC member who reached the highest score was identified as the head of the FMC.

Discussions among community members, and in consultation with FMC members, resulted in the following list of necessary actions to be carried out in the pistachio forest:

- Hire ten protection guards from the communities to realize activities according to the geographical location.
- Explore the possibility of designating one person from the FMC as the coordinator of the protection guards. This person should help develop the work plans, solve immediate problems, and provide support for skill and capacity development activities.
- Specify very clearly the duties of all FMC members.
- Clarify that the assistance being provided by ACC to the protection guards is temporary. Thus, FMC must develop a plan to sustain the activities beyond the project.
- Coordinate with the respective government authority for the support of an armed guard before harvesting time. It was proposed that three community protection guards and two

armed guards from Government work together during this critical period.

- Map the forest and identify strategic routes for patrols and locations for small rooms/tents for the protection guards.
- Install water containers at the protection posts.
- Build mud houses as shelter for the protection guards.
- Provide tents to the protection guards for the period of the harvesting time as they need to be mobile.

The forest protection guards were selected in a similar manner as the FMC members. The protection guards are responsible for facilitating the sustainable management of the pistachio forest and are supervised by the FMC members.

Achievements of the FMC

After the establishment of the FMC the following positive changes were experienced in the pistachio woodland in Shareek Yaar:

- The forested area is protected by local protection guards.
- The community is more and more aware of the fact that they play a key role in the protection

and sustainable management of the pistachio woodland.

- For improved protection and control over grazing, the community intends to develop a grazing plan and have requested advice from DFR staff.
- The FMCs help in raising awareness among the population on the proper time for harvesting pistachio nuts.
- Sustainable harvesting methods are promoted.
- More intensive communication between the communities inside and around the pistachio woodland is facilitated by regular meetings of the FMC.
- Decisions regarding forest issues and pastures are made by the FMC based on the needs and requirements of all villages in and around the woodland.
- The pistachio harvest increased by 10 % after establishing the FMC.
- Quality of pistachio seeds increased because the nuts are harvested at the right time. The nuts also command a higher price at the local market.
- The FMC discusses the benefits of conservation and sustainable management of the forest with communities in the area.
- The FMC plays a key role in communication and coordination of activities with the government.

Figure 2. The head of the FMC Sharek Yaar/Samangan monitors germination of direct seeding efforts. In the background forest area was converted to a wheat field / Photo by ACC-UNOPS





Figure 3. Training on sustainable pistachio harvesting techniques / Photo by ACC-UNOPS

2. *Terracing/ seeding/ irrigation of newly established forest sites versus conservation of existing forests.* The establishment of new forest sites proved to be unsustainable unless multi-year funding for irrigation can be secured. Pistachio seedlings need to be irrigated for about four years until the root system is strong enough to supply the plant with sufficient water. In some sites funding ended after only two years resulting in high mortality of seedlings.

Recommendation: In terms of cost efficiency (USD per hectare), but also from an ecological point of view, the conservation of existing forests and rehabilitation of degraded forests should be emphasized rather than embarking on reforesting entirely denuded mountain sides. This will provide a tangible economic benefit to the community in the form of income from pistachio nuts, and contribute to the conservation of the unique biodiversity in native pistachio woodlands.

3. *Lack of good quality seeds in the regions.* Purchasing seeds from the open market for reforestation activities gives very poor results in Afghanistan. The reasons for this are multiple but include poor harvesting practices, incorrect storage, and so on.

Recommendation: Provide seed cleaning, seed testing and storage equipment together with specialized training to the government staff at the provincial level. Good quality seeds suitable for reforestation purposes could be stored in provincial MAIL nurseries. Implement a community awareness program that increases the abilities of local people to collect high quality and viable seeds, for example, from the natural pistachio forests. Training should include the topic “Site assessment and selection of proper trees for seed collection”.

4. *Lack of community awareness and insecurity.* Following years of war in Afghanistan, levels of education particularly in the rural communities are

exceptionally low, and rural people have become accustomed to prioritizing short-term benefits over long-term sustainable natural resource use and management.

Recommendation: Undertake community-based workshops and directly involve the community in the implementation and protection of their natural environment. Develop range and pasture projects for the communities. Implement intensive environmental education programs for children. Mullahs and other highly respected religious leaders can considerably help to raise awareness of the community about sustainable forest management and environmental issues after Fridays in the mosque. They play an important role in community awareness raising and education as they are highly respected by the people. They are perceived as very knowledgeable and their advice should be followed. A training and skill development program tailored to Mullahs roles should be developed and implemented in order to provide and prepare them to raise environmental awareness in the community.

5. Mortality from frost, insects, grazing and predation. ACC and DFR staff opted to implement direct seeding of pistachios, rather than planting saplings, due to a limited supply of sapling stock. However, seed quality proved to be a problematic factor in survival rates and, furthermore, the seeds provided a food source for foxes. The primary cause of mortality, predation by foxes, was not identified by any of the local communities, provincial department staff or site assessment teams prior to sub-project implementation as it was neither known nor anticipated as a potential threat.

Recommendation: Frost is a natural occurrence and it is difficult to guard against. Due to the size of the sub-projects, it is hard to use plastic sheets or other materials to protect the seeds and seedlings from frost damage. While it is quite impossible to implement measures to minimize mortality from frost, predator control is recommended before seeds and trees are affected. A tested recipe for a successful homemade predator repellent is: 4 liters of water, 30-60 milliliters finely ground hot pepper, 30-60 milliliters liquid hot pepper sauce and 1-2 eggs. Mix the ingredients and soak the pistachio seeds in the mixture before sowing.

To minimize negative impacts from (over)grazing, range and pasture projects should be brought to the

attention of the communities. As a first activity, grazing plans have been developed in a series of consultative meetings with communities, FMC members, MAIL technical staff and ACC staff. They were drafted in a way that allows grazing of animals and forest protection in a sustainable manner and will have to be adapted annually according to the changing situation. It is recommended to continue this activity and to include representatives from the nomad Kuchi families into the drafting stage.

6. Distance of the projects from urban centers. Given that the pistachio management and reforestation projects were often implemented in remote and isolated communities, monitoring and supervision had to be carefully planned.

Recommendation: Provide logistical facilities to relevant entities and Government employees thereby greatly facilitating the supervision and monitoring of the projects.

7. Lack of long-term funding. Reforestation and natural resource rehabilitation and management are long-term processes that require a sustained effort on behalf of donors, Government staff, and local community members. In the case of pistachio forests, this investment should be secured for a minimum of five years – the amount of time required to increase the chances of survival of the pistachio saplings, as they are able to develop their large tap root and therefore access the upper levels of the water table. This is also a good period of time for supporting the development of strong community-based natural resource management institutions. During project implementation, it is also necessary to work closely with local communities to ensure their full commitment to the long-term survival of the saplings beyond the establishment period.

Recommendation: Secure longer-term funds for natural resource restoration and management, thereby creating income generating projects that have sustainable outputs.

8. Site protection. Initially, the building of a consolidated relationship with local communities was a somewhat time-consuming process. As time passed confidence between the different stakeholders increased and both the community and the Government contributed towards the protection of the sites.

Recommendation: It is necessary to work closely with Government and community stakeholders to increase levels of confidence between the two groups and their awareness of the importance of investing in natural resource management for the sustainability of their future.

9. Land and forestry ownership. Large areas of government land have been occupied by commanders and powerful people. In one pistachio sub-project, work was temporarily halted by a community located 50 kilometers away who claimed title to the land. The assessment team had relied on information from the local Shura and provincial Government departments to determine any potential conflicts. However, during these meetings the groups indicated that they were unaware of any claims to land titles. The unexpected conflict that followed provided an opportunity for the first community stewardship workshop in the form of a meeting between community members, provincial government, provincial departments of the government, and ACC regional staff. During the workshop and meeting, government and ACC staff explained the reasons for pistachio reforestation, the subproject timeline and the overall growth process of pistachios, and the respective roles and responsibilities of each stakeholder.

Recommendation: Realize in-depth site surveys and participate in discussions with local communities that include as many stakeholders as possible. The importance of having staff who are trained in conflict resolution methodologies should not be underestimated.

Also there is an urgent need to clarify land and natural resource use rights. Currently, national legislation for sustainable forest management and benefit use/sharing is being drafted. With such legislation it will be possible to increase the communities' rights to use and manage forest and forest products, as it is emphasized by the community based natural resources management concept.

Conclusion

This community based pistachio woodland management case study is a successful example of a participatory approach to natural resource management for creating sustainable results. By fully involving local communities in the management of

this valuable resource, it was possible to generate consensus on prioritized actions and common efforts towards their implementation. The communities themselves identified problems and challenges associated with the unsustainable use of pistachio woodlands, and identified possible solutions in a series of active discussions. Technical capacities for sustainable forest management were strengthened through specialized organizations like ACC and the technically relevant government departments, which additionally provided the necessary political support. Innovative practices, such as the use of influential local religious leaders, contributed significantly to the success of the initiative.

A situation characterized by a "Tragedy of the Commons" and spiraling forest degradation is now slowly being transformed into one of the first successful examples of sustainable community based forest management in Afghanistan. In addition to environmental benefits, such as decreased levels of soil and water erosion, the project has both provided emergency employment and increased the quantity and quality of pistachios harvested by local villagers, thereby increasing the sustainability of household income sources. ACC has done an excellent job of initiating a long term, community based forest management effort. Continuity of the program is imperative for success and has the potential to be scaled up across the natural pistachio forest range, particularly following the approval of the new forest law which is anticipated to take place in 2010.

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3-9

Reviving Pistachio Cultivation in Argu District, Badakhshan

By *Abdul Hakim Mudabbir, Ma Cleofe Pablo-Bernardino, Charles R. Hatch*

Pistachio, which is present in most of Afghanistan's woodlands, has always been a part of every Afghan's life. In the last three decades, most of the Pistachio forest has been lost or destroyed. The communities from the villages of Hazara-i-Dewana, Tagharchuk, Khoshdara and Barlas, all in the Argu District of the province of Badakhshan, have begun to revive pistachio cultivation. The 9-month project mobilized the community's interest and willingness to participate in the restoration of their Pistachio forest. In 33 hectares of forest area, they have planted 20,500 of pistachio with a 90% survival rate, and planted 12,000 cuttings of almond with a 95% survival rate. Having planted the pistachio and almond, a Forest Management Committee has been organized to oversee the management of the forest that belongs to the four villages of Argu.

Background

The province of Badakhshan where the world-famous Lapis Lazuli¹ can be found, is one of the most mountainous and remote provinces of Afghanistan. Located in the northeastern part of the country, it is bordered on the east by China, by Pakistan to the south, Tajikistan to the north and Takhar province in the west. It has an estimated population of 1 million people spread out over the rugged mountains and narrow fertile valleys of the province's 28 districts. Faizabad, the capital of Badakhshan functions as the commercial and administrative center of the province.

The District of Argu, located west of Faizabad, is one of the largest districts of Badakhshan and is divided into 156 villages, populated by 50,000 individuals. The main income of the community is derived from livestock, rainfed agricultural crops and

fruit bearing trees in the forests. Following three decades of war, continuous drought and harsh winters, it has suffered a dramatic loss in forest cover and a significant decrease in agricultural production. The fruit trees were also cut for fuel wood and other military uses which caused more soil erosion, loss of biodiversity and poor agricultural production. In need of cash, the people began poppy cultivation to meet their daily needs. In 2007, the government launched an intensive campaign against poppy cultivation with a promise of development projects to replace it. The communities of Argu followed the government recommendation. By mid 2009, all the poppy plantations were gone. However, the promise of development projects for the people was not fully realized.

A baseline survey² conducted by PEO³ in the early part of 2009 showed that 75% of those living in the

¹ *Lapis Lazuli* – is a rare semi-precious stone with an intense blue color lightly dusted with small flecks of golden pyrite.

² *The baseline survey resulted in the following standards: 1. The poor are those who do not own any land or only 1 jerib non-irrigated land, they have a very poor house, do not own any animal, and are hired for labor. They are usually headed by women, are disabled and unskilled; 2. The Motawassit or middle-class owns 1-10 jeribs of land and has some animals for milk and meat. A motawassit may own a shop in the village or may sometimes be employed. They have gardens and have more sons; 3. The Bai or the rich are those who own 10-20 jeribs of land, have animals, fruit trees, vehicle, house, and hire laborers for their land. They have more sons and more than one wife. They have gone to Hajj.*

³ *In 2005, ten individuals from the province of Badakhshan, decided to form the Sayeed Jamaluddin Afghan Education Center (SEC). To professionalize and develop SEC's management skills as a service organization, SEC joined the competition sponsored by the Badakhshan Development Forum (BDF), a consortium of international NGOs that included Afghan Aid, Oxfam, Concern and Aga Khan Foundation. BDF awarded SEC the Grass Roots Afghan NGO Development (GRAND) Fellowship providing it capacity-building support. These trainings focused on organizational development to position SEC as one of the key players for development work in the region. SEC was registered with the Ministry of Justice and since it saw itself as working beyond social services, they formed the Poor Empowerment Organization (PEO) and registered it with the Ministry of Economy to enable them to address both basic services and other concerns such as natural resources management and livelihood.*



Figure 1. Project area/ Photo by Mamet Magno, BSP/NEPA

district (particularly the villages of Hazara-i-Dewana, Tagharchuk, Khoshdara and Barlas) belong to the poorest of the poor, with their income being less than one dollar a day. The four villages have 896 households comprising of 6,290 individuals. Further research showed that in the past, sale of forest products contributed 10-15% of their income. The community considers the pistachio (*pista*), almond (*badam*), wild almond (*badam-e-talkbak*), wild fruit (*arooch*), wild pear (*shakundy*), wild cherry (*akhman*), cumin (*zira*) and hing (*hing*) as the leading crops in the forest from which they earn income. PEO also learned that, since time immemorial, these four villages have been using and managing the forest among themselves with a well-defined and clear boundary of forest areas for each village. However, when these areas were destroyed, the communities had to resort to poppy planting. Although other non-income benefits from the forest were not identified, the community recognized the value of the forest and its connection to their everyday lives.

The high poverty incidence, well-defined community sense of ownership of the forest area, and a much needed development project are the factors that helped PEO decide to choose this area for its development intervention. PEO submitted a project proposal on June 2009 to the BSP/NEPA CBRM Grants Program. In September 2009, PEO was awarded a grant to implement the project titled: *Reviving Pistachio Cultivation in Argu District, Badakshan*.

Brief Description of Project

The forest area to be revived is wide, non-irrigated and was host to more than 50,000 plants of pistachio until 1970⁴. The plan to revive the pistachio cultivation in Argu focused on two major strategies:

- Enhance the community's capacity to manage and cultivate pistachio forest, and;
- Reforest a 30-hectare area where pistachio used to grow.

To build the community capacity, appropriate trainings were conducted on reforestation of pistachio and related forest management skills. Establishment of governing bodies to address the concerns of the forest activities was also undertaken.

All the seedlings and cuttings were provided by the project with emphasis placed on the use of local species.

Land and soil preparation were done by establishing numerous terraces, digging of holes to accommodate the planting, and fertilizer preparation using animal dung. All these preparatory activities were done in a 30 hectare area that once was a Pistachio forest.

Activities

Identifying the Target Beneficiaries

During the initial social investigation, PEO learned that there were three villages who claimed control over the forest resources. However, further research resulted in the identification of another village, quite far from the Argu forest, which also used the same forest area. After much verification, the project was able to identify the communities who would be the target beneficiaries and partners in the implementation. These are communities of Hazara-i-Dewana, Tagharchuk, Khoshdara, and Barlas.

Coordination with local officials

Intensive coordination and respect for protocols

⁴ It was related by the elders, that these forest products used to be protected by community-assigned guards. When it was time to harvest, the guard went down to the community and announced the readiness of the nuts for harvest. Families went into the forest and harvested all they could according to their capacity. Thus, those with the most number of family members harvested more products and earn more from the selling of these forest products.

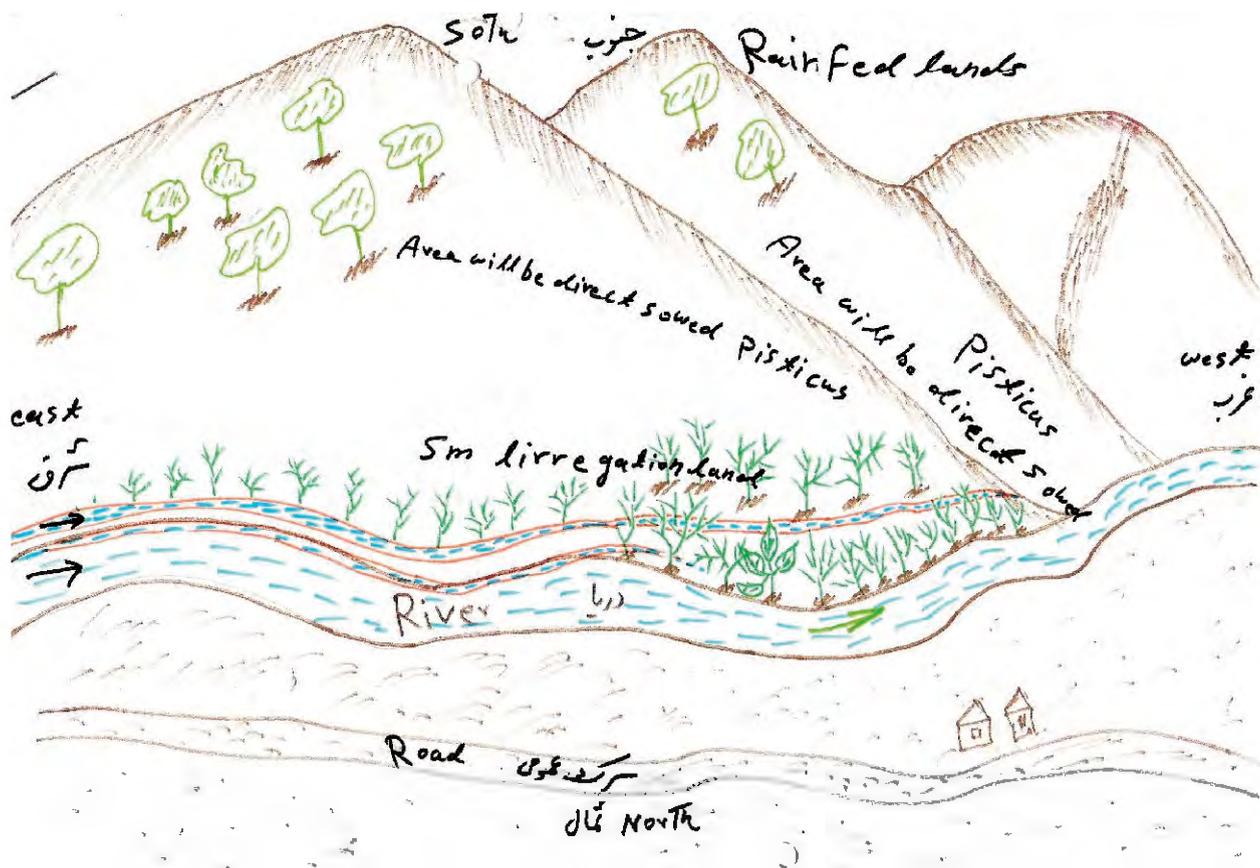
paved the way in establishing relationships with the community. PEO from the beginning had already recognized the importance of coordination by meeting with, and giving information to, different agencies with jurisdiction over the Argu forest and having general governing power over the area. PEO coordinated with the District Governor, the CDCs, and the provincial and district offices of NEPA and MAIL. These government offices, in turn, helped introduce PEO to the community. These endorsements of the project helped build the trust between PEO and the community for a smooth project start. The different offices also declared support through the provision of technical assistance, help in monitoring progress of the project, and support whenever difficulties arose in the course of the project implementation. The project received full support from all key players in the area, freeing PEO from any constraints in implementing the project.

Planning and reforestation activities

A combination of many activities helped to realize project objectives.

1. Participatory rural appraisal was undertaken.
2. Numerous meetings were conducted with the communities from the four villages.
3. Various trainings that focused on importance of biodiversity, revival of the forest, natural resources management, soil and water conservation, tree production and pistachio management.
4. Forest Management Committees were created.
5. Pistachio and other forest trees were planted.
6. PEO project personnel were assigned in the area and regular visits of other PEO and government project staff were conducted at the site.

Figure 2. Sketch map of development activities prepared by four communities in Argu



7. Recognition and agreement on boundaries were determined and identified to prevent conflicts.

Results and Analysis

The 9-month project, which started in September 2009, has had many positive results. It has provided income for 800 of the poorest individuals from the four villages who worked on the land preparation activities. It will provide forest products for more than 2000 individuals during the coming years. PEO acquired local development experience implementing this project. PEO has demonstrated the role it can play in local development. The development interventions in this project have accomplished the following notable results:

1. *Identification of stakeholders.* Various meetings were conducted to facilitate the identification of the primary stakeholders of the forest of Argu District. The first few meetings identified the communities from the villages of Hazara-i-Dewana, Tagharchuk,

and Khoshdara to be those who were directly using the forest. However, after additional rounds of meetings and further community visits, PEO learned that there was another community using the forest. The community was from the village of Barlas, and their use was affirmed by the other communities. The first three communities readily agreed to the project plan and nominated four representatives from each village to sit on the forest management committee. Barlas community on the other hand was first reluctant to participate, but eventually conceded and nominated one representative from their community. Thus, 13 community representatives formed the forest management committee for the Argu District.

2. *Boundary delineation.* While most projects experience difficulties when boundaries are discussed, that was not the case in this project. The FMC called a meeting to discuss the boundary concerns and the communities easily identified and

Figure 3. Pistachio seeds and almond rooted cuttings were planted on 4 meters long and 40 cm deep ditches/Photo by PEO





Figure 4. Villagers planted 12,000 almond cuttings/ Photo by PEO

agreed on the boundaries amongst themselves. The four villages' historical use of the forest followed traditional boundaries. This facilitated the demarcation of boundaries for the planting and resource management activities. With boundaries clearly identified, each villages' work responsibilities were clarified and agreed upon.

3. Planting activity. When the community members learned that the project would require a counterpart from the community in the form of volunteer labor for the planting activities, the community members raised some reservations. The community members wanted the project to pay them for planting the pistachio. They stated that time invested in planting pistachio for the project will take them away from paid employment opportunities. Most community members rely on paid labor for income. PEO project staff met with the community members who were identified to participate in the planting activities. They jointly determined that the cost for building a 4 m x 40 cm terrace and two 40 cm x 40 cm holes is Afs 20. Based on this estimate, they agreed that PEO will pay the workers Afs 15 per 4 m x 40 cm terrace and two 40 cm x 40 cm holes. The Afs 5 savings from

the labor cost will be considered as the community's counterpart for the project.

The dialogue between PEO and the community enabled each group to make compromises so they met their own expectations. The community realized that the benefits from the trees will go to them. Thus, the community willingly offered to share Afs 5 of the Afs 20 labor costs to prepare the site for planting.

From the original target of 30 hectares, the community reforested 35 hectares. The community established 20,500 pistachio plants from seeds and planted 12,000 almond cuttings in and on the terraces and holes. They also broadcasted seeds of wild cumin on the terraces and seed of acacia and willow along the banks of the river.

5. Management bodies. An FMC was organized during the project and it worked effectively with all the institutions and governing bodies in the area. One such governing body was the government organized CDC. The project's respect for functional institutions in the area proved to be very productive. It prevented any unnecessary confusion and conflict. In this particular instance, no confusion or conflict was ever experienced with the FMC since it was focused on the forest concerns of the communities involved in the

revival of pistachio cultivation. The CDC was concerned with general development activities for the whole district.

5. *Capacity building of communities.* Consultations with the FMC resulted in the identification of training needs and prioritization and scheduling of training activities. A total of 600 individuals from the villages (including members of the FMC) participated in training programs that covered biodiversity, reviving of forests, natural resources management, soil and water conservation, tree production and pistachio management topics.

6. *Expression of support.* One of the ways that the communities formally recognized the support of PEO was by providing them a physical center for project activities. One of the community leaders allowed his house to be used by PEO for the 9-month period of project implementation. The house was strategically located at the foot of the forest. This made it easy for the project staff and the community members to access the forest to implement project activities. It also became a meeting place for the communities when they needed to discuss project concerns.

Conclusion

The PEO decision to undertake a project in Argu could not have come at a more opportune time. Argu was seeking development assistance to revive the productive capacity of its degraded areas. PEO recognized the importance of pistachio to the communities in Argu District. By selecting a resource that the community relied on for survival, the project succeeded in rallying the support of the community in reviving this resource.

Many ingredients have been mentioned which demonstrate the project's smooth implementation. However, the most remarkable of them all is the action that the community took in continuing to demonstrate responsibility for the forest. They continued to maintain the historical forest boundaries that were recognized by the villages and, although the forest resources were depleted, the communities still maintained access to and control over their areas. When this project provided assistance for the revival of the cultivation of pistachio, all that was needed were external inputs in terms of training and planting materials. The management, which historically operated on a village

basis, was simply expanded to an inter-village network. The PEO experience in Argu District highlights the tenacity of people to manage natural resources amidst chaos and difficulties.

3-10

Capacity and Institutional Development Program for Afghanistan's Environment The CBNRM Experience

By Ernie Wijangco, UNEP CBNRM Expert

UNEP has initiated a program to field test community-based natural resource management projects designed to support the implementation of the Natural Resource Management program under Afghanistan's National Agriculture Development Framework. The field tests are located in 28 separate districts in 7 provinces. Each project relies on a local CDC to organize and support the community's involvement and to assist the community in developing a simple management plan.

During implementation, each project goes through three phases. Initially the community identifies a broad range of possible natural resource management actions that it could undertake. Next the community identifies the specific natural resource activities that will be undertaken, they develop a plan to guide their activities, and they implement the required plan. The third and final stage is defined when the community accrues benefits resulting from the implementation of their planned activities. This phase may not take place immediately, but it is envisioned to occur over an extended period of time and sustain the involvement of the community.

The NRM Strategy

The National Agricultural Development Framework outlines the Government of Afghanistan's agenda to revive the nation's agriculture and natural resources sectors. It has four major programs, namely: Natural Resource Management, Agriculture Production and Productivity, Economic Regeneration and Program Support and Change Management. The Natural Resources Management (NRM) program, however, is the "foundation for agricultural production and productivity and economic regeneration."

The NRM program is the government's strategy to restore the natural resources sector. It has three sub-programs: Surveillance and Planning, Protection and Conservation and Community-based Natural Resources Management. The three sub-programs can be applied at the national, provincial or village level. It was approved by the government in April 2009.

The NRM strategy is in the planning phase. To date, the government has been drafting a program to implement the strategy in restoring the natural resources of the country. This is a good starting point. UNEP, as a support partner to MAIL is

consciously testing the strategy with field

examples and experiences. It is this framework by which we are introducing CBNRM to the communities, and afterwards designing the CBNRM projects jointly with them and the government.

Testing the NRM Strategy

What is UNEP's approach to testing the strategy?

1. Testing it in different ethno-ecological regions.
2. Testing whether surveillance and planning, protection and conservation and a community-based natural resources management plan can all be implemented as project components in one village or several villages combined as a single project site.
3. Testing how the community, government and UNEP can arrive at a common point with which to do a project. All three parties essentially come from different perspectives. The communities have their "wish list", the government, in general, wants the communities to protect the resources and UNEP is testing the NRM strategy.
4. After step 2-3, testing whether the community, government and UNEP can jointly design the

project at a reasonable cost. The community must contribute their own equity (labor and communal land), the government provides technical training and UNEP (in most cases) supports the financial cost of the project. Community equity, in the form of labor and setting aside communal resources does not mean it has no monetary value. It has and, indeed, this value is at the heart of CBNRM.

Of particular interest at step 4 is the cost for a particular hectare of natural resources to be placed under better community management and protection.

5. Changing the mindset of UNEP's government counterparts from one of strict protection to that of wise conservation. For instance, prohibiting the cutting of trees but, at the same time, allowing rampant grazing is a zero sum game.
6. UNEP is also trying to encourage moving from activity oriented community interventions to one that is programmatic in approach whilst maintaining the community driver.
7. We start with a simple management plan. This becomes the core charter or agreement by which management and understanding is gauged.

The NRM Sites

Sites were selected:

- using criteria one in testing the strategy
- with awareness for security concerns
- in close consultation with partners
- at workshop venues where the government provincial partners and the local community were asked to design a CBNRM project after being given a seminar on the government's NRM strategy.

Table 1 is a summary of the characteristics for each of the projects stating the location, the natural resources and the issues, how it will be addressed (labeled as description), potential impact of the program, the budget, cost effectiveness of the program in terms of better management of a particular natural resource and program status. To date we have 28 CBNRM project sites at various stages of implementation – 48% are active, 14%

awaiting fund release, 7% contract negotiation stage, 14% are in the design stage and 18% are proposed sites or placed on hold for security reasons.

The initial CBNRM sites are concentrated mostly in the provinces of Herat, Bamyan and Badakshan due to safe security conditions, These provinces represent an initial ethno-ecological cross section of the country and have strong cooperation from government agencies or partners. Sites in the consultation stages or planned sites have moved closer to Kabul, partly as a response from our government partner to have accessible sites as learning laboratories for their staff.

The sites also represent some of the ecological regions of Afghanistan. The Herat sites represent lowland winter pasture areas mixed with denuded *tamarisk* forest. The Bamyan sites are generally shrubland pastures, except for Larasie and Murghestan which are denuded upland riverine areas. Badakshan sites are mostly open woodlands of Juniper with some sites extending to sub-alpine to alpine vegetation. Perhaps a unique case is the Kole Hashmat Khan site which is a wetland habitat in an urban setting.

The issues for all the sites may be broadly described as denuded or overused natural resources. Program description for each site may range from reinforcing traditional practices with scientific information or technical assistance, to alternative sources of energy with women as the lead stakeholder (Sya Layak site), to integration of a micro-hydro power plant as a CBNRM component and managing solid waste pollution in Kole Hashmat Khan. Potential program impacts are also diverse from improved local natural resource technologies to improved village land-use plans or formation of river councils.

The project sites, as stated earlier, are at various stages of implementation with some at the drafting stages of a management plan. Although we seem to have covered a broad range of ethno-ecological regions, natural resource issues and program approaches, UNEP considers that these sites are still at the “pre-feasibility stage”, an assessment stage to gauge the appropriateness and effectiveness of the NRM strategy.

Table 1. UNEP's CBNRM Project Sites

Site	NR/Issue	Description	Impact	Budget (in US\$)	\$/ha	Status
1 Larasic/ Bamyam	Riverine Habitat/ Unstable fluvial dynamics, loss of farmland and river forest	<ul style="list-style-type: none"> • Reinforce local (<i>Dakas</i>) technologies with scientific knowledge to rehabilitate riverine habitat • Protect remaining forest • Set up village woodlot • Projects managed by a river council 	<ul style="list-style-type: none"> • Better technology • Farm lots protected • Regenerating forest • Woodlot as endowment • Proactive river council 	6,744		Active
2 Marghestan/ Bamyam				6,744		
3 Sabz dara/ Badakhshan	Juniper-pasture land/protected but poor regeneration	<ul style="list-style-type: none"> • Set up village center for integrated natural resource management • Restoration of open Juniper-pasture land 	<ul style="list-style-type: none"> • Revive spring pasture • Paradigm shift from strict protection to wise conservation 	10,125	18.41	Active
4 Dash tok/ Badakhshan	Juniper-pasture land as watershed/ protected but poor regeneration	<ul style="list-style-type: none"> • Demonstrate integrated management of micro-hydro power plant model • Watershed management • Powerhouse management • Distribution management 	<ul style="list-style-type: none"> • Revive spring pasture • Integrate micro-hydro projects into CBNRM • Huge tracts of natural resources can be managed by villagers 	29,130	1.20	Active
5 Jawkar/ Bamyam	Spring rangeland/ degraded river bank, no land use plan	<ul style="list-style-type: none"> • Restore upper catchment riparian zone • Village land use plan 	<ul style="list-style-type: none"> • Village land use plan • Reduced soil erosion 	3,329	256	Active
6 Karnil/ Herat	Winter rangelands, Tamarix forest/ highly degraded, loss of rangeland and farmlands	<ul style="list-style-type: none"> • Set aside rangeland preserve • Propagate seeds of rangeland plants • Plant Tamarix to mitigate flash flood damage • Cluster three adjacent villages to work as one CBNRM unit managed by a Pasture council 	<ul style="list-style-type: none"> • Integrated rangeland Tamarix forest management • Joint village approaches • Proactive Pasture council 	8,865	2.9	Active
7 Sya ab/ Heart						
8 Khoskhak/ Heart						
9 Sya Layak/ Bamyam	Spring rangeland/ highly degraded	<ul style="list-style-type: none"> • Women use LPG ovens as village bakers relieving pressure on using rangeland bushes as fuel for <i>Tandoor</i> • Alternative fuel to 	<ul style="list-style-type: none"> • Role of women in NRM • Alternative fuel to benefit income and rangeland • Women as 	2,911	9.7	Active

Site	NR/Issue	Description	Impact	Budget (in US\$)	\$/ha	Status
10 Qabr e Zaghak/ Bamyam	Spring rangeland/ highly degraded	<ul style="list-style-type: none"> • Improve the use of <i>Bandaks</i> to increase water catchment • Set aside rangeland preserves 	<ul style="list-style-type: none"> ◦ Better village watershed management ◦ Rangeland regeneration 	7,172.5	5.72	Active
11 Ali beg/ Bamyam	Spring rangeland/ highly degraded	<ul style="list-style-type: none"> • Construct small park as visitors' welcome center in a unique vegetation area 	<ul style="list-style-type: none"> ◦ Re-establish past role as gateway to Shah Foladi 	3,344		Active
12 BomeFeroz Bahar/ Bamyam	Spring rangeland/ highly degraded	<ul style="list-style-type: none"> • Integrate management of a cultural landmark and village natural resources 	<ul style="list-style-type: none"> ◦ Protected area managed using CBNRM approach 	6,954		Active
13 Farmanqoli/ Badakhshan	Spring rangeland/ regeneration of local species	<ul style="list-style-type: none"> • Biodiversity based livelihood and <i>in situ</i> gene bank of indigenous plant species 	<ul style="list-style-type: none"> ◦ Low impact biodiversity based livelihood project and <i>in situ</i> gene bank 	8,935		Active
14 Kark/ Badakhshan	Juniper open woodland/ protected but poor regeneration	<ul style="list-style-type: none"> • Alternative lowland agriculture • Reduce upland rainfed farming 	<ul style="list-style-type: none"> ◦ To be determined 	~6,063		Draft contract
15 Angara/ Badakhshan	Juniper pastureland as watershed/ protected but poor regeneration	<ul style="list-style-type: none"> • Demonstrate integrated management of micro-hydro power plant model • Watershed management • Powerhouse management • Distribution management 	<ul style="list-style-type: none"> ◦ Revive spring pasture ◦ Integrate micro-hydro projects into CBNRM ◦ Huge tracts of natural resources can be managed by villagers 	16,512		Draft contract
16 Joshan/ Badakhshan						
17 Shak Khombok/ Badakhshan						
18 Khombuk/ Badakhshan	Juniper open woodland/ protected but poor regeneration	<ul style="list-style-type: none"> • Demonstrate integrated management of micro-hydro power plant model • Watershed management • Powerhouse management • Distribution management 	<ul style="list-style-type: none"> ◦ Integrate micro-hydro projects into CBNRM 	~15,000		Contract Negotiation

Site	NR/Issue	Description	Impact	Budget (in US\$)	\$/ha	Status
19 At e kattoo bala/ Badakhshan	Juniper open woodland/ protected but poor regeneration	<ul style="list-style-type: none"> • Demonstrate integrated micro-hydro power plant model • Watershed management • Water transmission management • Powerhouse management • Distribution management 	◦ Integrate micro-hydro projects into CBNRM	~15,000		Contract Negotiation
20 Kole hashmat khan/ Kabul	Inner city lake/ Polluted	<ul style="list-style-type: none"> • Solid waste management 	◦ To be determined			Design stage
21 Saroobi/ Kabul	Kabul City watershed	<ul style="list-style-type: none"> • Village and city cooperation to rehabilitate and draft natural resource plan for the watershed 	◦ Local government and village collaborative work			Initial design
22 Rukha/ Panjsher	Forest/ No protection	<ul style="list-style-type: none"> • Village Forest Management and protected area at higher elevation 	◦ Landscape management plan			Initial design
23 Mirkan/ Badakhshan	Watershed/ To be determined	<ul style="list-style-type: none"> • To be determined 	◦ To be determined			Initial site visit
24 Kawri/ Badakhshan	Fish resources/ To be determined	<ul style="list-style-type: none"> • To be determined 	◦ To be determined			Proposed
25 Kapisa	<i>Chalgoza</i> orchards	<ul style="list-style-type: none"> • Capacity building of the <i>Chalgoza</i> committee to manage community pine nuts production 	◦ To be determined			On hold (security concerns)
26 GulGhundi/ Parwan	Denuded <i>red bead</i> original bushes	<ul style="list-style-type: none"> • Restore <i>red bead</i> bush vegetation • Joint management of a city park between the villagers, local government and the MAIL 	◦ To be determined			On hold
27 Ghorban/ Parwan	Degraded fisheries habitat	<ul style="list-style-type: none"> • Village level management of fisheries resources 	◦			Proposed
28 Shighnan/ Badakhshan	Spring rangeland/ land grabbing	<ul style="list-style-type: none"> • Conflict management of rangeland resources 	◦ To be determined			Proposed

Initial Experiences

1. Community level (organization, dynamics and cultural perspectives)

- As we all know the National Solidarity Program (NSP) organized the villages through their *shuras* into Community Development Councils. Using the CDCs saves time and funds during the initial consultation stage for a project. It is easy to identify who are the members of the CDCs for a particular village or cluster of villages.
 - Through the district office, one can also check the CDCs track records of past projects.
 - CDS are also legally recognized entities making direct transfer of funds to projects easier.
 - As we know, Afghanistan is a male pervasive society so one will most likely expect a fully male CDC which does not allow for any discussions on the role of women in natural resources management.
 - In areas where there has been less displacement of people during the long civil unrest, the CDCs tend to be more cohesive in facilitating the early project conception stage. On the other hand, as we may expect, areas where the villagers are recent returnees or of mixed ethnic groups, consultations with the CDCs take longer, even if a project idea can be agreed upon.
 - In one case, we have managed, through the help of the Department of Women's Affairs, to request for women “elders” to attend the consultation process and thus enabled us to design a project with the women playing a significant program role.
 - Whichever agenda is proposed, the CDCs already have their wish list. This presents the opportunity to start discussions and link the wish list to better management of the local natural resources.
- ### 2. Project design (three sub-programs)
- For obvious reasons, during winter months, CDC meetings are held indoors, in the *shura's* or council's meeting room or in a mosque. The venue limits participation of more members of the community and tends to hinder a more open and free flowing discussions on the issues of their local natural resources. Building trust and camaraderie at this stage is difficult and both are necessary ingredients for the long-term viability of the program.
 - As weather allows, more meetings are conducted outdoors. This attracts attention and, therefore, more people. This is good as it allows more participation, although women's groups are seldom allowed to join.
 - The surroundings in an outdoor meeting, becomes a laboratory which allows one to direct the participant's attention to natural resource issues. Outdoor meetings are also an excellent opportunity, as we have found in most occasions, to facilitate “community sketches” (either in plastic sheets, on the ground or in whatever media is available) of the natural resources being discussed.
 - The community sketching process has become dynamic and more inter-generational. The younger ones are tasked to do the drawings while the elders take charge of the editing process. Editing is also an occasion for consensus building on the condition of a particular resource. It is the community that eventually has a say as to the condition of the natural resources. It is their own diagnostic process as to how they have managed the natural resource and its current condition. (When using plastic sheets as a medium, blue is used for rivers, streams, lakes or glaciers; green for forest; brown for rangeland; and black for trails, roads or built up structures and so on.)
 - The community sketching process, as stated above, is and must be an iterative one. Like that of a paper being written, editing and redrafting of the sketches (or map) takes place during the course of the program. In all likelihood, the “community sketches” will become a living document of the program. They will evolve as the program matures.
 - The above bullets, perhaps, describes implementation of the three sub-programs of

the NRM strategy. The community sketch is a map (a product of surveillance and planning) which identifies areas to be protected and conserved. The visual and iterative process also allows the community to deduce, or to realize for themselves, that CBNRM projects for their locality are not just a single activity (i.e. planting trees or rehabilitating a canal) but requires many activities. This is a project in itself as all the projects are combined as one program – the CBNRM program.

3. Common ground (consultation), equity from all sides (participation), cost effective ratios

- Consultation takes place when the different parties describe their “objectives” or agenda during the first or second meeting with the CDCs. The CDCs, as mentioned earlier, has a wish list. The government states its position requesting the community to protect the natural resources.
- UNEP starts by describing the objectives of some of the UN agencies and orients the community's thinking of UNEP as an agency. As one of the smaller UN agencies in Afghanistan, UNEP does not have

humanitarian or reconstruction funds and is in Afghanistan to help the government test current policies and strategies to manage the country's denuded natural resources and in general, improve environmental management of the natural resources.

- Furthermore, UNEP emphasizes to the community that grant money comes with great responsibility. There is “no such thing as free money”. UNEP is not just a conduit of funds from the friends of Afghanistan, but is equally responsible with the community and its government partners that the funds are used wisely.
- It may seem inane or strange to the community when our government counterparts talk about “testing policy and strategy”, when there has been none for the past three decades. If elders are aware of past government policy, it is because it was often imposed on them, and they are less supportive of it.
- However, through the use of historical photographs, literal translation of traditional names for their

village (such as *Sabz dara* which means green valley, when in fact the valley is not green anymore), anecdotes from the elders, historical maps and/or “community sketches”, the rationale for testing the policy is grasped.

- Greater understanding and acceptance by the community for testing policy and strategy paves the way for reaching a common ground.



Figure 1. The presence of elders, the major resource users and the youth facilitated the exchange of information during a community mapping exercise/ Photo by Ernie Wijangco/UNEP

This comes with a price, not just from the UNEP side but from all parties.

- The stage for participatory planning begins. The communities' wish list is prioritized whether it has any direct or indirect relationship to better management of the natural resources. Obviously, UNEP and the government are biased toward supporting items in their wish list that have a direct relationship to natural resources, and these are the projects that are funded. With the funding, the community is asked to protect and conserve a particular natural resource. Usually for a specific activity that is funded, hectares of natural resources are set aside for strict protection or are included in a management plan.
- Setting aside a particular natural resource by the community also has a monetary value for them, in broad terms, forgoing an opportunity cost, no matter how marginal is the revenue from that natural resource.
- The funded cost for a project is then divided by the hectares of natural resources set aside for protection. This broad concept allows us to determine a cost effective ratio for a specific program.
- The previous table indicates that cost effective ratios has a wide range from \$256/ha to \$1.20/ha.

Summary

1. Early indications show that implementing the three sub-programs of the government's NRM strategy is indeed feasible. Communities are willing to go through the process of mapping their locality and their natural resources, characterizing the ecological health of the natural resources, setting aside areas for protection and conservation and formulating a CBNRM program with guidance from the government and UNEP.
2. Some sites are in the planning stage. Some are already implementing the program. But in all stages, close guidance from the government and UNEP is still needed.
3. In addition to UNEP's approach to the strategy, an overarching three-phase approach is emerging and can be discretely termed as the incentive stage, the "coming to terms" stage and, again, the incentive stage.
4. The first incentive stage is when a wish list is granted to a community provided it has a direct bearing on managing the natural resources.
5. The "coming to terms" stage takes longer and requires closer guidance. It starts with deeper community realization of the serious condition of their natural resources, a programmatic approach to rehabilitating and managing the resources, and the necessary formation of village institutions to implement the program.
6. The final "incentive" stage may not take place in the immediate future but UNEP envisions this stage as benefits accrue from successfully implementing the CBNRM program. Over the long term, true sustainable conservation and resource management brings increased benefits. This is the long term payback for all.
7. *M ā dare Tabiat*, Mother Nature in Dari. Afghans appreciate nature as a caring mother which provides for basic needs. It shows that women do have a role in managing the natural resources but is not explicitly expressed in this culture. For example, water cleanliness has a direct relationship to the health of the family, a very specific role for women. Cultural restriction did not allow enough opportunities for UNEP to discuss with women their experiences and expertise in natural resource management.
8. In the case of other countries, men and women have a different perception to donor funded projects. Donor funded projects tend to be perceived by men as "business as usual" activities from one project to another. Women perceive projects as opportunities for positive changes in their family and the larger community.
9. Considering point 7 and 8, there is a need to seriously explore creative ways to harness women's expertise and their role in managing CBNRM programs and, in general, the natural resources.

3-11

Empowering Afghanistan's Extensive Livestock Producers

By Michael J. Jacobs and Catherine A. Schloeder

Extensive livestock producers in Afghanistan have much in common with other herders around the world. Their communities face the challenges of gaining access to public rangelands and acquiring or retaining land ownership. In combination with high illiteracy rates and low government representation they suffer from a vulnerability that can lead to conflicts over natural resources. Building capacity and empowering livestock producers to resolve conflicts peacefully is one way to assist them in meeting their challenges. Other benefits include gaining national identity, trust, and the respect of their fellow countrymen. The PEACE Project included conflict resolution as part of its agenda to increase extensive livestock production on Afghanistan's public rangelands. Understanding how livestock producers in Afghanistan were organized, and how they traditionally solved issues, was fundamental to developing a successful conflict resolution program. Earning trust with straight talk; making no promises that couldn't be delivered; remaining patient and continuing to listen despite setbacks; and, facilitating efforts for conflict resolution as opposed to directing them, were all critical to a successful outcome.

Background

Decades of conflicts, drought, insecurity and poverty have left Afghanistan with little infrastructure and low capacity. In the past, it was a country that could boast that its agricultural sector contributed to more than half of its national income (1). More recently, it has become known as a country heavily dependent on food aid from international donors. Since 2001, donors and the Government of Afghanistan saw its greatest challenge as one of rebuilding its agriculture sector to overcome its food security issues. Challenges for the development of Afghanistan's extensive livestock sector *were considered particularly* daunting. The main reasons for this were the lack of information on the condition of Afghanistan's rangelands, livestock's nutritional status, current livestock management practices and the threats to the extensive livestock sector. In 2006, the PEACE¹ Project was initiated with funding from USAID to develop baseline information on Afghanistan's rangelands and to address some of the underlying causes for the decline in extensive livestock production (2).

Early research by USAID partners indicated that the majority of extensive livestock production in Afghanistan was carried out by a transhumant² group of pastoralists referred to as the Kuchi. The Kuchi's livelihood is dependent on moving their livestock to rangeland areas in the Hindu Kush mountain range, in Central Afghanistan. Depending on where they start from, they either walk or drive their livestock into the mountains from the surrounding lowlands each spring and return to their wintering areas each fall. Through discussions with the Kuchi, the PEACE project determined that some of the more significant changes to this group's livelihood included the disruption of traditional migration routes, the cultivation of rangelands, competition for critical grazing areas and conflicts over land tenure and traditional grazing rights. Herd sizes have declined significantly as a consequence and, in some situations, many Kuchi are now without a livelihood.

The Kuchi account for approximately 8% of Afghanistan's total population yet in recent surveys of livestock markets in six of Afghanistan's largest cities, 60% of the small ruminants brought for sale

¹ PEACE: *Pastoral Engagement, Adaptation and Capacity Enhancement*.

² *Transhumant describes the type of movement the Kuchi people make with their livestock. In this case they move seasonally between summer and winter grazing lands.*

originated with the Kuchi (3). Kuchi livestock not only represent the majority of the animals found in Afghanistan's livestock markets, they are also considered the primary source of animals purchased by farmers for fattening or rebuilding herds. As the Kuchi move across the landscape they commonly sell off animals in the local markets. They sell animals to limit the risks associated with keeping animals alive or when they need cash.

One of the primary objectives of the PEACE Project was to institutionalize a set of technologies within the Ministry of Agriculture, Irrigation and Livestock (MAIL) that would provide better information about the condition of Afghanistan's rangelands. The technologies included a Livestock Early Warning System (LEWS), a Nutritional Profiling System (referred to as NIRS) and a Livestock Market Information System (LMIS)³. LEWS provides current and projected estimates of native forage production for Afghanistan's rangelands up to 90 days in advance. The NIRS program provides information on seasonal diet quality for the different rangeland areas. The LMIS program tracks current livestock prices in the markets and disseminates this information to the producers and to the government as requested. These technologies provide information which will improve the decision-making ability of the producers - when to sell, when to move; how much should I stock, should I negotiate and for how much; and, to facilitate the management and policy-making capacity of the MAIL with respect to improving livestock production.

Better information for producers and policy makers is advantageous but if the producers cannot access the rangeland resources required to produce livestock, this information loses relevance. Therefore, another primary objective of the PEACE Project was to address land access and tenure issues through a conflict resolution program for Kuchi leaders. Due to the extent of these issues in Afghanistan, this program was destined to develop and expand more than we had originally envisioned. The conflict resolution program and the empowerment of the Kuchi will be the focus of the following case study.

The Challenge

Similar to extensive livestock producers in other parts of the world, they Kuchi face a myriad of problems ranging from illiteracy to limited access to health care. Of primary concern to the Kuchi, however, are conflicts over land tenure and access to public rangelands, because these directly impact their livelihood. These same conflicts are also the major source of ethnic tensions that have led to fatal clashes in recent years (4). Conflicts of land tenure and access to rangelands, experienced by the Kuchi, fall into three main categories:

- *Conflicts with villagers or other Kuchi on winter rangelands.* The Kuchi winter in the surrounding lowlands of Afghanistan includes all northern provinces from Herat to Takhar, and all southern and eastern provinces from Helmand to Nangarhar. The issues for these areas include village expansion, rangeland conversion, rangeland degradation, lack of and costly forage resources in the winter.
- *Conflicts with villagers during migration.* Cultivation of rangeland corridors for wheat production is blocking access to summer rangeland areas. Where access is allowed, the Kuchi are often charged a fee to move and graze their animals. Other conflicts along movement corridors are due to ethnic tensions that either have a historical or current context. Regardless of the basis, ethnic tensions have eroded any trust between the competing groups to the point that reconciliation is likely impossible without intervention.
- *Conflicts with villagers over land tenure.* This problem has been perpetuated by past and current ruling power which favored one ethnic group over another by granting land tenure rights to the group in preference. The areas involved in these conflicts are mostly the summer rangeland areas, including Bamyan and Badakshan. These are complicated issues and require effective mediation efforts to resolve.

In addition to these types of conflicts, the Kuchi face the issue of general insecurity in Afghanistan. Their transhumant lifestyle makes them very vulnerable to the demands of criminals,

³ The technologies were originally developed by the Global Livestock Collaborative Research Support Program for east Africa and have subsequently been adapted for Mongolia, Afghanistan and West Africa.

commanders and anyone else in power. The challenge then, was to develop a program that empowered the Kuchi to peacefully resolve as many of these conflicts as they could for themselves, in a way that would be sustainable.

Project Activities

The PEACE Project's approach to conflict resolution was very simple: (1) understand how the Kuchi, as a culture, organized themselves; (2) understand their traditional means of solving problems and conflicts; and, (3) begin to deliver trainings in ways that incorporated lessons learned from the first two approaches in order to build capacity to facilitate the peaceful resolution of conflicts at the community, district and provincial level.

Organization

The Kuchi are organized by clans with a clear leadership structure beginning at the village level and extending to a “localized/regional” level. The extent of clan leadership is independent of geographic area and related instead to close family and political ties. In 2006, a new formal method of organization was instituted for and by the Kuchi. This involved the establishment of the Independent Department of Kuchi (IDK) as a mechanism for facilitating government representation and, for solving problems that extended beyond a clan's control. The IDK operates as a quasi-Ministry but one with a single agenda: address all social, economic, and political issues affecting the Kuchi across Afghanistan, regardless of ethnicity⁴. When the PEACE Project started, IDK was a newly formed institution with little capacity or capital to really help the Kuchi. As of January 2010, the IDK had 31 Provincial Directors representing 31 of the recognized 34 provinces in Afghanistan.

Traditional problem-solving mechanisms among the Kuchi

In Afghanistan, *shuras* are defined as an “assembly of leaders” that most groups use to solve problems and settle disputes. The Kuchi are no exception in that they have their own *shuras* and these are used to solve many of their own problems. However, few if any Kuchi leaders sit on *shuras* not of their own making including those representing districts and provinces in Afghanistan. *Shuras* are comprised of

the most powerful and respected leaders in a province, district, or community. It is estimated that Afghanistan's *shuras* are responsible for settling more than 80% of the conflict-based cases in the country (5). With an understanding of the Kuchi's traditional problem-solving mechanism, we determined that the best approach for the resolution of their land-related conflicts would be to train those Provincial Directors who were active in solving problems already, and who demonstrated the most interest in gaining skills in the area of conflict resolution.

Delivering Conflict Resolution Skills

The trainings in conflict resolution were not an easy sell in the beginning. The IDK Director viewed commodities, such as tents and solar panels, as more important to the Kuchi than a capacity building program with the aim of solving conflicts. This response was not surprising since transhumant pastoralists often have difficulty seeing beyond their immediate physical needs and accordingly make requests for short-term, quick-fix solutions. Convincing the IDK that they should participate in this program was accomplished pointing out the long-term benefits of the program and how a capacity-building exercise would help solve other problems including those related to their short-term needs. We were also direct and honest about the project's aims and budget stating that these did not include the purchase of commodities or short-term fixes but rather, PEACE was about developing long-term solutions and capacity building, among other things. The resulting discussions with the Director and his staff took much time and many visits, over the course of which we repeated the benefits of a conflict resolution program. In the end, it was the staff who came to understand the benefits and who were responsible for convincing the Director to bring the Provincial Kuchi leaders to Kabul to meet with us and attend at least one training program.

Ten Provincial Kuchi Directors for IDK were invited to attend the first conflict resolution training. This workshop involved the presentation of an alternative approach to meeting their needs using peace-building techniques in the context of their traditional means of problem-solving. The workshop also allowed us to evaluate their interest

⁴ *Kuchi include a wide range of ethnicities: Pashtun (majority), Uzbek, Turkmen, Tajik, and Gojer*



Figure 1. Extension of Delivering Conflict Resolution Skills/ Photo by PEACE

and capacity. We found that the participants were very interested in the potential of resolving their own conflicts and they asked for the opportunity to participate in more skill-development workshops. The first trainings were relatively time-consuming due to the need for translation from English to Dari and Pashto, and, due to the fact that some leaders were illiterate. Subsequently, we began to work with the Sanayee Development Organization (SDO), an Afghan NGO experienced in delivering conflict resolution training in Dari and Pashto and more importantly, experienced in adapting trainings of this nature to a wide range of participants. After some time, we were able to develop several trainings that specifically addressed the Kuchi's needs and the PEACE project's goals.

Kuchi Provincial Directors received between three to seven trainings in conflict resolution and peace

building techniques (6). Skills and topics covered during the trainings included:

- Benefits of peace
- Social ethics
- Understanding different perspectives
- Communicating your interests
- Listening to others
- Analyzing a conflict
- Mediation skills (characteristics, steps)
- Negotiation skills (interests versus positions)

Following these trainings, the leaders were asked to go back to their provinces and try to use their new skills during *shuras* to solve any issues of importance. To facilitate their efforts, PEACE began a program of providing limited sponsorship of the leader's monthly *shuras* (7). The aim of supporting the

Provincial Kuchi *shuras* was two-fold. First, to provide a forum for each Provincial Director to increase dialogue between the Kuchi people and their government and second, to develop a mechanism by which conflict resolution and rangeland management information could be disseminated. At the start of this program, Kuchi Provincial leaders had insufficient funds to reimburse the District leaders for their transportation costs to attend each month's meeting. If Kuchi representatives could effectively pass messages between rural residents and decision-makers, then supporting them to attend meetings would be well worth the cost of transportation. In total, this effort led to the funding of 13 Provincial *shura* each month.

In exchange for support of their *shuras*, the Kuchi Provincial Directors were required to submit a written report after each meeting, to the IDK Director and PEACE office with details about the issues and conflicts discussed during each meeting, and the means by which they were resolved. Within a few months of supporting the Kuchi *shuras*, however, it became obvious that some directors struggled with producing a report of any substance. Subsequently, we followed up with additional trainings in organizational and report-writing techniques, in addition to developing a simple format that they could follow specific to solving this problem. Directors who responded well to this initiative are now writing reports that are detailed in the nature of the conflicts they are dealing with and in the solutions that have proven useful. More importantly, the reports have proven useful to the IDK Director in Kabul, as monthly information from the provinces has allowed the IDK to systematically document the Kuchi's problems at the provincial and national level and their efforts to resolve them. Increasing the capacity of the IDK to collect information from their directors may have been how we first began to earn the trust of this institution.

This program also proved quite useful in that it enabled the provincial leaders to demonstrate their skills in using peaceful negotiation as an alternative for solving conflicts. Several Provincial Kuchi Directors have told us that they have been able to prove to their constituents that their *shura* can help them and as a consequence, they are finding that

their constituents are happy to support their leader's attendance of the monthly *shuras*. Increasing a Provincial Director's ability to resolve conflicts within his means while improving his standing and that of the *shura* members to their constituents has been the single most important factor in our gaining the trust of the Kuchi at the local level.

Extension of Delivering Conflict Resolution Skills

In Provinces where security was fine we would attend the *shuras* to see first-hand how they were functioning. It was during these site visits that we recognized how effective the organizational structure could be for dissemination of information of any kind. Therefore, we decided that the next step in the peace-building and conflict resolution process was to increase the capacity of the Kuchi to resolve conflicts, at the district level. Provincial Directors that demonstrated a commitment to peaceful resolution of conflicts during the *shuras* were asked to select district leaders from their provinces for this program. Following, nine leaders from three provinces were enrolled in a month-long training program that emphasized conflict resolution strategies and negotiation methods. Since this training, these nine leaders have worked to develop multi-ethnic Peace *shuras* and have participated in numerous mediation and conflict resolution exercises involving Kuchi and non-Kuchi stakeholders. The PEACE Project has actively monitored the impact of this training effort through continual feedback in the form of reports and phone calls. In addition, the same nine Kuchi leaders received support to carry out their own conflict resolution workshops. To date, they have trained 160 Kuchi leaders in techniques for resolving conflicts peacefully. The nine leaders return to Kabul every three months for a one-day workshop where they present their work and, to receive additional training in areas specific to their needs.

The number and variety of conflicts that have been resolved successfully has been quite surprising. Kuchi leaders reported specific details of family and clan feuds and explained how they settled the disputes. Some examples of the kinds of issues they have addressed are summarized in Tables 1 and 2.

Peace Ambassador Program

As word spread about the trainings provided by the PEACE Project and SDO, we began to receive requests for similar trainings. One request came

	Individual	Family	Clan	Inter- Ethnic
Personal	75	3	34	11
Land Access	0	0	19	12
Land Tenure	0	0	0	12
Rangeland conversion	0	0	0	7
Total	75	3	53	42

	Individual	Family	Clan	Inter- Ethnic
Building schools	0	0	18	0
Consensus Building	0	0	23	45
Elections	39	0	0	0
H1NI Virus	26	0	0	45
Total	65	0	41	90

directly from President Karzai's Advisor on Tribal Affairs and Director of the Peace Commission, Wahidullah Sabawoon. His request was that we develop trainings aimed at resolving long-standing land disputes between the Kuchi and Hazara in Wardak Province. While we were apprehensive at first to take on such a potentially volatile issue, in the end and with SDO, we proceeded (8). A memorandum of understanding was signed with the Peace Commission so there would be no misunderstandings about what either party would be responsible for delivering: the Peace Commission would be responsible for finding the correct leaders to attend the workshops and PEACE and SDO would be responsible for developing the trainings and funding the effort.

A series of trainings were initiated with 60 Kuchi and Hazara leaders attending separate 8-day workshops that covered basic peace-building and conflict resolution techniques. Subsequently, the groups participated in a joint workshop exercise, during which they engaged in a conflict assessment regarding issues that they shared in common and methods that might prove useful in resolving them. We avoided issues that were related to the specific conflicts between them. The intent of this approach was to build trust among the participants by having

them realize that they shared many problems in common whose origins were mostly unrelated to the actions of any one particular person or group.

The most significant outcome of these workshops and the assessments was that both groups identified several critical points of agreement. Both Kuchi and Hazara leaders described a substantial government role in creating the problems they were experiencing over land tenure and the use of public rangelands. Participants equally advocated for the Office of Tribal Affairs to the President to become more active in seeking solutions to these problems. They also agreed that given 30 years of war, that a quick resolution could not be achieved. Both groups shared the sentiment that political leaders do not want them to settle land access issues at the community level and that more importantly it is high-powered Kuchi and Hazara government leaders who are responsible for perpetuating the conflicts to further their own political agendas. Regarding their own personal history of conflicts, participants widely agreed that fighting has not helped them to solve any of their conflicts and should therefore be discouraged.

During 2009, with additional funding from the Global Livestock Collaborative Research Support Program (GL-CRSP)⁵, we were provided with the opportunity to bring together over 300 Kuchi and

non-Kuchi leaders from five regions, to engage in joint conflict resolution workshops. Joint workshops were held for leaders of Faryab, Balkh, Kunduz, Ghazni and Wardak as these were the priority regions selected by the Peace Commission. For Wardak we conducted a follow-up exercise after the joint workshop. Ten Peace Ambassadors (PAs) comprised of 5 Kuchi and 5 Hazara leaders, were selected to continue to work at the community level to seek common ground to resolve the Kuchi/Hazara conflict over access to rangelands in the Hazarijat/Besud region. The PAs have been working for one year now to identify and resolve conflicts in the Behsud area and initial reports suggest that a positive resolution is possible at the community level for many conflicts (Table 3). They are reporting that one of the biggest conflicts over land tenure in Behsud may be solved this summer because of their work. Additional funding for this initiative in 2010 would be extremely useful to continue this type of work in other regions of Afghanistan.

Sustainability for Communities and Afghan Institutions

One of the strongest ways to develop and facilitate a sustainable peace building and conflict resolution effort in Afghanistan is to invest in transferring skills to community leaders. By targeting Kuchi leaders at the Provincial and District levels we were able to provide a large number of community leaders with the skills needed to solve conflicts for their people despite the political situation.

Prior to the start of the Peace Ambassador (PA) program, the President's Peace Commission had limited success in resolving any significant inter-ethnic conflicts. When the Commission heard of the conflict resolution training program that the PEACE Project had with Kuchi Provincial leaders,

they approached us to see if we thought this approach might serve as a better method to resolve some of the inter-ethnic, region-specific conflicts they were struggling with. With the implementation of the PA program, designed in collaboration with the PEACE Project and the SDO, the President's Peace Commission has demonstrated a continued commitment to support peace-building efforts in Afghanistan and, that they are willing to attempt new alternatives to solving Afghanistan's many conflicts. The Commission has also demonstrated the ability to recognize when communities can and cannot solve problems on their own; and, their willingness to work in collaboration with communities through the PAs when a more formal agreement is needed to seal an accord. By adopting this new approach in solving conflicts, the President's Peace Commission is demonstrating good leadership skills. Expanding the number of PA teams and regions where the program is implemented will demonstrate further confidence in this government institution and broader recognition of their leadership abilities in the area of community-based conflict resolution.

The Sanayee Development Organization has been in existence for 18 years and has focused much of its effort on building the capacity of communities to resolve conflicts peacefully. The PEACE Project came to SDO with a Kuchi-specific agenda and worked with them to develop a program of conflict resolution specifically aimed at tackling land access and tenure issues. In collaboration with the President's PEACE Commission, we further developed this program to include a multi-ethnic approach to resolve Kuchi/non-Kuchi conflicts. SDO will continue to become stronger and more capable with the implementation of this program as they, along with all collaborators, learn from the experiences of the communities and PAs.

	Individual	Family	Clan	Inter- Ethnic
Personal	36	12	13	17
Land Access	0	7	6	12
Land Tenure	0	5	3	8
Rangeland conversion	0	0	2	0
Total	36	24	24	37

⁵ GL-CRSP USAID Grant No. PCE-G-00-98-00036-00 to the University of California, Davis



Figure 2. Peace Ambassador Program/ Photo by PEACE

Illiteracy and the lack of education were by far the biggest constraints to project implementation. Report writing skills were nearly non-existent in the Kuchi leadership even at the provincial level. Also, but to a lesser degree, the unwillingness of most Afghans to publically state what they believe for fear of reprisals hampered a wider awareness and reduced the potential for a rapid increase in supporters. Effectively, this means that a program of this nature takes time to build momentum. Likewise, earning trust is a long-term effort and requires commitment and time. These constraints all highlight the reasons for donors to understand and commit to longer funding cycles. Sustainable development is rarely a short-term, high-impact endeavor.

Taking this effort to the next level is also essential. While village and Kuchi elders appear to be in

agreement that peaceful resolution is possible, more emphasis should be placed on including the younger members of these communities. PAs offer an excellent opportunity to reach this demographic, and it is possible that the community Peace Ambassador model could be successfully modified to train younger PAs whose responsibility would be to work side by side with their elder leaders. Facilitating Peace Ambassadors as a viable community conflict mitigation tool should also be an option for other communities. This year, PEACE hopes to increase the number of PA's to 50 and the number of regions where they work to 5. If the Peace Commission continues to remain engaged throughout the year, the program would be ready to scale up to include 300 PAs and most of Afghanistan.

Conclusions

The PEACE project recognizes, as do many others that there can be “no development without peace, and no peace without development” (9). This is particularly true when it comes to resolving conflicts involving natural resources. Therefore, all proposed activities targeting extensive livestock producers will continue to be enhanced and enabled through critical peace-building and conflict resolution workshops. Working within the context of the Kuchi's current organizational structure and culture, the PEACE Project will continue to use existing and new methods to empower Afghanistan's Kuchi leaders, in an attempt to build a large cohort of leaders that understand how and why it is best to solve problems peacefully and constructively. In this way, we can improve the social, economic, natural resource and political environment in Afghanistan, for communities through community involvement.

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About the Authors

Michael J. Jacobs is a range ecologist with over 25 years experience working with communities, and institutions to identify and solve complex socio-environmental problems. He is a research scientist with Texas A&M University and Chief of Party for the Afghanistan PEACE project led by the University of California, Davis. Email: mjacobs@cnrit.tamu.edu

Catherine Schloeder is an ecologist with over 25 years experience working on issues related to

sustainable natural resource management and biodiversity. She is a research scientist with Texas A&M University and the Afghanistan PEACE project led by the University of California, Davis. Email: cschloeder@cnrit.tamu.edu

This research was made possible through support provided to the University of California, Davis by the Mission to Afghanistan, United States Agency for International Development (USAID) under the terms of Cooperative Agreement No. 306-A-00-06-00521-00 and through support provided to the Global Livestock Collaborative Research Support Program by the Office of Agriculture, Bureau of Economic Growth, Agriculture and Trade, USAID under the terms of Grant No. PCE-G-00-98-00036-00. The opinions expressed herein are those of the authors and do not necessarily reflect the views of USAID.

3-12

Conserving the Wakhan by Developing Community Management

Anthony Simms, Inayat Ali and David Bradfield
Wildlife Conservation Society

The Wakhan Corridor and Afghan Pamir (“Wakhan”), the narrow strip of Afghanistan between Tajikistan and Pakistan that connects to China, is of international significance for biodiversity conservation because it hosts a number of globally threatened species. Two ethnic minorities occupy the Wakhan: the nomadic Kyrgyz (herders) and the Wakhi (sedentary farmers). Since these communities have been neglected in part due to their remoteness and have few exploitable natural resources, they are very disadvantaged. Achieving meaningful conservation in the Wakhan will require involvement of these communities.

WCS has been working in the Wakhan since 2006, first with the Wakhi and later with the Kyrgyz. In 2008, the Wakhi community formally established the Wakhan-Pamir Association (WPA) to oversee conservation and development activities. In 2009, WCS and the WPA were awarded a BSP/NEPA CBRM Grant to support community conservation activities in the Wakhan. The grant helped strengthen community governance, trained a cadre of community rangers, initiated the process of establishing the Big Pamir Wildlife Reserve, and facilitated interaction between provincial government officers and the WPA. During the implementation of the CBRM Grant, WCS functioned as advisors and trainers rather than decision-makers. The communities fully participated in identifying and defining conservation activities and were responsible for decision making during the implementation of the program. The communities have taken ownership of their resources and are actively engaged in managing them. Establishment of the community ranger program and the development of the WPA are pillars that are ensuring successful conservation efforts in the Wakhan, and directly demonstrate the community’s ability to manage their natural resources.

Introduction

The Wakhan Corridor and Afghan Pamir (“Wakhan”) in Northeast Afghanistan is a narrow strip of Afghanistan connecting with China (Figure 1). Wakhan forms part of a mountainous knot where the Hindu Kush, Karakorum and Pamir ranges intersect. It is one of the most isolated places on earth and

steeped in history: Marco Polo passed through in the 13th century and it later formed part of the Silk Road; political boundaries of Wakhan were established by Russia and Britain in 1895 during the “Great Game”.

Wakhan is of international significance for biodiversity conservation, being host to a number of globally threatened species, including Marco Polo

Figure 1. Ethnic areas and geographical regions of the Wakhan landscape



sheep (*Ovis ammon polii*), snow leopard (*Uncia uncia*), urial (*Ovis orientalis*), siberian ibex (*Capra ibex siberica*), brown bear (*Ursus arctos*) and wolf (*Canis lupus*). Marco Polo was the first to document “great quantities of wild sheep of huge size” in Wakhan, referring to his namesake. Marco Polo sheep (MPS) are the Wakhan's flagship species and Afghanistan's national animal.

Two ethnic minorities occupy Wakhan. The seasonally nomadic Kyrgyz live in the eastern high-elevation Pamir; they are split into two separate communities, the Big Pamir and Little Pamir, of around 500 and 600 people respectively. The other ethnic minority, the Wakhi, are a single community of about 13,000 people, occupying villages in the lower-elevation Wakhan Corridor. They are sedentary farmers, although some of the population seasonally migrates to the Wakhi Big and Little Pamir to graze livestock.

The Wakhan's communities are very disadvantaged, having suffered a long history of neglect and with few exploitable natural resources. Social indicators reflect their troubles: among the world's highest mortality and illiteracy levels. Much of their plight is attributable to the Wakhan's remoteness. The remoteness results in little government presence or support. Therefore achieving meaningful conservation in Wakhan presently requires a community-led approach.

Background

Wildlife Conservation Society (WCS) has been working in Wakhan since 2006. The initial three years of operation focused heavily on baseline research (wildlife and rangeland surveys, socio-economic assessments) and educating the community about conservation. The Wakhi community had been the primary focus of WCS' work up until summer 2008. During these years the community saw few benefits from conservation and they were beginning to question its value to them. WCS needed to begin the next phase of the project.

In July 2008 community members from 16 Wakhi villages that most heavily use the Big Pamir (a site that had been identified for formal Protected Area designation) were given introductory ranger training. Immediately after this training WCS went to the Little Pamir Kyrgyz community and provided the same training to 17 community members. The training in the Little Pamir marked the start of WCS' engagement with this community. Both trainings were enormously successful and it was clear that directly engaging the communities in conservation was going to be of huge value.

In 2008, the Wakhi community decided to form a social organization, the Wakhan-Pamir Association



Figure 3. Little Pamir CDCs and rangers meeting with WCS at Qala-e Panja, Wakhan.



Figure 2. New Wakhi ranger recruits exercising as part of the introductory training.

(WPA). The Wakhi landscape consists of 42 villages spanning 190 km of the Wakhan Corridor from Sarhad-e Brogil in the east to Futur in the far west. Community Development Councils (CDCs) were elected in 2005 under the National Solidarity Program (NSP). In 2006-7 WCS found that due to the lengthy distances and travel times across the Corridor there was no practical way for the CDCs to meet and make collective decisions. Therefore the community decided to form the WPA, an organization that represents their entire community, overseeing conservation and development. The CDCs elected nine Board of Directors (BoD), a Chairman and a Secretary. The community registered the Association with the Ministry of Justice in early 2009.

The Kyrgyz communities were slower to adopt the NSP, only forming CDCs in July 2008. Even though WCS hopes to see the Kyrgyz amalgamate with the WPA, this is going to take more time.

Stemming from the baseline research WCS had carried out across Wakhan, a number of potential protected area sites have been identified. By the end of 2008 the Wakhi community had decided to establish a protected area, the Big Pamir Wildlife Reserve (BPWR).

By the conclusion of 2008 WCS fully recognized the importance of directly engaging the communities in conservation. This need prompted WCS to apply for and secure a CBRM grant from the Biodiversity Support Program for the National Environmental Protection Agency (BSP/NEPA).

Goals and Objectives

The goal of the CBRM grant was to support community conservation in Wakhan. The objectives were to:

1. *Strengthen community governance of natural resources.* Supporting the development of the Wakhan-Pamir Association and the CDCs in the Kyrgyz Little Pamir.
2. *Hire and train a cadre of community rangers from across the landscape.* Training and equipping 33 existing rangers and recruiting, training and equipping an additional 26 rangers.
3. *Begin the process of establishing the Big Pamir Wildlife Reserve as a nationally recognized protected area.* Demarcating the protected area boundary and commencing on-ground management operations in the form of ranger patrols.
4. *Integrate provincial government with conservation in Wakhan.* Introducing and training counterparts from provincial NEPA and MAIL, and developing working relations between them and the WPA.

Challenges and Problems

There are a number of challenges facing conservation in Wakhan, including:

1. Unsustainable management of natural resources that are important to biodiversity conservation by communities in certain parts of the landscape (e.g. overgrazing of mountain rangelands).
2. Few livelihood opportunities beyond livestock grazing.
3. Poverty which makes it difficult for communities to engage in conservation.
4. Lack of governance, including the absence of rules and regulations concerning natural resource management.
5. Lack of education and very low technical capacity of communities.
6. Divisions that exist between ethnic groups.
7. Drug addiction among certain communities.
8. Unconditional food donations given to certain communities.
9. Almost non-existent support from government.

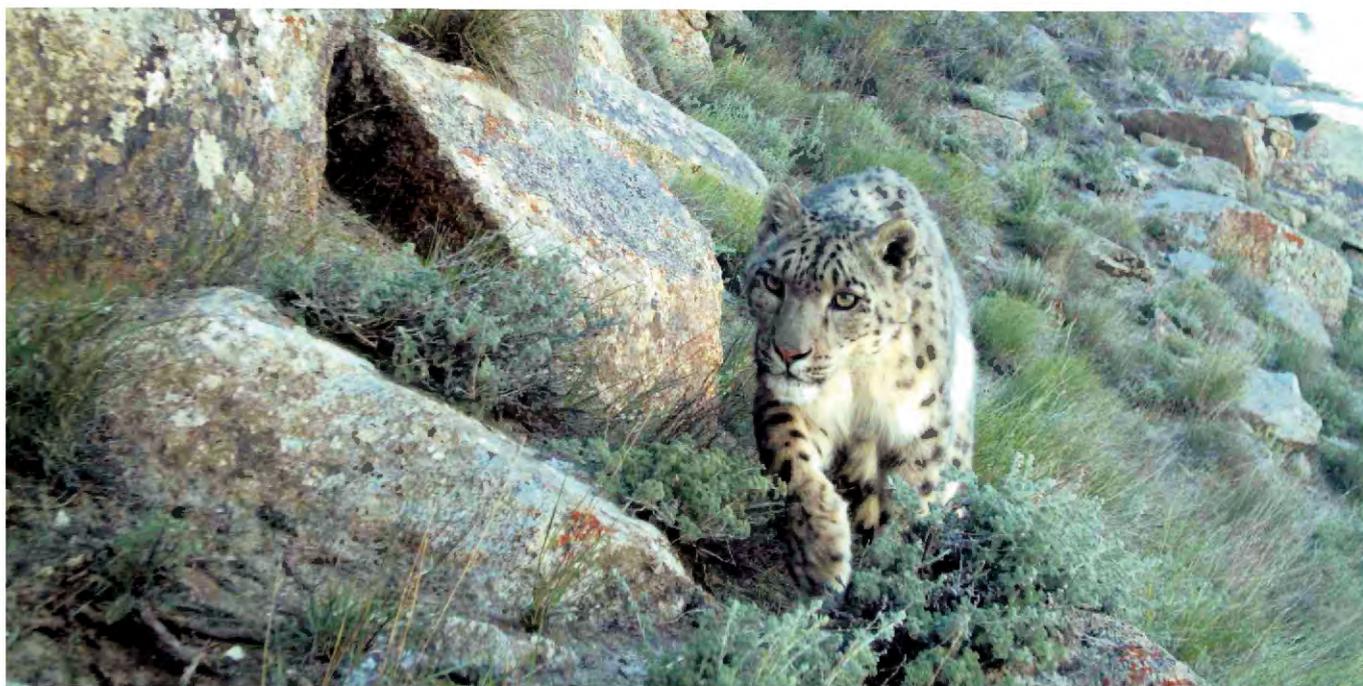


Figure 4. Photo of adult male snow leopard taken by the camera trap at Sast Valley.

10. A culture of wildlife hunting among communities and local authorities.
11. Remoteness and huge travel times between villages and around the landscape.

Methods

Part of WCS' rationale for developing community conservation in Wakhan is that it provides a model that can be self-sustaining in the near future. Given the isolation of Wakhan and historical issues, developing conservation where communities take the lead and government supports has been vitally important. The BSP/NEPA grant helped WCS move quickly towards achieving this.

The key to the success of WCS' work with Wakhan communities has been the engagement of staff from Northern Area Pakistan who are ethnic Wakhi. They have quickly developed strong relationships with the communities, particularly the Wakhi.

WCS adopts a very participatory approach to its activities in Wakhan. WCS personnel are mindful of remaining advisors and trainers, as opposed to top-down decision-makers. Transparency, openness and honesty are key to WCS' good community relations. However, WCS will also on occasion disagree with communities. Solid relationships allow all partners to share differing opinions from time to time.

Democratic decision-making is encouraged, as is gender balance.

The WPA became WCS' direct partner under this grant. WCS worked through and with them at all times. A similar concept was followed, but to a lesser extent, with the CDCs in the Little Pamir.

Results

The following summarises how the grant objectives were achieved:

Governance

This grant helped strengthen community governance by making the WPA operational. Through WCS, the WPA was the recipient of this grant and the implementing partner. This made the WPA a functional institution. Included in this was the establishment of an office at Qala-e Panja for the WPA. WCS shares this office as a means of providing ongoing support and training. It is hoped that government will eventually establish a presence in this facility.

In the Little Pamir, WCS worked through the newly elected CDCs. The project gave the CDCs management experience and legitimised their positions. However, there were some problems. After training the rangers in 2008, this community was extremely enthusiastic about conservation and

the ranger program. WCS planned to return early in 2009 to work with the rangers. But things had changed over the winter. It was one of the harshest winters in the community's living memory. Many livestock were reported to have died, one shepherd perished from exposure, and many more livestock were depredated by wolves. WCS went to this community in July 2009 to equip and train the rangers. At a meeting held with the CDCs on arrival, WCS was asked not to work with the community. The winter had created a fear among the community that conservation would result in more predators and thus threaten their grazing livelihood. WCS carefully explained that conservation would not impact livelihoods. WCS made it clear that it would enthusiastically re-engage with the community if they changed their mind in the future. Prior to departing, several of the CDCs requested another meeting later in the year, which WCS agreed to. Plans to develop the ranger program, however, were placed on hold until that time.

Ranger Program

Irrespective of the difficulties encountered in the Little Pamir, the ranger program with the Wakhi community moved ahead. In April, the three existing ranger teams totaling 16 rangers were issued uniforms and equipment. Following this a large meeting was held with the CDCs and rangers to discuss employment conditions.

The meeting had the following outcomes:

- a. In the Wakhan Corridor, rangers would patrol for 7 days per month and get paid 1,500 Afs.
- b. In the BPWR, rangers would patrol for one month and get paid \$100 plus \$20 food allowance.

The CDCs requested that the ranger program be extended across all 42 Wakhi villages because the entire Wakhan landscape is important for conservation and it was not equitable to only support certain villages. Approval was subsequently given by BSP/NEPA to recruit rangers from all 42 villages.

WCS worked with the WPA to select, train and equip the new (26) rangers. Each village nominated three candidates. WCS and the WPA then went village-to-village and tested all candidates. Testing was based on literacy, general knowledge (Wakhan, wildlife and

conservation) and fitness. The successful candidates were later issued uniforms and equipment, and provided introductory training.

In early October, WCS met the Little Pamir CDCs and rangers to discuss resuming work with their community. The attitude of the CDCs had totally changed by this time and they requested a resumption of the ranger program. Soon after the meeting, WCS went to the Little Pamir and issued uniforms and trained the rangers.

The grant helped WCS bring an expert ranger field-trainer and wildlife ecologist from Northern Areas Pakistan to Wakhan. Throughout 2009 he went from team-to-team training the rangers in survey techniques and other duties. Part of this training was the use of camera traps. One camera trap was issued to each ranger team. The camera traps were used for surveying wildlife and to instill pride among the communities concerning their wildlife. Numerous photographs were captured of snow leopards, which had a tremendously positive impact on the local community. These photographs were the first of their kind for Afghanistan.

Protected Area Establishment

The grant also helped establish the Big Pamir Wildlife Reserve, soon to become Afghanistan's second national protected area. The Wakhi rangers began patrols in this area in July 2009. In August 2009 a large group of stakeholders, facilitated by WCS, demarcated the protected area boundary. Over 30 people participated. It was a community- and government-led process; WCS played a facilitation and advisory role.

Even though including a large group of stakeholders in this process was logistically difficult and somewhat expensive, it was critically important. The boundary alignment in Shikargah Valley was opposed by local graziers even though all 42 CDCs had previously decided on it. After the demarcation, local graziers lodged a complaint with the District Governor. Following an investigation by the Governor, the issue was resolved and the boundary alignment was maintained as demarcated.

This conflict demonstrates sensitivities associated with establishing protected areas in Afghanistan and the need for foreigners and organizations not to get too involved with the decision-making processes. It



Figure 5. NEPA and Wakhi community leader demarcate the first rock of the protected area.

also highlights the importance of involving a broad group of stakeholders in the process.

Government Involvement

The involvement of government was positively initiated under this grant, particularly that of NEPA. Working relationships are now forming between government and the community. The Badakhshan Provincial Director of NEPA was particularly active. He helped train the new Wakhi rangers and played an instrumental role in the BPWR demarcation exercise. Provincial MAIL also participated but its representative was not as enthusiastic as the Wakhan District Manager for MAIL who has always been actively involved with conservation in Wakhan and is a valuable partner.

Conclusion

The establishment of the ranger program and the WPA have become pillars to the success of conservation in Wakhan. The overall result is that communities feel ownership of their resources and are actively demonstrating their ability to manage them effectively. It demonstrates how conservation can strengthen governance and bring communities together around wildlife conservation. It shows that the Afghan government encourages community management of natural resources.

4

Trends and Patterns on CBNRM Implementation in Afghanistan

By Mamet Magno, Charles R. Hatch and Mark Dripchak

As organizations strive to bring community based natural resource management to Afghanistan, several points should be emphasized. Positive outcomes of CBNRM projects include effective use of PRA tools to garner community participation in the design phase of programs that build public and private capacity for natural resource management at the local level; dynamic resource assessment, monitoring and policing at the community level; and improved livelihood opportunities.

Areas of concern are also noted. Communities' insecure custodianship of natural resources and the right to use these resources may currently be undermining CBNRM efforts. Without the establishment of a formal custodianship, communities are apprehensive that government might take away their ability to use the resource they are being allowed to managed.

As a result of this concern, community participation is constrained and people are not willing to commit their own time and resources in the development of natural resources. Cash-for-work was used in nearly every project as a way to entice people to “participate in” (work on) physical improvements to natural resource systems. However, the long-term use of this practice may have negative implications for the sustainability of CBNRM efforts.

Almost unanimously, capacity building was viewed as a critical activity associated with sustainability. One important way to incorporate capacity building into CBNRM activities is to use adaptive management principles that allow stakeholders to integrate lessons learned into their programs through an iterative process. With the flexibility afforded by adaptive management, organizations gain the ability to better anticipate, plan for, and implement scenarios that lay a foundation for sustainability.

Working groups at the national conference discussed various roles that government, NGOs, and communities might play in CBNRM projects. These groups highlighted the role of government in providing technical assistance, training and development inputs to communities. Although discussion groups identified the role that government ideally plays, in almost all areas MAIL lacks the resources, or local officers lack access to the resources, that they need to have a consistent presence in the communities where CBNRM is being initiated.

How project implementers defined CBNRM

During the national conference, the following statements summarize how some of these organizations believe their projects are contributing to the implementation of CBNRM programs in Afghanistan:

The responsibility of the forest management lies with the community. The community manages their resources while the project facilitates activities, provides technical advice and introduces the people concerned with the management

and use of the forest resources to useful management methods.

The program places community ownership over processes relating to the management of social and technical interventions at its core, in order to ensure both an holistic and sustainable intervention, and to address the complex set of considerations in the target area.

The project is about making people take responsibilities for their own natural resources and livelihood and establishing

institutions for future sustainability by building NRM capacities of local communities, by promoting their ownership, contribution and by best use of local knowledge, cultures and learning from other areas/projects.

The project demonstrates a way to empower communities to solve natural resource conflicts in a way that promotes more effective use of those resources. Conflict resolution is, or should be, thought of as part of natural resource management. When you empower communities to solve natural resource conflicts, you have initiated management dialogue.

The statements above closely reflect the widely accepted definition for CBNRM as discussed in Chapter 1. Cases in Chapter 3, however, illustrate that there are significant opportunities for bringing CBNRM closer to internationally accepted CBNRM enabling conditions.

Ownership of the resources being managed

Activities mentioned in Chapter 3, and in the above statements, cover many of the principles and enabling conditions for a successful CBNRM program cited in Chapter 1 of this book. However, the current uncertainty of land tenure in Afghanistan makes the implementation of CBNRM throughout Afghanistan very difficult. In some cases, as described in ACC's paper (3-8), the local government has ceded a certain level of authority to the local community under a type of lease agreement. While this assignment of resource user rights is encouraging, it must be further extended to ensure that the community directly derives sustainable benefits from the program.

In all cases, the communities' custodianship over the resources they are managing is not formally recognized by government. The communities may develop natural resource management plans or grazing plans for areas that they have traditionally been using. However, these plans are not covered by long-term contracts with the government that legitimizes the communities' control and responsibility over the resource being managed.

The Islamic Republic of Afghanistan has yet to complete the mapping of its area to delineate public lands from private lands. It also has yet to issue and implement rules and regulations to secure the communities' custodianship of the resources and the communities' right to use these resources. Thus,

communities still are apprehensive that government might take away their use over the resource they are managing.

Because of these apprehensions, communities are not inspired to invest their own time and resources in the development of natural resources. At this stage, the rehabilitation efforts in degraded watersheds, forests, wetlands and rangelands are driven more by the agenda of assisting organizations than the community. Since communities have little incentive to develop the resources, NGOs have to resort to cash-for-work or food-for-work schemes to mobilize community members to participate.

There are cases, however, where communities have taken risks in investing their own time and resources even when their rights over the natural resource have not been formalized. The villagers in Karasti and Argu (3-6), for example, mobilized internal resources to pay for their own forest guards. The farmer cooperators of CRS (3-3 and 3-4) and MEDA have likewise contributed free labor in the planting of high-value crops because the benefits from these activities were immediate and accrued directly to them.

Determining use of common lands

Jacob and Schloeder's paper (3-11) stated that 60% of the small ruminants sold in Afghanistan are supplied by the nomadic Kuchis. However, the Kuchis' use of summer grazing areas on government lands is being constrained, in part, because of the conversion of rangeland corridors into wheat production areas.

The Islamic Republic of Afghanistan needs to determine how government lands can best be used. A master plan showing which areas are appropriate for grazing, agriculture production, forestry, urban development and protection could guide multiple stakeholders in determining field-level actions associated with their programs.

Community structures for natural resource management

Community leadership is historically provided by the local shuras. The shuras are selected by community members based on their traditional role in the community and based on the scope of their influence. The local shuras usually act as arbitrators during conflict resolution. The PEACE project

capitalized on this fact when it designed its capacity-building program on conflict management.

While access to natural resources within Afghanistan is legally controlled by the national government, the absence of national government personnel in inaccessible and remote villages made the local shuras “de facto” managers of these resources. Thus, they can influence who can access resources within their areas of territorial jurisdiction.

When development assistance significantly increased in Afghanistan, NGOs and government agencies implementing donor funded projects introduced community committees. The National Solidarity Project (NSP) created Community Development Councils (CDCs) on a massive scale. This action involve communities in the planning, implementation and monitoring of development projects. NSP directly channeled funding for the projects through the Community Development Councils. The CDCs and the local shuras eventually became the cornerstone for other community committees (i.e. Forest Management Councils, Watershed Management Committees, ranger associations) created by CBNRM programs.

While the local shuras are seen to oversee broader concerns, community committees were tasked to manage specific community concerns like forestry, watershed management or wetland management. In most cases, the local shuras became members of the community committees formed by the external agencies. Thus, by affiliation, the community committees automatically get the buy-in of local shuras for their activities.

However, the ability of these committees to implement CBNRM practices is uncertain in many cases, primarily because the concept is not yet well understood in Afghanistan. There is a lack of broad commitment and social cohesion in the communities. As CBNRM becomes better understood, one may also expect the community's level of social cohesion to increase.

Strategies to motivate participation

During presentations at the national conference, “participation” was defined as a concept that essentially equated it to physical presence. In some cases, simple attendance at meetings was equated to “participation” in the project. Cash-for-work was used one way or another in nearly every project as a

way to entice people to “participate in” (work on) constructing physical structures, such as check dams, or planting trees. As it has been documented in the past in many countries, once a project ends and the payments stop, so too does the reason for “participating”.

Several presenting organizations noted the challenges of a perceived mismatch between local people's immediate needs for food, income, and employment and the long-term investments and commitments needed to foster CBNRM. Rather than investing time to raise awareness, to identify critically needed natural resource interventions and to ensure the buy-in of the communities, some projects simply bought the communities' “participation” by paying for their labor. Notably, Concern Worldwide (3-5) dealt with this problem by setting up income-generation activities to draw people to the project.

It was observed that communities were more inclined to provide volunteer work if the perceived benefits from an activity could immediately be seen. Thus, CRS (3-3 and 3-4) got farmer cooperators to plant high-value crops in their respective land without paying for their labor. But it was harder for CRS to get farmers to build rock walls along their farms without payment for labor.

Experience with CBNRM programs elsewhere in the world has used cash-for-work as a means to sustain CBNRM projects during unforeseen natural disaster setbacks, but it is not used as the motivating force to ensure community participation. Given Afghanistan's recent three-decade history of civil disturbance, one could view all CBNRM programs as being in a disaster relief phase. However, by relying heavily on cash-for-work to ensure community participation now makes it very unlikely that CBNRM projects will be sustainable in the long-term.

Development interventions

Development interventions do not necessarily focus solely on natural resources. Some NGOs realized the importance of addressing health, livelihood and education concerns because the impacts of these concerns are immediately felt by communities and, thus, are among their highest priorities. Working on these areas of concern often develops trust which makes it easier to engage communities in natural

resource management programs. The NGOs also found it easier to mobilize communities to participate in natural resource management activities if parallel assistance was provided for health, education and livelihood concerns.

Strategies for sustainability

The many varied ways that CBNRM projects can be implemented were displayed in the presentations, discussions and case studies. Ideally, the participants at the national conference will use the experiences of their colleagues as sources of inspiration to test ideas that they found interesting. However, statements identifying practices that do not support the long-term sustainability of CBNRM programs, such as only using cash-for-work to enhance community participation, were not voiced by the participants. Some organizations claimed that they have planned ahead, and the initial cash-for-work mechanism is such a meager amount it will not be missed once the financial benefits of the project come on-line. At this point it is difficult to evaluate that claim.

Almost unanimously, capacity building was viewed as a critical activity associated with sustainability. Although the need for capacity building was recognized, participants were less clear on how it should be addressed. They were not sure whether responsibility for its delivery rested with donors, government organizations (central, provincial or local), or NGOs.

The working groups also stated that all sectors of the community must be engaged in the planning and decision-making process to ensure its sustainability. They emphasized that external stakeholders, such as MAIL, should ensure that communities are involved as much as possible in the decision making process.

Most of the participants had been involved with CBNRM projects for a relatively short period of time. This factor minimized their use of adaptive management principles as a component in their "lessons-learned" environment. As an example, both the CRS and Concern (3-5) projects had check dams that were washed out. In both cases they had analyzed the causes and modified the design or implementation procedures but had not had sufficient time to evaluate improvements in a subsequent season. Hence, government representatives criticized the entire project for not

having used a government engineer. Implicit in these statements is a relatively significant increase in cost in order to implement the project and a lack of emphasis on using adaptive management processes to improve management practices.

Concern over the control of projects, control of resources, and control of people is a common characteristic of CBNRM projects in Afghanistan. This is evident on the part of government, and to a lesser extent, with NGOs. Organizations are hesitant to relinquish control to communities for a variety of reasons. It appears that one important reason is directly related to the strict timelines and activity schedules imposed by donors. Most NRM projects in Afghanistan have timelines of 1-3 years. To prepare communities to take responsibility and accountability for natural resource management, project implementers need a longer timeframe.

Meeting donor requirements was viewed as more pressing than working with the community to help them sort through the complicated issues associated with community decision-making. This may, in part, be associated with a lack support for implementing programs that rely on an adaptive management component. If delays in community decision making are not built into the project design, then the organization must choose between helping the community resolve issues that directly impact the long-term sustainability of the project (quality of programming), or quickly moving forward with a rigid plan of activities (quantity of output). In CBNRM projects in Afghanistan, the latter appears to be the more common outcome. With the flexibility that would be afforded by adaptive management, organizations gain the ability to plan for and anticipate varying implementation scenarios and better lay a foundation for future sustainability.

Role of Community, NGOs, and Government

It is important to note that government-dominated working groups suggested that the role of communities should be to provide input on project activities and the role of government would then be to implement the CBNRM project. In contrast, NGO-dominated working groups proposed that, in addition to the role of providing input on project activities, the communities should develop the vision for the interventions and determine the objectives and goals for the project. The community would also assign the rights of use and access within the

community, and ensure that the traditionally excluded sectors of society be included.

The discussion groups predominantly highlighted the role of government in providing technical assistance, training and development inputs to communities. Notably, they also highlighted the need for government to establish necessary legal frameworks as a priority. Importantly, government was also assigned the role of ensuring the security of the population and the enforcement of laws governing natural resources management.

Although discussion groups identified the role that government would ideally play, in almost all areas, MAIL lacks the resources and/or local officers lack access to the resources that they need to have a consistent presence in the communities where CBNRM is being initiated. Therefore, there is a notable lack of technical assistance provided to communities. In villages where NGOs have a presence, they have helped resolve this problem in two ways. One is to provide the assistance themselves, using their staff to train villagers. The second is to facilitate the ability of MAIL staff to visit the field by providing them allowances or actual transportation. In many cases the initial project is still ongoing so the issue of communities' access to assistance, beyond the life of the project, has yet to be addressed. It appears that CBNRM is not in the district-level financial plans of MAIL, although local officers support CBNRM projects when resources are made available for them to do so.

MAIL's version of natural resource management implied a very top-down approach. However, it is important to note that community members were not present at the forum so it was not possible to determine if the nature of the top-down approach is of concern to local communities. MAIL does use the term "community-based" in describing the management process it intends to implement. This implies that it envisions a future where MAIL, and possibly the civil society sector, has a less prominent role. This vision should be programmed into the design of their prospective projects. Given the government's vested interest in creating sustainable livelihoods for families and communities, MAIL's interest should be to enable communities to operate autonomously within existing frameworks so as to conform to good governance principles. Government may also play an important role in

facilitating or providing capacity building to ensure that best practices are developed and utilized by the communities.

Factors Enabling Positive Outcomes for CBNRM Projects

Many aspects of the NGO projects were noteworthy and should be considered in the design of future CBNRM projects. These include the use of traditional community structures to formulate a CBNRM governing body; the effective use of participatory rural appraisal (PRA) processes to motivate community members to participate, at least, in the PRA exercises (mapping, prioritization, planning, etc.); emphasis on local capacity building in natural resource management technologies and basic management skills for organizations; and training in conflict resolution at the local level. Many of the presentations inferred that their capacity building efforts equated to empowerment. This argument would be strengthened if their capacity-building efforts had included processes that helped communities negotiate with authorities to obtain resource user rights. Although this occurred in a couple of cases, it was not common practice.

Important enabling conditions that need attention include:

1. Local community commitment and strengthened capacity;
2. Strong local institutions and participants with adequate skills;
3. Regional resource management plans with set "limits of acceptable use" or "carrying capacity";
4. A workable environmental mitigation and monitoring program;
5. Effective resource monitoring and policing;
6. Access to markets and credit; and
7. Genuine economic benefits.

Points 1 and 2 emphasize the widespread need for both public and private capacity throughout rural Afghanistan. The legal frameworks that are under development (*i.e.* Forest Law, Rangeland Law, Medicinal Plants Law) should also address the need for establishing and strengthening local institutions, much in the way that the draft Water Law aims to support Water User Associations along irrigation canals.

Points 3, 4, and 5 will require a dynamic assessment and monitoring capability in government that will offer feedback to the communities in a timely manner and assist them in implementing rules and regulations.

The final points, 6 and 7, are presently hampered by lack of education and very poorly producing assets. As assets become more productive through improved CBNRM management of natural resources, the government will need to support communities' ability to access credit and markets.

To facilitate and strengthen the design of CBNRM projects in Afghanistan, the following project design procedures are proposed.

1. Begin the CBNRM project design by using a participatory rural appraisal (PRA) process that includes:
 - a. A review of secondary information associated with the community
 - b. Visits to local authorities to explain the objectives of the proposed program, while making it clear to them that the actual activities may vary according to the desired needs of the community.
 - c. Preliminary visits to the community to:
 - Explain the objectives of the organization and the proposed programs;
 - Explain the process to be used, particularly the process during and after the PRA;
 - Gather general information, such as statistics, priority activities that the community would want to undertake, and potential location of project sites;
 - Make arrangements for a follow-up visit and for conducting the PRA so all local members of the community can effectively participate in the PRA.
 - d. During the follow-up visits, continue to assess the community's understanding of why the program is being proposed, and verify that the information gathered on the earlier visits is correct.
 - e. Once the community commits to undertaking the program, conduct the PRA.

(Discussions during the national conference suggest that some organizations may not currently have the capacity to implement a PRA. In these case they should either develop that capacity within their organization or partner with an organization that has that capacity.)

2. Follow the PRA with a thorough analysis and synthesis of its findings. The findings are then presented to the community, and a prioritization exercise is conducted with the community. An action plan is then developed that assigns roles and responsibilities for each action.
3. Through the process, it is essential to seek and attain agreement on the community's commitment to and ownership of all activities. If, at any point, doubts surface about the community's commitment, the causes need to be identified and addressed. These responses may alter the plan of action.
4. Assess the sustainability of all proposed activities. One method of assessing sustainability is to ask the community "what will happen when the project ends?" Another approach is to ask "what will happen once no one is providing the community technical assistance and advice?"

To facilitate and strengthen implementation of CBNRM projects in Afghanistan, the following procedures are proposed.

1. Assign long-term resource use rights to the communities for the resources that they are managing.
2. Affiliate each community project with a NGO or local government organization to provide technical assistance and capacity building, and assist in resolving resource use conflicts.
3. When possible, use an existing community structure to organize the community and implement the program.
4. Use adaptive management to ensure that indigenous knowledge and best practices are incorporated into the program.
5. Design longer-term CBNRM programs (i.e. 5 or more year duration programs in contrast to current 3 or less year duration programs).

5-1 Glossary of Local Terms

Ailoq – grazing grounds on the upper slopes

Akbman – wild cherry

Arooch – a kind of wild fruit

Badam – almond

Badam-e-talkbak – wild almond

Bai – rich

Bandak – a mitre-like cap

Chalgoza – edible pine

Hasbar – joint community action

Jerib – 5 *jeribs* is equivalent to 1 hectare

Kandas – underground water harvesting tanks carved in rocks

Lalmi – rainfed agriculture

M ā dare Tabiat – mother nature

Manteqa – geographical contiguous area which is usually defined by the local population

Motawassit – middle class

Mujabedeem – freedom fighters

Nan – unleavened bread

Pista – pistachio

Quroot – marketable milk product

Shakundy – wild pear

Shole-e-pista – pistachio harvest festival

Shura – council

Tandoor – clay oven

Woloswal – Governor's representative in the district

Zira – cumin

5-2

List of Plant and Animal Species

Plants

Shrubs and grasses

- Agropyron afghanicum* – donkey grass
Amygdalus spinosissima - wild almond (*Badam-e-talkhak*)
Bunium persicum – black cumin
Cerasus fruticosa – wild cherry (*Akhman*)
Cousinia spp. – mountain flower
Cuminum spp. – cumin (*Zira*)
Ferula assafoetida – hing; Devil's Dung
Festuca spp. – perennial tufted grass
Hordeum spp. – barley
Medicago sativa – alfalfa
Onobrychis spp. – Eurasian perennial herb (*Sanfoin*)
Poa spp. – meadow grass
Stipa spp. – Afghan feather grass
Tulipa spp. – tulip (*Lalah*)

Forest trees

- Bauhinia variegata* – mountain ebony (*Arghawan*)
Populus spp. – poplar
Fraxinus spp. – ash
Robinia pseudoacacia – acacia, black locust
Salix actifolia – Russian willow
Salix afghanica – willow
Tamarix spp. – salt cedar

Fruit trees

- Cercis spp.* – redbud
Juglans spp. – walnut
Malus spp. – apple
Pistacia vera - pistachio (*Pista*)
Prunus spp. – apricot (*Badam*)
Pyrus spp. – wild pear (*Shakundy*)

Animals

- Ovis ammon poli* - Marco Polo sheep
Uncia uncia – snow leopard
Ovis orientalis – urial
Capra ibex siberica – Siberian ibex
Ursus actos – brown bear
Canis lupus – wolf

5-3

List of Participants

**National Conference on
Community-Based Natural Resource Management in Afghanistan
Selected Experiences and Practices**

18-19 May 2010, Intercontinental Hotel, Kabul, Afghanistan

Ab. Wadood Norwegian Afghanistan Committee	Bawari National Humanitarian Juvenile Afghanistan
Alavi, M. Ayoub Wildlife Conservation Society	Carpenter, Kathryn United States Department of Agriculture
Agha, Shirin Concern Worldwide	Differt, Janis MADERA
Ahmadi, Mumtaz United States Agency for International Development	Dubee, Bruce United States Department of Agriculture
Ahmadzai, Zaitoon MEDA Afghanistan	Emadi, Mohammad Hossein Ministry of Agriculture, Irrigation and Livestock
Amanyar, Mohammad Aman Ministry of Agriculture, Irrigation and Livestock	Emami, Enayatullah National Environmental Protection Agency
Aminullah, Sayed Ministry of Agriculture, Irrigation and Livestock	Fenny, James World Food Programme
Amiri, Mohammad Aslam United States Agency for International Development	Gandhi, David CRS
Aqa, Faiz National Environmental Protection Agency	Gautam, Ambika International Centre for Integrated Mountain Development
Azizi, M. Jawad National Environmental Protection Agency	Haqbeen, Mohammad Azeem National Environmental Protection Agency
Azami, Mohammad Khalid Helvetas	Haqbin, M. Akbar National Environmental Protection Agency
Azizi, Makia Ministry of Rural Rehabilitation and Development	Jacobs, Michael Afghanistan PEACE Project
Azizullah, Sayed Ministry of Agriculture, Irrigation and Livestock	Koshani Ministry of Rural Rehabilitation and Development
Barikzai, Hashim Ministry of Agriculture, Irrigation and Livestock	

Kunari, Najibullah
National Environmental Protection Agency

Malang, Noorullah
UNOPS/Afghanistan Conservation Corps

Mirza, Mohd
Global Partnership for Afghanistan

Modaqiq, Abdul Wali
United Nations Environment Programme

Mohibullah
Poor Empowerment Organization

Mohd, Akbar
CRS

Mohammad Ali
National Environmental Protection Agency

Mohmand
MEDA Afghanistan

Momin, Abdul
Lapis Lazuli Sky

Muddabir
Poor Empowerment Organization

Maihanpoor, Said.Abdul Jabar
Ministry of Agriculture, Irrigation and Livestock

M. Agha
Independent Department of Kuchi

Nadiri, Mohsen
CRS

Nadya
National Environmental Protection Agency

Noorullah, Hakemi
National Humanitarian Juvenile Afghanistan

Nasiri, Hafizurahman
World Food Programme

Obaidee, Nisar Ahmad
Global Partnership for Afghanistan

Olson, Thomas
United States Agency for International Development

Rishteen, Sharif Shah
Global Partnership for Afghanistan

Saboor, Mia Abdul
United States Agency for International Development

Saeed, Ezzatullah
World Food Programme

Sakhy, Samai
Ministry of Agriculture, Irrigation and Livestock

Sallari, Sulaiman Shah
National Environmental Protection Agency

Sharif, Mohammad
National Environmental Protection Agency

Stanekzai, Wakeel Ahmad
National Environmental Protection Agency

Stanikzai
MADERA

Stevenson, Peter
IDEA, Mercy Corps

Temouri, Ghazi Gul
National Environmental Protection Agency

Wijangco, Ernie
United Nations Environment Programme

Yamin Najibullah
National Environmental Protection Agency

Yousifi, Javed
World Food Programme

Yusufy, M.Naiem
National Environmental Protection Agency



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