

Mountain Development Resource Book for Afghanistan



About ICIMOD

The International Centre for Integrated Mountain Development, ICIMOD, is a regional knowledge development and learning centre serving the eight regional member countries of the Hindu Kush-Himalayas – Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan – and based in Kathmandu, Nepal. Globalisation and climate change have an increasing influence on the stability of fragile mountain ecosystems and the livelihoods of mountain people. ICIMOD aims to assist mountain people to understand these changes, adapt to them, and make the most of new opportunities, while addressing upstream-downstream issues. We support regional transboundary programmes through partnership with regional partner institutions, facilitate the exchange of experience, and serve as a regional knowledge hub. We strengthen networking among regional and global centres of excellence. Overall, we are working to develop an economically and environmentally sound mountain ecosystem to improve the living standards of mountain populations and to sustain vital ecosystem services for the billions of people living downstream – now, and for the future.



Mountain Development Resource Book for Afghanistan

Copyright © 2009

International Centre for Integrated Mountain Development (ICIMOD)

All rights reserved. Published 2009

Published by

The International Centre for Integrated Mountain Development, GPO Box 3226, Kathmandu, Nepal

ISBN 978 92 9115 122 6 (electronic)

Library of Congress Control Number 2009-341524

Resource book production team

Elisabeth Kerkhoff (Resource Book and Writeshop Coordinator)

Joyce M. Mendez (Writeshop Resource Person and Chief Editor)

Mohammad Shafi Hafizi (Facilitator and Translator)

Elizabeth Fox (Writeshop Editor)

Dharma R. Maharjan (Layout and Graphic Design)

Asha Kaji Thaku (Editorial Support)

Photo credits

Sanjeev Bhuchar – cover, pp24 (all), 56, 59, 63, 65, 89; Noorin Nazari – p2; Abdul Bassir Abid – p4; S. Zia Ahmad Farid – p10; Gauri S. Dangol – p12 (both); Farooq Ahmad – pp14, 27, 29, 32 (right); Ambika P. Gautam – p17; Sima Rezai – p18; Surendra Raj Joshi – pp25, 32 (left); LR Verma – p32, (top); Ghulam Mohd. Malikyar – p36, (both); Arun Shrestha – pp40, 112, 125, 128, 129; Samden Lama Sherpa – p44; Yi Shaoliang – p58; Ahmad Shah Siddiqi – pp48, 50-53, 61, 98, 104-105, 108; CRS – p65; Andrew Billingsley – p65; Keshar Man Sthapit – pp71 (left), 76; Samden Lama Sherpa – p71 (right); Madhav Joshi – p73; Shanti Bhattarai – p76; Kamal Aryal – p80 (top two); Partap and Watson p80 (bottom); PARDYP Nepal – pp77, 85-87, 92; Andrew Billingsley & Asha Kaji Thaku – pp88-90; PARDYP Pakistan – p95; Abdullah Zaimi – p103; All sketches are by Asha Kaji Thaku

Disclaimer

The opinions expressed in this publication are those of the authors and do not necessarily represent those of the International Centre for Integrated Mountain Development (ICIMOD) nor of the International Fund for Agricultural Development (IFAD). The designations employed and the presentation of material in this publication do not imply the expression of any opinion whatsoever on the part of IFAD or ICIMOD concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or the endorsement of any product.

Reproduction

This publication may be reproduced in whole or in part and in any form for educational or non-profit purposes without special permission from the copyright holder, provided acknowledgement of the source is made. ICIMOD would appreciate receiving a copy of any publication that uses this publication as a source.

No use of this publication may be made for resale or for any other commercial purpose whatsoever without prior permission in writing from ICIMOD.

This publication is available in electronic form at <http://books.icimod.org>.

Contents

Foreword	iii
Acknowledgements	iv
Acronyms and Abbreviations	v
About This Resource Book	vii
1 Working with Communities	1
Working with Mountain Communities	3
<i>S. Zia Ahmad Farid, C.N. Anil, Min Bdr. Gurung, Brigitte Leduc</i>	
This chapter introduces the benefits of participatory approaches to development and how to mobilise a community in the Afghan context. It describes some useful and tested tools such as conflict resolution, social auditing, gender approach, and participatory 3-dimensional modelling.	
2 Creating Livelihoods	15
Planning and Developing Community Micro-Enterprise	17
<i>Dyutiman Choudhary, Ahmad Javid Ghyasi, Sima Rezai</i>	
This chapter focuses on the approach to developing community managed micro-enterprises in the rural areas focusing on developing competitiveness of rural enterprises and the bottom lines of economic viability, social equity, and environmental sustainability. The methodology is applicable to a wide range of sectors.	
Honeybees, Pollination and Livelihoods	25
<i>Farooq Ahmad, Min Bdr. Gurung, Saeed Khan, Uma Partap</i>	
This chapter presents the contribution of honeybees and beekeeping to livelihoods in Afghanistan, its economics, and some technical aspects of bee management applied to the country's climatic conditions. It also explains the role of honeybees in poverty reduction and maintaining biodiversity.	
Renewable Energy Technologies for Rural Development	35
<i>Ghulam Mohd. Malikyar, Bikash Sharma</i>	
The chapter provides guidance on choosing the right combination of sustainable energy solutions in remote areas without electricity and energy, explaining the rationale for decentralised renewable energy. Basic concepts and principles in the provision of sustainable energy service and guidelines for choosing and implementing the right renewable energy options are discussed.	
3 Managing Natural Resources	47
Rangeland Resources Management	49
<i>Muhammad Ismail, Rohullah Yaqini, Yan Zhaoli, Andrew Billingsley</i>	
This chapter describes the value of rangeland resources and the present conditions as well as the state of rangeland management in Afghanistan. It proposes co-management as the approach to improving rangeland productivity in Afghanistan while protecting these resources, and offers a step-by-step guide to implementing it.	

Watershed Management	59
<i>Sanjeev Bhuchar, Andrew Billingsley, Madhav Dhakal, Isabelle Providoli, Samden Lama Sherpa, Ahmad Shah Siddiqi</i>	
This chapter introduces the watershed management concept in the local context of Afghanistan and illustrates this with a local case study.	
Soil Moisture Retention and Soil Fertility Options for Agricultural and Degraded Lands	69
<i>Sanjeev Bhuchar, Andrew Billingsley, Madhav Dhakal, Isabelle Providoli, Samden Lama Sherpa, Ahmad Shah Siddiqi</i>	
This chapter highlights soil moisture retention and soil fertility improvement options for agricultural and degraded lands in different climatic regions of Afghanistan.	
Integrated Snow and Water Harvesting and Low-Cost Irrigation	83
<i>Sanjeev Bhuchar, Andrew Billingsley, Madhav Dhakal, Isabelle Providoli, Samden Lama Sherpa, Ahmad Shah Siddiqi</i>	
This chapter introduces integrated snow and water harvesting methods in Afghanistan adjusted to the local context. It also highlights low cost irrigation methods.	
4 Living with Risk	97
Local Knowledge on Disaster Preparedness: with examples drawn from experiences on droughts and flash floods in Herat Province, Afghanistan	99
<i>Julie Dekens, Ahmad Shah Siddiqi</i>	
This chapter describes local knowledge and provides a simple tool on how to understand, identify, and collect this tacit knowledge for disaster preparedness, drawing from examples on droughts and flash flood disaster risks that have taken place in Herat and other provinces.	
Flash Flood Risk Assessment for Afghanistan	109
<i>Mohammad Tamim Bahadurzai, Arun B. Shrestha</i>	
The chapter provides a general methodology for flash flood risk assessment in Afghanistan and incorporates both hazard and vulnerability aspects in the assessment.	
5 Making Development Work	121
An Overview of Monitoring and Evaluation	123
<i>Farid Ahmad</i>	
The chapter raises awareness and interest for monitoring and evaluation (M&E) and clarifies what this entails. The chapter explains the main components of M&E and provides snapshots of some commonly used M&E tools and methods applicable in diverse project situations.	
Glossary of Key Terms	133
Annexes	143
Annex 1: Links to organisations	145
Annex 2: About the Contributors	146

Foreword

ICIMOD works in Afghanistan and would like to contribute to the recovery and rebuilding of the economy of this country. The underlying assumption is that because of more than 25 years of war and unrest, a lot of relevant local knowledge remains to be rediscovered and activated. The strong presence of foreign experts makes it important to draw attention to valuable traditional practices essential for the future development of the country.

This **Mountain Development Resource Book for Afghanistan** – the product of a cross pollination of ideas among ICIMOD and Afghan partners through a writeshop – is part of this effort. We acknowledge and thank the International Fund for Agricultural Development (IFAD), and German Technical Cooperation (GTZ) for support to this project. Each chapter and subject in this Resource Book provides a development option or technology carefully chosen and represents both ICIMOD and Afghan experience and expertise and are illustrated by Afghan examples. Development practitioners who work with communities in Afghanistan can use any chapter of the book that interests them, or choose a mix of options found in several chapters and apply the interventions where they work. The resource book also covers intangible but valuable dimensions such as gender and participatory approaches, acknowledged as important to the success of any development undertaking. The book offers leads to where to get further information and resources to implement them.

We want this resource book to be used, so as part of its dissemination strategy, the book will be translated in Pashto and Dari, the major languages of the country, and will have no limit on reproduction; we encourage its reproduction and use by others, and translation into other Afghan languages as development practitioners-users see fit. During the book's conception, the response to the idea of a resource book was positive and optimistic: our local partners liked the idea especially of a book because it is tangible and contributes to rebuilding the library resources destroyed by war, and because capacity building of government staff, especially at provincial and district levels, remains a major concern in Afghanistan. But the approaches are applicable also for nongovernment organisations or civil society and community-based and people's organisations. During the book's making, both our specialists at ICIMOD and our Afghan counterparts learned much from each other's experience through the interaction and exchange.

ICIMOD intends to foster more of these exchanges and knowledge harvest approaches with partners in the member countries and with the international development community as a regional learning and knowledge centre. ICIMOD would like to be a platform for exchange in the member countries and the global community. Part of our task as a regional mountain learning centre is to promote cross-learning and exchange, and to validate traditional knowledge and enrich it with scientific expertise. The English language version of the resource book is available on our website and provides a model for other member countries, should they wish to develop a similar resource of their own, a kind of Godavari Demonstration and Learning Centre in book form. As learning is a never ending continuum, we hope to update the book, particularly the online version, from time to time with inputs, refinements, and contributions from readers and users. Write to us about them, about what have worked and what have not, and about new technologies applicable and useful to know to improve the mountain condition and the quality of mountain life. We hope you find the book useful, that it contributes to your work to alleviate poverty and improve the conditions of the people in Afghanistan as well as provide starting ideas for similar work in the other member countries.

Andreas Schild
Director General, ICIMOD

Acknowledgements

ICIMOD expresses its appreciation and gratitude to the people of Afghanistan for the warm welcome and for showing our staff the way. As the coordinator for this resource book, I am especially thankful to our hosts and facilitators, the Ministry of Agriculture, Irrigation and Livestock, especially H.E. Eng. Ghulam Mostafa Jawad, Deputy Minister, and Abdul Ghani "Ghuriani", and the Aga Khan Foundation team including Henri Suter, Akhtar Iqbal, Mohammad Shafi Hafizi, Andrew Billingsley, Amin Masood, and the staff of the AKF office in Badakhshan. I also thank Mirwais Ahmadzai of Kabul University, Verena Schild, and Farid "Mateen" Ahmad for their guidance and good advice. The financial support provided by the International Fund for Agricultural Development (IFAD) and GTZ – German Technical Cooperation – is also highly appreciated.

This endeavour required people from across ICIMOD programmes to work together in new ways. Therefore, I thank ICIMOD's management, particularly Andreas Schild, Director General; Madhav B. Karki, Eklabya Sharma, Michael Kollmair, and Mats Eriksson, for their valuable inputs and for the human and financial resources. I also appreciate sincerely the support provided by the ICIMOD Country Office in Afghanistan, especially Tika Laxmi Gurung, Sagendra Tiwari, Abdul Sial, Ambika Gautam, and Jawed.

The authors and editors merit recognition for their professionalism, hard work and dedication during the writing, rewrite, and review of the chapters. Several people deserve special mention for generously sharing their photos of Afghanistan; they are Ahmad Shah Siddiqi, Sanjeev Bhuchar, Andrew Billingsley, Yi Shaoliang, Arun B. Shrestha, Ghulam Mohd. Malikyar, Sima Rezai, Noorin Nazari, Abdullah Zaimi, Abdul Bassir Abid, and Zia Ahmad Farid.

Mohammad Shafi Hafizi, with his exceptional communication and language skills, was instrumental in building bridges between the Afghan and ICIMOD colleagues. His wealth of knowledge on agriculture and rural development in Afghanistan guided the choice of topics covered in the resource book and provided valuable insights to all of the chapters. He also helped to carefully identify the Afghan experts on each topic and bring them to Nepal.

Neetu Ghale's invaluable support made the writeshop and exposure visit run smoothly. Mohammad Ismail and Samden Lama Sherpa did a wonderful job in welcoming the Afghanistan delegation to Nepal, and organising the exposure visit with help from Local Initiatives for Biodiversity, Research and Development (LIBIRD) in Pokhara, and ICIMOD's Travel and Hospitality section.

I especially thank Joyce Mendez for promoting the writeshop approach, without which this resource book could not have been created, and acknowledge the support of Elizabeth Fox and Beatrice Murray. Dharma Ratna Maharjan and Asha Kaji Thaku once again proved their professionalism by laying out and making technical drawings for this book in the new ICIMOD style.

I thank you all for this great team effort and rewarding experience.

Elisabeth Kerkhoff
Coordinator
ICIMOD

Acronyms and Abbreviations

AKF	Aga Khan Foundation
BCR	benefit-cost ratio
CDC Council	Council of Community Development Councils
CRS	CRS Afghanistan project
DACAAR	Danish Committee for Aid to Afghan Refugees
GDP	gross domestic product
GHGs	greenhouse gases
GLOF	glacial lake outburst flood
GTZ	German Technical Cooperation
ICIMOD	International Centre for Integrated Mountain Development
IFAD	International Fund for Agricultural Development
IRR	internal rate of return
LDOF	landslide dam outburst flood
LFA	logframe analysis
MAIL	Ministry of Agriculture, Irrigation and Livestock
MDGs	Millennium Development Goals
MEW	Ministry of Energy and Water
M&E	monitoring and evaluation
MOVs	means of verification
MRRD	Ministry of Rural Rehabilitation and Development of Afghanistan
NPV	net present value
NSP	National Solidarity Programme
OVI	objectively verifiable indicators
P3DM	participatory three-dimensional modelling
PM&E	participatory monitoring and evaluation
PRA/PRRA	participatory (rapid) rural appraisal
PTD	participatory technology development
RET	renewable energy technologies
RRA	rapid rural appraisal
WOCAT	World Overview of Conservation Approaches and Technologies

About This Resource Book

ICIMOD and Afghanistan

This resource book will guide you through some of the current topics on mountain development. You can either go directly to the chapters or sections you need, or read through all of the topics to gain insight and new ideas, or to just be inspired.

The book is organised in five chapters or themes: Working with Communities, Creating Livelihoods, Managing Natural Resources, Living with Risk, and Making Development Work. Its chapters cover a selection of technologies and approaches for development in mountain areas that ICIMOD recommends. They include: (1) Working with Communities (2) Enterprise Development (3) Beekeeping (4) Renewable Energy Technologies (5) Rangeland Management (6) Watershed Management (7) Soil Conservation (8) Water Conservation (9) Disaster Preparedness (10) Flash Flood Risk Management, and (11) Monitoring and Evaluation. Through the book, we aim to reach out to professionals working with communities in Afghanistan. These include extension workers, decision makers, and local leaders who decide on what to do to develop their mountain communities.

Readers need not be experts in the fields mentioned to be able to understand and use the book. We describe the basics of technologies and approaches, but you may need additional information to be able to implement some of them. Further information on certain topics is available in English from ICIMOD, and/or from partner organisations in Afghanistan. We do not assume that all of the options provided are applicable everywhere in Afghanistan. They will need to be tested and adapted to each particular situation or condition. During the trial or piloting phase, many other factors may need to be taken into account, as well as questions answered such as, does it solve the problem? Is it suitable and acceptable to the communities? Lastly, are materials accessible and affordable? Adaptation means making it more acceptable, for example by using locally available materials and tapping local knowledge, or by making it cost-effective or culturally more appropriate. Involving the communities in the process of implementing them can result in useful suggestions and innovative, new ideas.

How the Book was Produced

The book was developed as part of an IFAD-funded project, 'Enhancing Innovative and Pro-poor Upland Policies (2006-2008)'. Afghanistan has been a regional member country since ICIMOD's founding in 1983. However, this is one of the first ICIMOD projects to be implemented directly in Afghanistan after several years. As part of the project's learning and exchange process, a multidisciplinary team from ICIMOD first visited Afghanistan in 2007, going to the field and interviewing key officials of various Ministries and nongovernment organisations. The team felt,

however, that a visit was not enough, and that they needed more exchange with Afghan professionals to be able to write materials suitable to the Afghan conditions, socio-cultural context, and needs.

Therefore, this resource book was prepared through an intensive participatory exchange workshop called the 'writeshop', which took place March 3-7, 2008 in Nepal. This involved bringing together the Afghan and ICIMOD counterparts' expertise in the writing and assembly of the resource book's materials. A exposure visit preceded the writeshop, where our Afghan partners were brought to sites where some of the options recommended by ICIMOD were being practiced in Nepal.

The writeshop was a first in ICIMOD and a kind of 'learning by doing'. The team members came to the writeshop with preliminary drafts and other written contributions. The papers were read and critiqued, and many of the drafts underwent major revisions, sometimes complete rewrites as a result of the exchange with the authors and editors. This collaboration helped to make sure that what is presented here is relevant, appropriate, and usable in the Afghan context and provided ICIMOD with the opportunity to learn more about Afghanistan and strengthen its professional network in the country.

We hope you find the book useful, that it raises your interest in the topics discussed, and their importance and applicability. It should give you ideas on what can be done and where to find additional information. We also hope the process in which it was produced provides a model for exchanging experiences and capturing partners' knowledge and experiences in our member countries.

We welcome questions, comments, feedback on this resource book, and any interesting information about mountain development in Afghanistan. You can reach us at info@icimod.org.

The Resource Book team