



HIGHLIGHTS FROM **HIMALICA IN THE HINDU KUSH HIMALAYA**

December 2012 – March 2018



ICIMOD

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Preface

ICIMOD implemented the European Union-funded “Support to Rural Livelihoods and Climate Change Adaptation in the Himalayas” (Himalica) initiative with partners in five countries: Bangladesh, Bhutan, Myanmar, Nepal, and Pakistan. The initiative generated evidence-based knowledge through collaborative action research on ecosystem management, agricultural extension, migration, and adaptation, and demonstrated innovative practices, technologies, and approaches to reducing poverty by increasing income resilience. It also built the capacity of national and regional stakeholders to develop livelihoods and protect the environment. This report documents several stories showing the impact of Himalica over the last five years; they speak to how Himalica has transformed lives by promoting climate resilient practices, engaging with the private sector to bring innovation and investment to add value closer to production pockets, sharing learning and knowledge with policymakers, and strengthening collaboration at the national and regional level.

Since Himalica began its work, stakeholders have learned crucial lessons about livelihoods, gender mainstreaming, social capital, and natural resource management. We have tried to capture these lessons and good practices to share them among stakeholders. We hope that Himalica’s work and achievements will inspire development partners, government institutions, and the private sector to scale the practices that Himalica started.

David Molden,
Director General



“Himalica shows how packages of solutions developed with communities can address complex climate and socio-ecological changes, and build resilience to address future risks and opportunities.”



Himalica Overview



Funded by the European Union with a grant of 10 million euros, the Support to Rural Livelihoods and Climate Change Adaptation in the Himalayas (Himalica) Programme successfully developed, tested and scaled innovative livelihoods options to increase the resilience of mountain communities in the Hindu Kush Himalaya (HKH). It was implemented with partners in five HKH countries: Bangladesh, Bhutan, Myanmar, Nepal, and Pakistan.

MORE THAN
15,000 PEOPLE, ALMOST

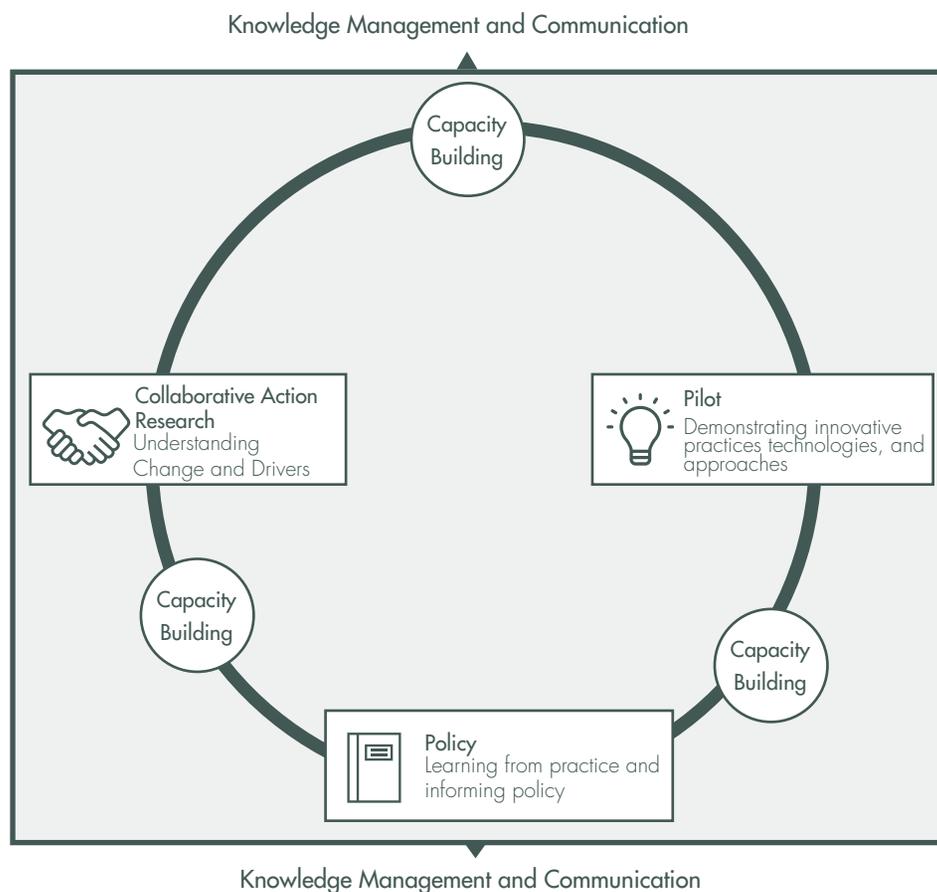
50%

OF THEM WOMEN,
BENEFITED DIRECTLY FROM
HIMALICA'S INTERVENTIONS
IN THESE COUNTRIES.

Himalica Framework

Himalica helped poor and vulnerable mountain communities in the HKH adapt to climate change and mitigate its effects. As outlined in the project contract, its expected key results were:

- Enhanced capacity of national and regional stakeholders to deal with livelihood development by using natural resources more efficiently and sustainably while protecting the environment
- Reduced poverty among mountain communities through new and more equitable livelihood opportunities



The Himalica framework was developed in line with ICIMOD's overall strategy of linking science (both basic science and applied research), practice, and policy. The pilot projects demonstrate proven interventions, bring in innovations based on research findings, and influence policy by generating knowledge. The pilots focus on three broad areas – building resilient production systems, diversifying income options, and encouraging supportive government policies (including sustainable provision of finance and other business services).



Approaches for Impact

Himalica's implementation approach involved promoting joint ventures with partners, piloting value chains with practitioners and beneficiaries, and promoting and supporting champions for policy engagement. This was concretized by mapping impact pathways and partnership networks to develop a conceptually clear theory of change for the programme.

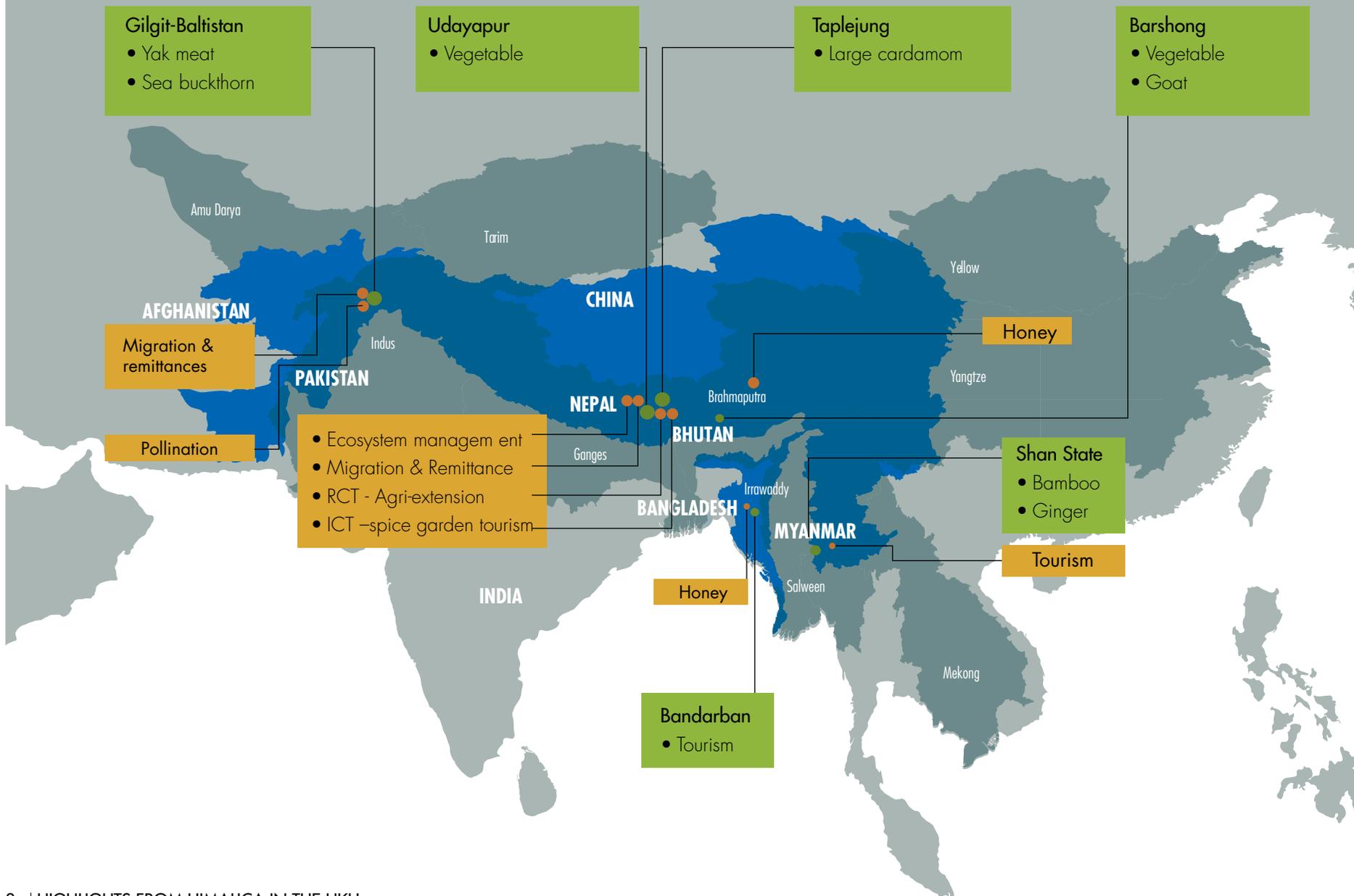
The programme focused on:

- Diversifying income and livelihood options by developing value chains of niche mountain products and services
- Demonstrating packages of practices to sustainably manage resources
- Strengthening local institutions, implementing gender-responsive planning and decision making, and supporting service mechanism and governance

“The Himalica project in Taplejung has been a great success because it identified the right issues, the right partners and the right pilot sites for implementation.”

- Pem Narayan Kandel,
Joint Secretary at Ministry of
Forest and Soil Conservation, Nepal

Intervention Landscape



Partners



Bangladesh

- Ministry of Chittagong Hill Tracts Affairs (MoCHTA)
- Bandarban Hill Development Council (BHDC)
- Base Camp Pvt. Ltd.
- Arannayk Foundation (AF)



Bhutan

- Ministry of Agriculture and Forests (MoAF)
- Tsirang Dzongkhag Administration
- Royal University of Bhutan (RUB)
- College of Natural Resources (CNR)
- Bhutan Media and Communications Institute (BMCI)



Myanmar

- Ministry of Natural Resources and Environmental Conservation (MonREC)
- Ministry of Hotels and Tourism (MoHT)
- Myanmar Institute of Integrated Development (MIID)
- Myanmar Survey Research (MSR)



Nepal

- Ministry of Population and Environment (MoPE)
- Department of Agriculture (DoA), Ministry of Agricultural Development (MoAD)
- The Center for Environmental and Agricultural Policy Research, Extension and Development (CEAPRED)
- Environment Conservation and Development Forum (ECDF)
- SAARC Business Association of Home Based Workers, Nepal (SABAH-Nepal)
- Nepal Institute of Development Studies (NIDS)



Pakistan

- Pakistan Agricultural Research Council (PARC)
- The Aga Khan Rural Support Programme (AKRSP)
- Rural Support Program Network (RSPN)
- The World Wildlife Fund for Nature (WWF–Pakistan)



Adaptation Practices and Innovations



Developing climate-resilient value chains

Himalica developed a framework for “pro-poor and climate resilient value chain development,” emphasizing sustainability, equitability, do-no-harm, and traditional knowledge in order to help farmers and development workers understand the market system and identify points on the chain where farmers might improve market linkages for their benefit. The framework suggests tools and processes to customize the value chain to a mountain context and adopt gender inclusive and climate change perspectives to balance goals, increase growth and address poverty. This approach was applied in pilot sites on a variety of mountain products: yak and sea buckthorn in Pakistan; vegetables and goat in Bhutan; tourism in Bangladesh; bamboo and ginger in Myanmar; and, cardamom and off-season vegetables in Nepal.



In Myanmar, more than 250 households benefited from the collective marketing approach that Himalica introduced for ginger. Rather than take ginger to the market, farmers sold 500 MT of ginger worth USD 74,000 through community-based seed banks and collection centers to a private company, Phyto Kyaw Export and Import. The company offered MMK 10 per 1.45 kg, higher than the market price at Heho. Target households benefited from a growth in the bamboo value chain. According to craft makers, value-added bamboo products (e.g., mugs, clocks, tissue boxes, stationary container boxes, trays, and cups) are popular. In 2017, 41 bamboo craft persons earned USD 10,254 from selling bamboo products.

FARMERS SOLD
500 MT
OF GINGER WORTH
\$74,000

Adding value to benefit women, men, and children

New technology and training, demonstration, and exposure visits significantly increased income in project sites. In 2017, more than 40 metric tonnes of dry sea buckthorn were harvested using berry harvesting technology from pilot areas and sold at PKR 200 to 220 per kilogram, generating USD 100,000 in revenue. Similarly, the average income of yak value chain beneficiaries increased from PKR 61,810 to PKR 117,700 (approximately USD 530 to USD 1,020) between 2014 and 2017. Moreover, 286 members (145 women and 141 men) of the Farmers Enterprise Group (FEG) were direct beneficiaries. .

“ We have signed a Memorandum of Understanding with Gansu Agriculture University in China to help us in R&D of various value added seabuckthorn-based products and to bring new harvesting technologies to help farmers and private sector. ”

- Mr. Khilendra Gurung,
Manager, Himalayan Biotrade Pvt
Ltd, Nepal.

Bringing investments closer to production pockets

Himalica engaged the private sector with a shared investment arrangement. In Bangladesh, for example, the Bandarban Hill District Council (BHDC) signed an MoU with Base Camp Pvt. Ltd. to address ways to develop community tourism in Munlai village by improving infrastructure, facilities, and market linkages, developing businesses and entrepreneurship, and promoting collaborative management, all the while guided by principles of inclusive, equitable, and responsible tourism. The public-private partnership endeavor also led to an MoU between BHDC and North End Coffee Roaster to promote eco-friendly coffee production and marketing from Bandarban and with ISPAHNI for fruit processing. In Pakistan, Himalica has followed an innovative model of supporting two lead enterprises (North Natural Pakistan for sea buckthorn and Sky Frozen for yak) in Gilgit-Baltistan for technology transfer and innovation. This model is based on the idea that the market pull created by a lead enterprise will result in higher returns for farmers, producers, and micro and small entrepreneurs (MSEs). For better positioning of high value mountain products in high-end market, the project also supported the creation of brand 'Himalica - green products from the mountains.'

THE AVERAGE INCOME OF YAK VALUE CHAIN BENEFICIARIES INCREASED FROM **USD 530 TO USD 1,020** DURING 2014-2017.



Leveraging ICT for informed decision making

With its local implementation partner and ICT service provider, Himalica promoted the use of ICT to provide market price information, agro advisory extension, and weather information to farmers to enable them to take up smart and resilient cardamom farming practices. A total of 220 registered farmers from Taplejung district received regular text messages in Nepali. Farmers did not have to rely on local traders for market price information and were able to consult experts on crop advisories and weather information. A user feedback survey conducted in June 2017 showed that farmers wanted the service continued beyond the Himalica project duration, and 92% were willing to pay for the service.

Although the Himalica pilot project has ended, farmers continue to receive information. Some 500 enquiries are received per day via text message, demonstrating that farmers have understood the value of such service introduced in the pilot phase. On the other hand, this change in information-seeking behavior has prompted the ICT service provider to set up a business, guaranteeing the sustainability and expansion of the service by creating a win-win situation. The Nepal Cardamom Entrepreneur Association (NCEA) has signed an MoU with ICT service providers to expand this text message-based advisory system to their district chapters across Nepal

500
ENQUIRIES ARE RECEIVED
PER DAY VIA TEXT
MESSAGE



Customizing traditional skills for 'mountpreneurship'

The craftsmanship of HKH communities contributes to the region's rich cultural diversity, but in many areas traditional skills are at risk of being lost. Himalica worked with local partners and groups to combine traditional practices with innovative designs to create new opportunities by developing entrepreneurship in mountain areas, sometimes referred to as 'mountpreneurship.' This generates additional income while also preserving local traditions. In Shan State, Myanmar, rural producers from Inlay Lake toured Yangon to learn about the bamboo value chain, including methods to cultivate and process bamboo and produce tourism souvenirs such as serving bowls, plates, and cutting boards. In Bandarban, Bangladesh, local artisans learned new designs for handloom products. They are now developing table runners, laptop bags, and mufflers. In Taplejung, Nepal, cardamom farmers learned to make added use of their large cardamom plants, such as by using plant fibre to make woven bags and wallets. Linkages with the private sector and the development of a unique Himalica brand has helped to better position these products in the marketplace.





Addressing water scarcity

Water shortage has been a critical problem in upland villages near Inlay Lake, Myanmar. During the dry season, villagers were dependent on a single pond. The first step of Himalica's pilot project addressed this problem through rooftop rainwater harvesting, creating new ponds, and better water management. This proved so popular that households not involved in the pilot built the water systems independently. The concept has spread to five more villages, with USAID and Winrock replicating ICIMOD's work.

MORE THAN

1600

PEOPLE (50% WOMEN) FROM SIX VILLAGES IN MYANMAR BENEFITED FROM INTERVENTIONS THAT INCREASED THE QUALITY AND QUANTITY OF WATER AND REDUCED DRUDGERY.

Enhancing women's adaptive capacity



Himalica held orientations for partner organizations on gender responsive plans and enabling women to participate in all nodes of value chains, for example by improving technical skills, technology, and leadership in community groups. Each new technology was assessed to see if it reduced drudgery or increased workload. Every effort was made to ensure that women were equally represented among participants, helping transform them from passive beneficiaries to powerful leaders. For example, in Taplejung, Nepal, with support from Himalica, some women came together to form a company: “Kanchenjunga Himalica Agriculture Industry” (KHA).

“After participating in Himalica, I am confident that we can easily maintain our livelihoods by selling vegetables. By applying off-season vegetable production techniques, I was able to earn NPR 15,000 from the first crop cycle, and 44,000 from the second crop cycle, which is three times more than I could earn from the piece of land in previous years.”

- Urmila Khadka,
Rauta-5, Udayapur

Understanding Mountain Resilience and Vulnerability



Augmenting ecosystems services management and livelihood



Himalica conducted a multidimensional assessment of ecosystems and action research for ecosystem services management in Udayapur. The assessment revealed that a strong foundation for ecosystem services management reduces vulnerability and builds resilience, and can be realized when communities see tangible livelihood benefits and outcomes from a robust resource management approach.

For their efforts in enhancing ecosystem management, the Dumrithumka Adarsha Women Community Forest User Group (CFUG) from Udayapur, Nepal won the 2017 Birdlife Nature's Hero Award – an award given by Birdlife International for outstanding conservation work by individuals and community groups. Their work in restoring land-slide eroded areas, promoting zero grazing and introducing new fodder species on marginal lands, and promoting improved cook stoves in parts of Udayapur has enhanced agro-forestry ecosystems and ecosystem services. This has been replicated by neighbouring CFUGs.

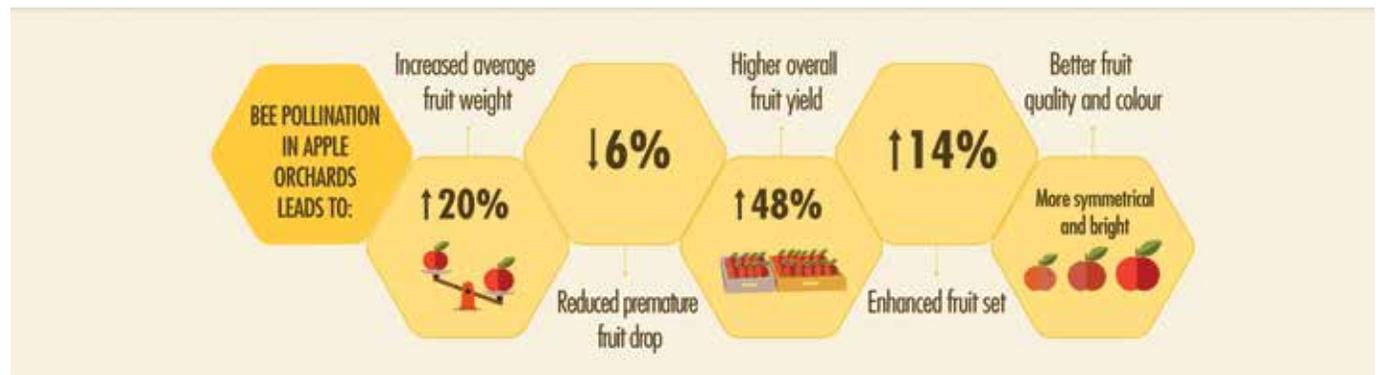
A photograph of a man wearing a wide-brimmed straw hat and a light-colored, striped polo shirt, sitting in a rural landscape. The background features rolling green hills under a cloudy sky. The man is looking towards the camera with a slight smile. The overall scene is bright and natural.

Multi-dimensional poverty and livelihood vulnerability assessment

Himalica conducted surveys and developed the framework for multidimensional poverty and livelihood vulnerability assessments in selected districts of Chin State and Shan State, Myanmar, and six representative districts in Bhutan. The results clearly showed pockets of poverty and vulnerability and the deprivations that drive poverty in these areas. The reports also provide an excellent basis for national stakeholders to strengthen their National Adaptation Plans and draw up strategies to address the 2030 SDGs.

Pollination by bees improves yield and quality of mountain crops

Action research in six villages in northwest Pakistan suggested that apple production might be improved, both in yield and quality, by using honeybees for pollination. The research found that honeybee pollination increases the overall production as well as the size of the apple, its shape, and colour. ICIMOD worked with beekeepers in Bandarban in Bangladesh, Tsirang in Bhutan, Taplejung and Udaypur in Nepal, and Chitral in Pakistan to increase honey production and improve the value chain for local honey.



Policy Engagement



Facilitation of national adaptation plan (NAP) process



Himalica contributed to the National Adaptation Plan (NAP) formulation process in Nepal, out of which the following reports acknowledging Himalica were published (<http://napnepal.gov.np/publication>):

- *Vulnerability and Risk Assessment Framework and Indicators for NAP Formulation Process in Nepal,*
- *Technical Synthesis Report of Stocktaking Report for NAP process,*
- *Observed Climate Trend Analysis Report (1971–2014).*

Building on learnings from Nepal's NAP process, Himalica supported the Myanmar Climate Change Alliance (MCCA), a government initiative that focused on climate change adaptation to assess vulnerability in the hilly region, taking into account climate change and socio-economic factors. The assessment details the contours and drivers of vulnerability and suggests steps for adaptation and building resilience. Himalica also supported cross-learning between Bhutan and Nepal by organizing a visit of technical working group members from Nepal to Bhutan.

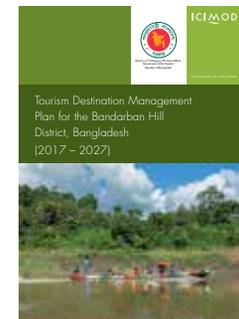




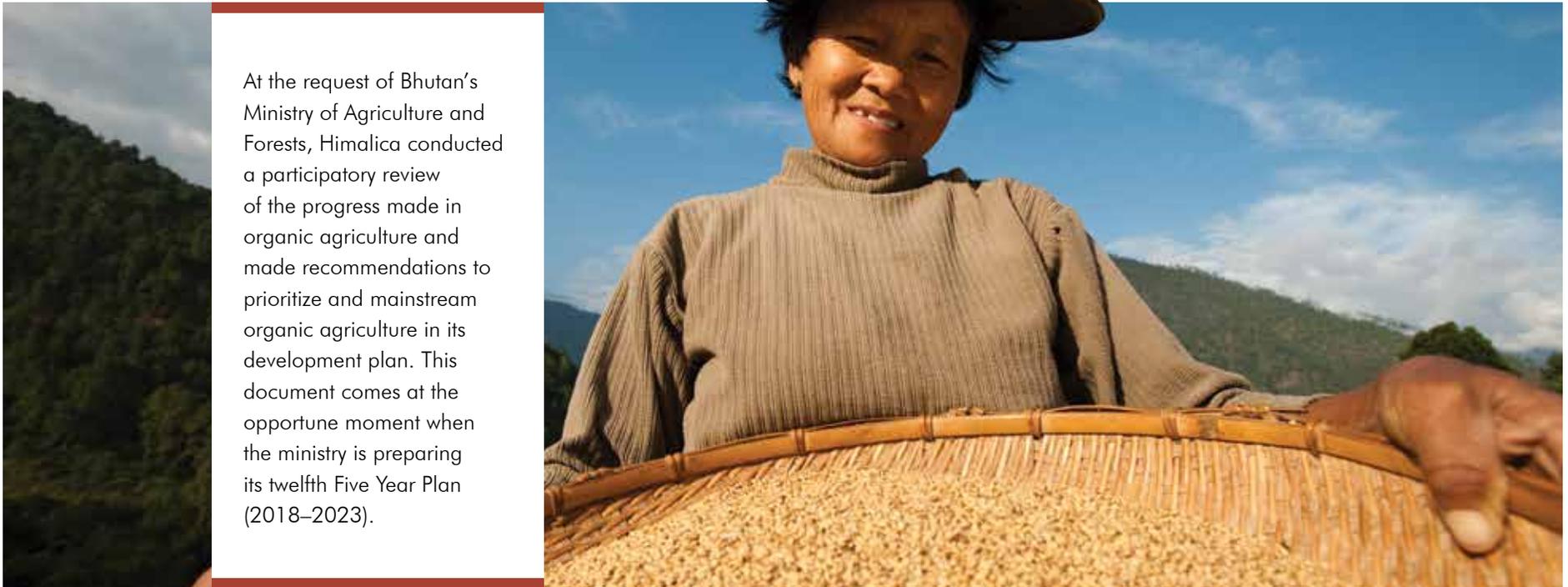
Support to craft policies for sustainable and inclusive tourism development

A tourism economy, in some cases, may damage the cultural heritage and natural resources that draw visitors to an area. To encourage sustainable and people-friendly growth in tourism, Himalica worked with government agencies and private sector partners involved in tourism and natural resources and environmental conservation to balance the seemingly disparate concerns of each sector. Himalica helped develop a Destination Management Plan (DMP) for Inle in Myanmar and Bandarban Hill District in Bangladesh to develop tourism in a responsible and inclusive way and diversify livelihood opportunities for peripheral communities. Himalica also helped craft the Ecotourism Policy and Management Strategy for Protected Areas and Guidelines for Ecolodges in Myanmar. These policies have been approved by the government and put in place to promote tourism and economic growth while safeguarding vulnerable areas.

HIMALICA HELPED DEVELOP THE DESTINATION MANAGEMENT PLAN (DMP) FOR BANDARBAN HILL DISTRICT IN BANGLADESH



Organic agriculture development roadmap for Bhutan's twelfth Five Year Plan



At the request of Bhutan's Ministry of Agriculture and Forests, Himalica conducted a participatory review of the progress made in organic agriculture and made recommendations to prioritize and mainstream organic agriculture in its development plan. This document comes at the opportune moment when the ministry is preparing its twelfth Five Year Plan (2018–2023).

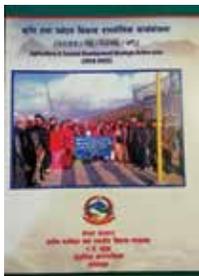
“ICIMOD, through its Himalica programme, supported expertise to review the progress of organic agriculture and produced this document in a participatory manner. The recommendations from this exercise will help the ministry prioritize organic agriculture, allocate resources, and mainstream its development plan to ensure sustainability.”

- Rinzin Dorji Secretary.

Ministry of Agriculture and Forests, Royal Government of Bhutan

Supporting strategic action plans of local governments

To ensure its interventions were sustainable, Himalica engaged multiple stakeholders to design, implement, and review its plans and progress. It organized joint monitoring visits to help communities and local support service providers exchange knowledge. Local governments, observing communities adopting technologies and practices, integrated many interventions piloted under Himalica into their regular programmes. With Himalica's support, the Phungling Municipality in Taplejung came out with a five-year agriculture and tourism development strategic action plan. Himalica facilitated participatory planning to develop similar strategic action plans for Taplejung's Shree Junga Rural Municipality ("Gaupalika"), and Geogs action plan in Tsirang district, Bhutan.



SO FAR,
24 COMMUNITY
LED MICRO-PLANS ARE IN PLACE:
10 IN NEPAL, FIVE IN MYANMAR,
FOUR IN PAKISTAN, AND FIVE IN
BHUTAN.

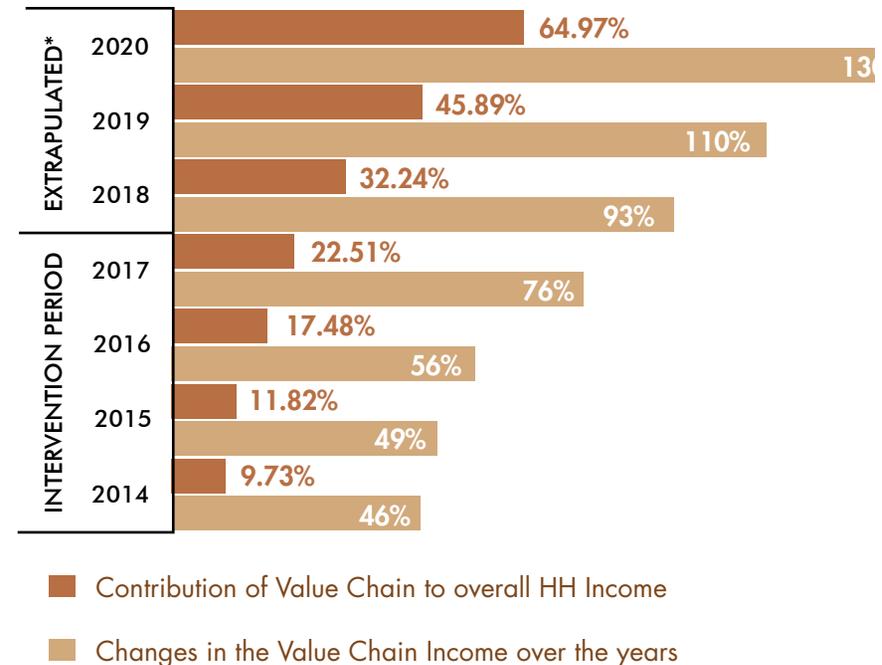


Measuring Real Change

Following rigorous evaluation procedures, Himalica established quasi-experimental designs to assess disaggregated impacts directly attributable to the project. The rigorous evaluation procedures helped facilitate institutional learning and accountability for evidence-based decision making, and provided a strong base of evidence to scale lessons from pilot interventions. The findings revealed an increase in household income, adoption of climate resilient technologies and practices, women’s empowerment in decision making, and other transformative changes. For example, in Pakistan, the average income of beneficiary households from the yak value chain increased by 76% against the baseline; the yak value chain contributed 22.5% to the overall household income of beneficiary communities. Similarly, the ‘difference-in-difference’ average income of beneficiary households from sea buckthorn value chain has increased by PKR 7,683 from the baseline of PKR 615, signifying an exponential growth in household income.

1 USD= PKR 116

Contribution of Yak Value Chain to beneficiaries HH income



Generating and Disseminating Knowledge



Facilitating regional learning and cross-border collaboration

Himalica provided a platform to catalyse transboundary collaboration and cross-fusion of innovative ideas, good practices, and learnings across the Hindu Kush Himalaya. It brought together government representatives, partners, stakeholders, and community change agents from Bangladesh, Bhutan, Myanmar, Nepal, and Pakistan.



Cross-learning

Himalica organized exposure tours to understand drivers of vulnerability and widely applicable solutions, helping strengthen partnership. The Tourism Destination Management Plan for Bandarban in Bangladesh built on the work in Inle Lake in Myanmar; Bhutanese farmers from Tsirang visited Nepal to learn about improved goat breed and sheds; delegates from Pakistan visited China to learn about the commercialization of sea buckthorn and yak meat; emerging tourism homestay entrepreneurs from Bangladesh visited Bhutan, Myanmar, and Nepal to learn about sustainable tourism practices and homestay management; and Nepal's National Adaptation Plan (NAP) delegation visited Bhutan to learn about the climate change adaptation mainstreaming process.

Regionalization of value chains

Himalica's interventions in yak and sea buckthorn value chains in Gilgit Baltistan-Pakistan created interest in Nepal, India, and Bhutan to identify niche mountain products to develop as regional value chains. A package of practices developed for large cardamom in Nepal is now used in Sikkim and Bhutan.

Technology and Knowledge Transfer

The Aga Khan Rural Support Programme (AKRSP), Pakistan, and the Gansu Light Industries' Science Research Institute, China, partnered to explore the commercial development of Pakistan's nascent sea buckthorn industry.

Research collaboration

Lanzhou University committed to sending a multidisciplinary team comprising researchers from its faculty, ICIMOD, and the Aga Khan Foundation to the Hindu Kush Pamir Landscape to scope out the commercial potential of sea buckthorn and yak value chains.

Private sector investment in mountain areas

Base Camp Pvt. Ltd. in Bangladesh invested in tourism development in Munlai Para as a model destination (<http://munlai.com.bd/munlai.html>) for tourists. Sky Frozen invested in a meat processing plant in Daniyur near Gilgit city, opening up economic opportunity for yak value chain actors across Gilgit-Baltistan.

Over 200 experts discuss resilient solutions

ICIMOD and Nepal's Ministry of Population and Environment, with EU support through Himalica, organized an international conference on "Resilient Hindu Kush Himalaya: Developing Solutions Towards a Sustainable Future for Asia" in Kathmandu on 3–6 December 2017. Bringing together more than 200 experts from around the globe, the conference aimed to identify, discuss, and recommend possible resilient solution packages for mountain areas. By drawing on experts' experiences developing and implementing sustainable and resilient solutions, practical policies, and the latest knowledge on resilience, the conference provided short- and long-term recommendations to achieve several SDGs and build the resilience of mountain communities in the HKH.



Policymakers and experts met on enhancing gender responsive adaptive capacity

Himalica supported the participation of relevant stakeholders from the HKH region in a number of global events, including the Conference of the Parties (COP) 21–23. Himalica organized an exhibition booth and a side event, “Experiences sharing on Nepal’s NAP formulation process and approach” together with MoPE and Action on Climate Today (ACT) at COP 22 in Morocco. The side event included a panel discussion that included the Executive Director of the National Environment Council of Bhutan. Himalica also supported the fifth Asia-Pacific Climate Change Adaptation (APAN) Forum in October 2016 in Sri Lanka to draw the attention of policymakers, donors, scientists, government, and civil society to a range of climate change-related issues and their impact on the HKH. Himalica organized a session on “Enhancing gender responsive adaptive

capacity in communities” with the UNEP Asia Pacific Office in Sri Lanka.

To facilitate a dialogue on the modalities, challenges, and opportunities to close adaptation knowledge gaps in different regions of the world, Himalica supported ICIMOD’s participation in the Lima Adaptation Knowledge Initiative (LAKI) Priority Setting Workshop on Adaptation Knowledge Gaps in the Hindu Kush Himalayas, held in Sri Lanka (20–22 October 2016), and also during the Bonn Climate Change Conference (May 2017) at the World Conference Centre in Bonn, Germany. The conference brought together country delegates, representatives of regional centers and networks, academia, research institutions, United Nations agencies, multilateral and bilateral donors, and knowledge brokers.



Climate-resilient package of practices

The climate resilient practices and technologies demonstrated in pilot sites attracted other farmers with its results. This has spread technology and successful practices to other villages.



Climate resilient technologies introduced by Himalica

Water smart



- Rooftop rain water harvesting
- Expanding and excavating ponds for collection of water (surface runoff)
- Plastic-lined ponds for water storage
- Sprinkler and drip irrigation
- Waste water storage ponds
- Bamboo pitcher irrigation
- Green manure and plastic mulching
- Micro pits on a farm land
- Raised nursery beds

Soil-nutrient smart



- Green manuring
- Farm-yard manure (improved composting)
- Biochar
- Improved terracing in sloping land
- Zig-zag plantation to control soil runoff
- Integration of legumes, nitrogen fixing plants

Weather and crop smart



- Mobile messaging on weather forecast, crop advisory, and market price
- Crop varietal selection; alteration in plantation and harvesting time to escape extreme weather
- Use of jholmal as a bio-pesticide and insect repellent
- Using honeybees as a pollination service provider and to diversify income streams
- Pheromone trap
- Forest management (to improve ecosystem services by promoting improved cook stove, stall feeding, etc.)
- Yak pasture management

Energy smart



- Solar pumping irrigation systems
- Energy efficient dryers (improved smokeless stoves)
- Improved cook stoves; bio briquettes
- Bio-digester
- Use of renewable technologies such as micro-hydel for cardamom grinder

Knowledge and business smart



- Community-managed seed bank and collection centre
- Customizing traditional skills in adding value to local resources (e.g. bamboo, handicrafts) per specific requirements of high end markets.
- ICT: Mobile messaging on demand-supply requirements
- Buyer-seller meetings
- Group/cooperatives for collective dealing
- Harvesting and processing tools
- Product development and branding

Gender smart



- Assessment of gender-friendliness of technology
- Reduced drudgery for women and children



Himalica's Publications



6 Books



6 Manuals



6 Working Papers



7 Research Reports



50 General Publications



8 Videos



5 Peer Reviewed Articles



J H Hesse, Head of Cooperation,
EU Delegation to Myanmar

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Published by

International Centre for Integrated Mountain Development (ICIMOD)

GP Box 3226, Kathmandu, Nepal

ISBN 978 92 9115 608 5 (printed)
978 92 9115 609 2 (electronic)

Production team

Samuel Thomas (Senior editor)

Atul Bhattarai (Editor)

Sudip Maharjan (Layout and design)

Photos: Cover photo - Jitendra Bajracharya; Alex Treadway – p26; Amjad Karim – p4, p10; Anu Joshi Shrestha – p30; Anu Kumari Lama – p25; GM Shah – p21; Hussain – p22; ICIMOD – p19; Jitendra Bajracharya – p14, p23, p24, p29, p31, p32, p34 ; MIID – p17; Noor ul Amin – p13; Sanjeev Bhuchar – p5, p20 ; Sibjan Chaulagain – p7, p15; Surendra Joshi – p11, p16, p18, p33

Printed and bound in Nepal by

Hill Side Press (P) Ltd., Kathmandu, Nepal

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This publication is available in electronic form at www.icimod.org/himaldoc

Citation: ICIMOD (2018) *Highlights from Himalica in the Hindu Kush Himalaya*. Kathmandu: ICIMOD



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