

An aerial night photograph of a mountain village. Several tall, stone towers are illuminated from within, casting a warm glow. The houses and buildings are also lit up, and the surrounding landscape is dark with some greenery visible. The text is overlaid on the right side of the image.

Vibrant Mountain Communities

Regional Development in Mountains:
Realizing Potentials, Tackling Disparities

Sustainable Mountain
Development Series

Sustainable Mountain Development Series

Vibrant Mountain Communities

Regional Development in Mountains:
Realizing Potentials, Tackling Disparities

2020

This publication was supported by the Austrian Development Cooperation

Publisher:

Centre for Development and Environment (CDE), University of Bern, with Bern Open Publishing (BOP)

Mittelstrasse 43, CH-3012 Bern, Switzerland

www.cde.unibe.ch

publications.cde@unibe.ch

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This publication was supported by the Austrian Development Cooperation (ADC).

Citation:

Wymann von Dach, S. & Ruiz Peyré, F., eds. 2020. *Vibrant mountain communities. Regional development in mountains: Realizing potentials, tackling disparities*. Bern, Switzerland, Centre for Development and Environment (CDE), University of Bern, with Bern Open Publishing (BOP). 56 pp.

DOI: 10.7892/boris.146720

ISBN (print): 978-3-03917-015-9

ISBN (e-print): 978-3-03917-014-2

Editors: Susanne Wymann von Dach (CDE), Fernando Ruiz Peyré (IGF, OeAW)

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Concept of *Sustainable Mountain Development Series*: CDE, ADA and SDC, with contributions by the editors

Design: Simone Kummer (CDE)

Language editing: Tina Hirschbuehl and Marlène Thibault (CDE)

Proofreading: Stefan Zach (z.a.ch gmbh)

Printing: Werner Druck & Medien AG, Basel, Switzerland

The e-print is available at:

www.cde.unibe.ch

Cover photo:

The high-mountain town of Mestia (1 500 m asl) in the Upper Svaneti region of Georgia, a UNESCO World Heritage site. Agriculture is a pillar of the region's economy (GTW/shutterstock.com)

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Foreword

In 2018, development specialists in five mountain regions around the world identified targets for urgent action to achieve progress on the Sustainable Development Goals in mountains by 2030. The lists were long and while some points were context-specific, many overlapped. The challenges common to most areas included reducing poverty, strengthening resilience, achieving gender equality and safeguarding mountain ecosystems. And promisingly, experiences have shown that progress on one target will have positive effects in several other high priority targets.

But how can mountain societies best tackle these issues – and what support do they need? Should prevailing disparities be addressed first, or does the solution lie in realizing the manifold potentials of mountain communities and regions?

The Austrian experience, both at home and in our longstanding cooperation with our partner countries, has shown that successful regional development processes are rooted in mountain communities' culture and skills, respond to their needs and aspirations, and unlock their potentials and those of their region. Such processes are integrative, focus on synergies and bring actors from different sectors and governance levels together. In doing so, they strengthen the connectivity of mountain regions with urban centres as well as with regional, national and even global markets. A robust and diversified network of mutual and equal exchange between farmers, small-scale entrepreneurs, civil society organizations and external actors helps to develop vibrant communities and strengthen their resilience against slow-but also fast-onset changes, such as climate change or the COVID-19 pandemic.

But achieving progress towards this vision is not an easy or straightforward endeavour. Mountain communities need support and special attention from policy-makers. This volume of the Sustainable Mountain Development Series presents ten good practices from mountain regions worldwide, many of them backed through long-term engagement by the Austrian Development Agency. They show that inclusive planning, reliable and innovative public service provision, and co-creation of quality mountain products and associated value chains can contribute to sustainable transformation processes in mountains.

It is my hope that these case studies and the concluding messages for policy-making encourage more actions in support of regional mountain development and unlock opportunities for mountain communities to realize their full potential and tackle disparities, thus ensuring that no one is left behind.

Thank you!



Martin Ledolter



Martin Ledolter, LL.M.
Managing Director
Austrian Development
Agency (© ADA/Wilke)





Revaluing regional mountain development

Teth, a fertile valley in Shkodra county, Albania. In this county, the Regional Development Programme has helped to pilot a comprehensive process of reform to strengthen coordination, capacity and institutions (Fredy Thuerig/shutterstock.com)



Fernando Ruiz Peyré, Cecilia Turin and Susanne Wymann von Dach

Mountain economies: diverse and rich in potential

Weekly market near Debre Libanos,
Oromia, Ethiopia (J. Krauer)

Sustainable and inclusive economies and supportive policies are crucial for enabling mountain people to escape multidimensional poverty and to live a good life, so that no one is left behind [1, 2]. The socio-economic situation of people living in rural mountain regions around the world varies greatly, although the challenges they face are often similar as well as substantial. At the same time, mountain regions and communities have rich potential for promising development pathways.

Worldwide, an estimated 650 million people live in rural or peri-urban mountain regions. They comprise more than two-thirds of the global mountain population, though their share varies significantly by region, e.g. in Africa, about 84 percent of mountain people still live in rural areas while in South America, only 33 percent do. In many mountain ranges, livelihoods can depend mainly on smallholder agriculture and on local natural resources [3, 4]. But there are also mountain ranges, particularly in Europe, where employment in the industry or service sectors prevails [3]. In recent decades, socio-economic changes have offered new prospects for diversifying employment options in mountains. But these opportunities have varied from one mountain region to another, and from one valley to another – and not all inhabitants of rural mountain regions have benefited equally. At the same time, pressure on natural resources has increased, with overexploitation and extraction widespread, and societal changes such as migration and aging pose additional challenges.

What is the current socio-economic situation of rural mountain regions? With no global overview so far, various studies offer a glimpse of it. A study assessed more than 39 percent of mountain people in developing countries as being vulnerable to food insecurity in 2012 [5]; this share was even 45 percent for rural mountain

areas. The share of people vulnerable to food insecurity also substantially varied between mountain regions (e.g. 64 percent in Middle Africa compared to 27 percent in South America).

National data of countries in which more than 75 percent of the population live in mountain areas provide a reasonable assessment of the incidence of multidimensional poverty as well as the degree of inequality and reflect the multifaceted socio-economic realities of mountain people in these countries (Table 1). The countries with a rather low Human Development Index ranking and a high level of multidimensional poverty (Lesotho, Rwanda and Burundi) generally face relatively high inequality in life expectancy, education and income.

However, these national-level figures do not reveal differences between highland and lowland areas – nor do they illuminate disparities between social groups, between women and men, between indigenous people and the dominant social groups, or between elites and marginalized groups [10, 11]. In the Hindu Kush Himalaya, the poverty incidence in mountains and hills is one-third, and thus higher than the national average of one-fourth. Moreover, indigenous people are among the poorest in the region [12]. Poverty, with its multiple impacts on people's well-being and health, is also influenced by elevation and a region's accessibility. In the Peruvian Andes, for example, farming communities at lower elevations are generally less poor and less food-insecure, with more options for livelihood diversification thanks to their proximity to urban centres. Mountain pastoralists in the upper highlands are poorer and have almost no diversification options; they are thus among the most vulnerable groups.

Table 1. Socio-economic situation of countries with more than 75 percent of the population living in mountainous areas

Developing and transition countries with > 75 percent of people living in mountain areas ^{a)}	Mountain people living in rural areas (percent) ^{a)}	Population in severe multidimensional poverty (percent) ^{b)}	Population vulnerable to multidimensional poverty (percent) ^{b)}	Rank of Human Development Index (out of 189 countries) ^{c)}	Coefficient of human inequality ^{d)}
Armenia	37	0	2.7	81	9.7
Bhutan	58	14.9	17.7	134	26.3
Burundi	87	45.3	16.3	185	29.6
Kingdom of Eswatini	76	4.4	20.9	138	29.0
Guatemala	49	11.2	21.1	126	26.9
Lesotho	71	8.5	24.4	164	32.0
Rwanda	83	22.2	25.7	157	28.4

^{a)} Based on global population model [6] and mountain delineation according to [7] in [8]; ^{b)} [9: 320–321]; ^{c)} [9: 308–311]

Factors defining opportunities and challenges

While mountain regions share certain commonalities, their economies are shaped by the interplay of manifold factors. These include a region's infrastructure and services; its institutions and governance; its diversity of actors and their capacities; and its endowment with natural resources. In addition, global trends – and the extent of a region's market integration – create opportunities but also challenges for development (Figure 1).

Shared characteristics of mountain regions

Complex terrain and high vertical agro-ecological gradients are common traits that result in a high diversity of environmental resources and habitats for fauna

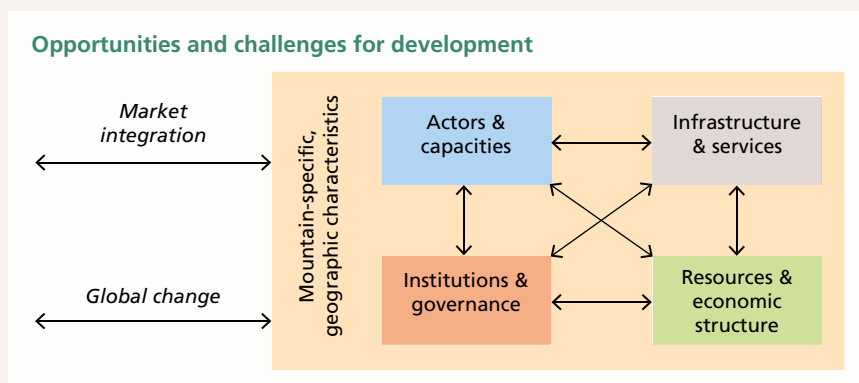


Figure 1. Key elements and their interplay define a mountain region's opportunities and challenges for development

and flora. In addition, the combination of difficult physical accessibility, susceptibility to multiple natural hazards [13] and high sensitivity to climate change [14] characterize mountain regions and influence their socio-economic development. Mountain regions are often peripheral to political and economic centres, resulting in their relative marginalization. In addition, population density is low, settlements are frequently scattered, and accessibility to social services is often fragmented.

Actors and their capacities

Farmers, small-scale entrepreneurs, civil society organizations and government organizations are among the many different actors that form a key component of social–economic–ecological systems in mountains. Their knowledge and skills, their financial resources and power, and their social and economic networks within and beyond mountain regions co-determine the entrepreneurship of actors and their capability to act and govern (Kratzer et al., pp. 34–35).

Mountains are home to a host of indigenous people and culturally rich communities [15]. Their traditional and local knowledge has evolved from generation to generation and enables them to adapt to the dynamic societal changes and challenging environmental conditions they face. This knowledge finds its expression in agricultural practices, socio-economic arrangements and local institutions – but also in the richness of a community's art, music and ritual practices [16].

Mountain people's capacity to respond in creative ways – either individually or collectively – to new opportunities and changing conditions is pivotal for regional mountain development. Households in mountain regions have a long tradition of combining and complementing different economic activities and coordinating workloads and income opportunities that vary throughout the year. This may include certain household members migrating temporarily or permanently, with positive and negative implications for those who stay behind [8, 17].

Local and regional governments' capacities, competences and accountability are decisive for governing and supporting regional development. In rural mountain areas, authorities often lack the necessary knowledge and financial means – but also the convening power – to steer regional development processes (Gjika and Imami, pp. 20–21, Janazyan and Mkrtychyan, pp. 26–27). This is also due to the weak political position of mountains [18]. A network of diverse actors can increase political clout, spur regional development and strengthen the resilience of mountain regions [19]. These actors may be governmental and non-governmental, civil society organizations or from the private sector, but given the very different socio-economic situation and power relations within and between mountain communities, their ability to seize opportunities varies greatly.

Institutions and governance

A region's political leadership, institutions, social capital and regional identity are important factors shaping regional development processes [3]. It is also important to ensure inclusive participation of the different social groups and to address their unequal power relations as well as social and cultural barriers within communities, and between local and external actors.

In rural mountain regions, local formal and informal institutions have shaped the management of natural resources and govern benefit sharing among stakeholders and different social groups. Collective action is employed in many mountain regions to use, conserve and add value to natural resources. But national laws and regulations have in many cases neglected the specific situation of mountain regions, and where they do address this situation, they may be insufficiently enforced. In Peru, government policies focus on high-potential areas, paying less attention to poor highland communities, which results in underinvestment in mountains [20, 21]. Recent decentralization efforts to strengthen local self-governance show that these shortcomings are being addressed. Similarly, countries around the world are increasingly establishing transboundary and national policies and initiatives that specifically aim at making mountain regions more robust (Box).

Natural resources and economic structure

A mountain region's endowment with natural resources and its historical economic trajectories influence its development opportunities and challenges.

Mountains are often rich in biodiversity, including agrobiodiversity. About 30 per cent of terrestrial Key Biodiversity Areas is fully or partially located in mountain regions. About 44 000 protected areas are situated in more than 1 000 mountain ranges [25, 26]. This biological diversity offers prospects for inclusive and equitable value chains of unique "mountain products" (Devaux et al., pp. 32–33). Moreover, mountain forests provide key regulating ecosystem services and goods such as timber, fuelwood, fibres, food and medicine. The sustainable use of these materials is essential for rural livelihoods and small-scale enterprises in the industrial and service sectors, and their importance for regional development is often overlooked [27, 28].

Around half the world's population depends on freshwater from mountains for drinking, irrigation, hydroelectricity, industry, recreation or transportation [29]. Water management that is sustainable, inclusive and integrated – and that ensures equitable benefit sharing – is thus essential for regional development in mountains as well as in the adjacent lowlands. Applying a water–energy–food security nexus approach helps to use synergies and ensure the provision of safe and sufficient water for household and business purposes, clean energy and adequate and nutritious food in the mountains, while protecting the environment [30].

Mineral resources have become increasingly important and mining is booming in many mountain regions. The sector is dominated by large-scale, non-locally owned companies and precarious working conditions for thousands of local people – and fails to account for their environmental and social costs [18]. However, other companies, as well as international aid agencies and NGOs, are increasingly engaged in supporting artisanal and small-scale miners and developing transparent and formal supply chains, e.g. in the gold mining sector, that can become important pillars of regional development [31–33].

Mountain-specific policies and strategies: three examples

Uganda, Africa: The National Sustainable Mountain Development Strategy aims at: a) protecting the fragile mountain ecosystems; b) improving the social and economic well-being and livelihoods of mountain people, particularly of the most vulnerable groups; and c) strengthening national capacities and stakeholder collaboration to sustainably manage mountain ecosystems [22].

Georgia, Caucasus: The overall goal of the Law on Development of High Mountainous Regions is to promote social and economic progress of high-mountain regions, with a view to ensuring the well-being of mountain people, raising their standards of living, promoting employment and improving overall social and economic conditions. In 2019, a four-year national strategy was developed to implement the law [23, Tkeshelashvili and Nowakowska, pp. 38–39].

Alpine Region, Europe: The "EU Strategy for the Alpine Region" (EUSALP) aims at enhancing the attractiveness and competitiveness of the Alpine Region and reducing social and territorial disparities. It fosters linkages between cities, plains, valleys and mountains through a macro-regional perspective [24].

For more information on mountain-specific institutions, laws and strategies, see [18].

The scenic beauty of mountain landscapes, a healthy environment and rich cultural heritage have made mountains a preferred destination of national and international tourism and of what has become known as “amenity migration”. Between 15 and 20 percent of global tourism flows to mountain regions [34]. While tourism offers new income opportunities in some mountain areas, it can also increase pressure on mountain environments and societies.

Infrastructure endowment and public services

Physical infrastructure such as roads, renewable energy facilities and communication technology is essential but often not a sufficient driver for regional development in mountains. Access to reliable and quality public services – such as administrative services, primary and secondary schools, vocational education and training, and extension and health services – is equally important [35]. The provision of administrative and social services is often fragmented and limited, also due to political marginalization and insufficient local government capacity. And there is the issue of cost – rugged topography, scattered settlements and the hazard-prone situation make it expensive to build and maintain physical infrastructure.

Mountain regions in global change

Mountain regions are affected by demographic changes, outmigration, urbanization, pressure on the environment, commodification of agriculture and landscapes, social-cultural and technological change as well as climate change [36, 37]. Climate change and related slow- and fast-onset disasters as well as market volatility and economic disruption – as currently caused by the COVID-19 pandemic – reveal the exposure and vulnerability of mountain regions and societies. Overall, the social–economic–ecological situation as well as these dynamic changes present both opportunities and threats for mountain regional development (Figure 2).

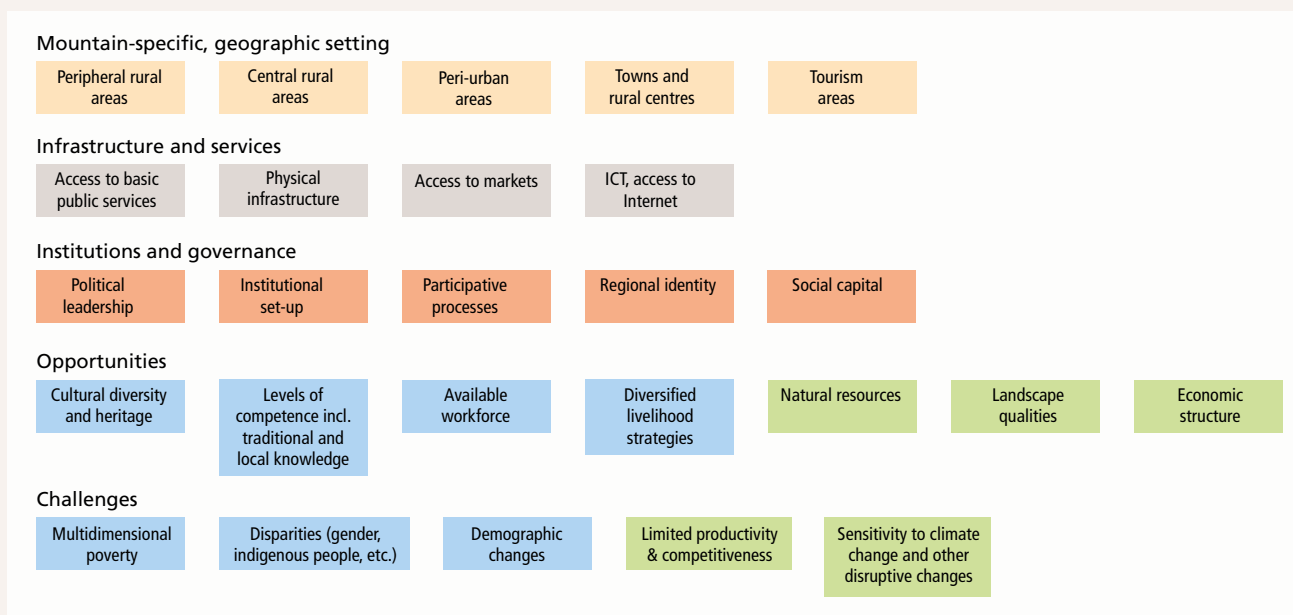
Increasing market integration

Increasingly, quality products are produced in mountain areas for regional, national and international markets. Economic opportunities emerge through the promotion of small-scale economic cycles, direct marketing initiatives (like fair trade or “comercio justo”) and local innovation networks that are supported by effective multilevel governance. The specialization in quality products, native crops or the protection of mountain specificity (e.g. through the “Protected Designation of Origin”) are proven strategies to differentiate these products from large-scale (agro-) industrial products (Box, [38]). Commodification of mountain products and resources, however, must not jeopardize local food security but instead contribute to strengthening the self-reliance of a region.

Since the middle of the 20th century, tourism has been one of the most dynamic economic activities in mountain areas. The rapid growth of tourism is related to increased urbanization and the need felt by a growing urban population to escape from cities for spiritual and recreational purposes, and to better accessibility of mountain areas [29]. Mass tourism is criticized for its negative environmental effects and high seasonality, and for its domination by powerful external actors that reap a large share of the profit. Alternative forms of tourism (e.g. eco-, ethno-, slow, health or adventure tourism) can contribute to sustainable regional development but it is not a magic bullet and depends on a region’s accessibility and potential to attract tourists (Chettri et al., pp. 36–37, [40]). Such alternatives are particularly rewarding if they are linked with capacity development and if tourism enterprises are owned by local people and communities. However, as the impact

Mountain Partnership Product Initiative

The initiative established a certification scheme for environmentally and ethically sound value chains that help to conserve agrobiodiversity and ancient techniques. More than 10 000 farmers (60 percent women) in eight countries are involved and benefit from selling prices that have increased by up to 25 percent, thanks to labelling and better market access [39].



of the COVID-19 pandemic is painfully demonstrating, too strong a focus on tourism increases vulnerability through economic dependence on a potentially volatile sector [41].

Figure 2. A framework for characterizing the socio-economic and environmental system of a mountain region, adaptable by context. Source: modified from [3: 54]

Migration and urbanization

Migration and mobility are traditional strategies in mountain areas for optimizing the use of natural resources and responding to social and economic needs. This means, though, that many mountain regions are currently facing considerable outmigration by mainly the younger generation (predominantly men but increasingly also women). These dynamic migration processes are also closely linked with changes in society and in gender relations. Migrants gain new knowledge that can trigger social and technical innovation in their place of origin in mountains. Financial remittances improve rural livelihoods and enable the family members that remain in the mountains – often women – to invest in business development [17]. Migration also weakens mountain societies and economies. Natural resource management, with the complementary gender roles and related knowledge systems it entails, is interrupted, and labour in agriculture must be re-organized or land lies fallow. The absence of migrants for much of the year weakens local organizations and undermines community governance but also care work traditionally organized within families and communities [8, 20].

Mobility and changing rural–urban relations are leading to new developments in small and medium-sized urban centres in mountains [42, 43]. These emerging centres are adopting new functions, bringing facilities (higher education institutes, public health centres, other public services, entertainment venues) closer to rural populations and becoming markets for agricultural products. Furthermore, they offer new employment opportunities and thus contribute to poverty reduction, provided fair working conditions are in place [44]. In doing so, smaller centres can play an important role in regional development and stimulate economic development not only in the centres, but also in the surrounding rural areas.

While outmigration from rural mountain areas prevails, well-connected areas also experience population growth through amenity migration by “new highlanders”. These migrants choose to settle seasonally or permanently, motivated by the beauty of the landscape, the fresh air and the tranquillity, or the opportunity to engage in new and alternative economic activities [45].



Fernando Ruiz Peyré, Cecilia Turin and Susanne Wymann von Dach

Regional visions for development and levers for transformation

Fostering inclusive and sustainable socio-economic development in mountain regions requires systemic approaches that take advantage of the potential of a region and the communities that inhabit it. Systemic approaches would enhance governance capacities with a view to strengthening multistakeholder partnerships and promoting efficient collaboration across sectors and between public, private and civil society actors. Such approaches would also secure basic social and economic services and infrastructure.

The overall goal of regional development in mountains is to reduce disparities while enhancing mountain people's well-being and strengthening their resilience. However, visions of "development" may differ according to people's aspirations and needs and a region's socio-economic and environmental situation. Indigenous people, women, men, elderly or the youth "see" regional development differently; as a result, they "do" development differently [1]. Consequently, the specific objectives and practices of regional development need to be rooted in local, socio-cultural conditions, and to answer the question: "What kind of regional development for whom?" [2] This implies finding common ground to jointly define a vision for the region, address existing social and power relations and diverging interests, and negotiate trade-offs between the different possible pathways. Pathways that are informed by sound evidence on the situation in the region are best placed to take advantage of the opportunities and to tackle challenges.

Principles of regional development

We have seen that mountain regions and their inhabitants harbour unique development potentials. At the same time, they face great challenges. To help achieve a region's vision, development strategies are best guided by a set of principles that make them inclusive, people-centred, place-based, environmentally sustainable –

A vision for the future of Tungasuca, Peru, jointly developed by representatives of local communities and local and municipal authorities, as well as researchers and NGO technicians (S-L. Mathez-Stiefel)

and that make them ensure diversified livelihood options. We expand on these principles below:

- Strategies should **be inclusive**, promoting economic development that tackles disparities of all types, ensures equal access and use (e.g. of natural resources) and benefit sharing, and reduces risks related to socio-economic changes and natural hazards [3]. Factors to consider in rural mountain regions include disparities between women and men, between different altitudinal zones or between well-connected and remote areas. This implies that all stakeholder groups, particularly women, as well as vulnerable and marginalized groups, actively participate in planning and budgeting, decision-making and concrete implementation of development strategies for mountain regions.
- Strategies should **be people-centred**, integrating local knowledge with external expertise; ensuring equitable distribution of benefits; respecting local culture; bringing local power relations into balance; and reducing local conflicts. All of these are key for regional development, as they trigger innovations and empower people's agency and accountability.
- Strategies should **be place-specific**, focusing on local potentials and opportunities, which increases the probability of success and, importantly, acceptance by the local population [3]. This includes taking into account the diversity of ecosystems as well as social-cultural and economic structures within and between mountain regions [4].
- Strategies should **be environmentally sustainable**, safeguarding mountain ecosystems to ensure the sustainable provision of ecosystem services (e.g. timber production or protection from natural hazards) for people in mountains and highlands. Key to achieving this is regionally adapted and community-based management of mountains' natural resources [5].
- Strategies should **ensure diversified livelihood options**, expanding economic options and increasing the adaptive capacity of a region. A diverse and attractive employment offer, accompanied by appropriate capacity development, can help to reduce outmigration and improve resilience, both of the region and of individual households. Promising examples in this respect include diversifying seasonal tourism offers, enhancing "multifunctionality" in the agricultural sector by combining agricultural with productive activities, or taking advantage of new ITC opportunities.

Levers towards sustainable and just economies

Considering these guiding principles, experiences from different mountain regions around the world reveal three main levers for transformation:

- plan and decide inclusively, based on existing potentials,
- ensure equitable access to quality public services, and
- connect actors to spark innovations.

The following three sections of the report present ten good practices on how these levers help to promote development, with multiple benefits for people in mountains and lowlands, and help to safeguard mountain ecosystems. The publication concludes with recommendations for policy and decision-makers and how they can trigger these levers through effective territorial governance, adequate funding schemes and capacity building efforts.





Lever: Plan and decide inclusively

Local community representatives and extension service/NGO technicians cooperate to identify and develop local innovations for the sustainable development of Ancoraimas village and surroundings, Bolivia (S-L. Mathez-Stiefel)

Bottom-up land use planning for equitable rural development in Lao PDR



Cornelia Hett, Phaythoun Pilakone, Kevin Kamp, Micah Ingalls and Andreas Heinimann

In the uplands of Laos, high poverty and insecure land tenure prevail. At the same time, traditional agriculture is being rapidly transformed into large-scale operations for commodity production and resource extraction. In this context, how can equitable economic development be achieved that both benefits family farmers and protects the environment? The participatory land use planning approach developed and implemented by the Agro-Biodiversity Initiative lays the foundations.

Villagers and government representatives in the Lao uplands working to implement FALUPAM (K. Kamp)

Three-quarters of Laos is mountainous and dominated by subsistence farming [1]. Most of the poor (87 percent in 2012/13) are rural, and poverty is concentrated in upland areas [2], where people generally lack formal land tenure rights [3]. Traditional swidden agriculture has resulted in a mosaic of natural forests, cultivated fields and forest fallows [4]. However, the Lao uplands are rapidly transforming due to (a) the economic integration into the Mekong region, (b) the national agenda promoting intensified, market-oriented agriculture and (c) the sparing of land for biodiversity conservation. The rural population benefits only marginally from these changes [5].

To promote pro-poor rural development, increase local tenure security and plan conservation, the Agro-Biodiversity Initiative (TABI) has developed a participatory forest and land use planning and management approach (FALUPAM) [6]. This bottom-up approach targets the village level and involves local residents and local/district-level government staff. FALUPAM is a multistage process that is implemented jointly over several years, enabling trust building, fair negotiation and adaptive change management.

During the various stages of FALUPAM, actors:

- Establish local land use planning committees and collect data on agrobiodiversity resources and socio-economy;
- Work in inter-village negotiations to identify landscape features and delineate village boundaries;
- Assess and map the current land use situation by considering all land uses, including land for swiddening, livestock grazing and collection of non-timber forest products;



"FALUPAM is good because it is participatory – if people are involved in the process, they follow the results – and because it involves detailed data collection and decreases conflict within and between villages."

Deputy Director, Agriculture and Forestry
Office of Luang Prabang Province [6]

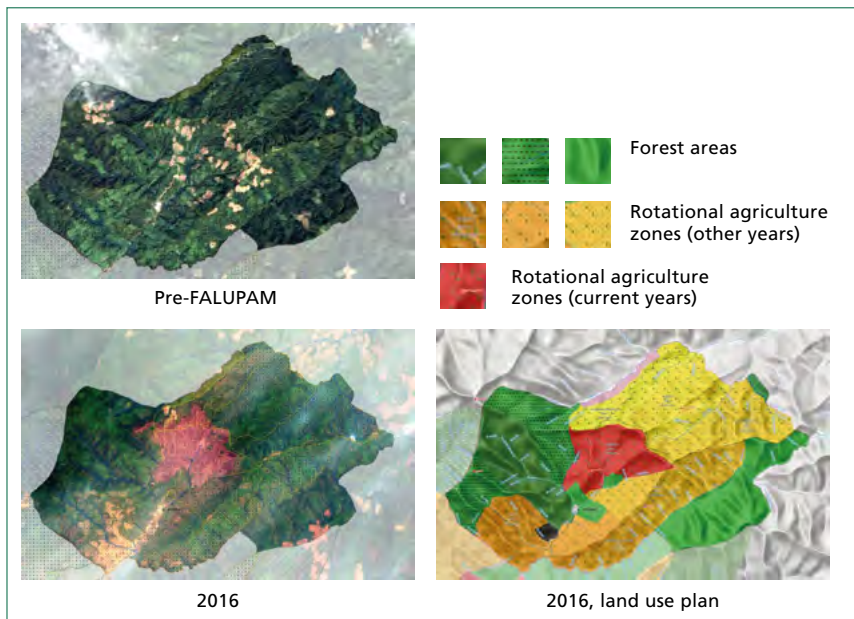


Figure 1. Example of implementation of a negotiated land use zoning plan in Thathong village, Northern Laos. Top: Starting situation, with swidden agricultural fields dispersed across the village territory. Bottom: Spatial clustering of agriculture and forest areas during the land use planning process led to larger continuous spatial units, which enables more efficient annual cropping of upland fields and promotes “tidiness” of landscapes. Source: modified from [3]

- Co-design future land use management and zoning plans by jointly negotiating development priorities and assessing trade-offs of different land use options, including the practice of clustering cropped upland fields (see Figure 1);
- Implement the plans, monitor the outcomes and, based on the outcomes, revise and update the plans.

The land use plans created under FALUPAM have been instrumental in creating clarity on land tenure. They respect local and customary tenure and are spatially precise in their clear definition of land use categories. The plans have also been recognized at higher administrative levels, making them the foundation for further development planning.

For the villages, the benefits of FALUPAM have been:

- **Economic:** The clustering of cropping land has led to improved land management and thus economies of scale for agricultural production. It has also secured the production of high-value (but long-rotation) agrobiodiversity crops (e.g. benzoin trees, or tea from ancient tea forests) by delineating forests for agricultural use;
- **Social:** Clustering the upland fields has strengthened village social networks through collaboration and coordination on land use. It has increased villagers’ negotiation capacity towards outsiders and reduced inner and inter-village land use conflicts. FALUPAM facilitated a constructive dialogue on the politically sensitive topic of swiddening, with government representatives from district and provincial levels;
- **Environmental:** Forest fires were reduced through more effective cooperation on fire control. The clearly defined areas of forest conservation and restricted use, also across village boundaries, led to larger continuous natural habitats and wildlife corridors. FALUPAM directly increased conservation forest areas by 9.5 percent and has contributed to the national strategy of increasing forest cover nationwide.

FALUPAM has been implemented in over 300 villages in 13 provinces. Training was provided to more than 70 government staff, faculty members and students at the National University, and staff of other major rural development projects.

- Land use planning is important to drive self-determined economic development at village level and simultaneously promote ecosystem services that are relevant for all levels, from local to global.
- To be effective, land use planning should provide space for the engagement of villagers, representatives of neighbouring villages and representatives of different levels and sectors of government. To build trust and ownership, land use planning should be carried out in an iterative way and over a long period.
- Adaptive change management is crucial to address challenges as they arise, and to take advantage of unforeseen opportunities. This means that land use zoning plans should continue to be evaluated and monitored – and, if needed, adapted.

The Agro-Biodiversity Initiative (TABI)

TABI is a joint programme of the Ministry of Agriculture and Forestry of the Government of Lao PDR and the Swiss Agency for Development and Cooperation. It aims to improve the livelihoods and incomes of local upland farmers by developing and facilitating opportunities to protect and enhance agrobiodiversity.

An evaluation in 200 villages showed that 66 percent of the villages followed the FALUPAM land use plans closely. One-quarter had minor difficulties in respecting the forest boundaries, and only 9 percent largely failed to comply with the plans. Reasons for failure included (a) unforeseen major land use interventions (e.g. granting of concessions at higher administrative levels) and (b) cultural constraints preventing clustering of upland fields [3].

Scenarios to steer and support development of mountain regions in Albania

Anila Gjika and Fiona Imami

Creating development scenarios was key to addressing increasing disparities in northern Albania's mountainous Shkodra county. The scenarios helped to identify Shkodra's development potentials and initiate promising pilot projects towards sustainable and balanced socio-economic development. The approach was scaled up and incorporated into Albania's upcoming Regional Development Policy (2021–27), which aims at taking advantage of the region's endogenous resources to improve people's well-being.

Rehabilitated road in Qender Village. Supporting the Regional Agricultural Department of Shkodra to rehabilitate infrastructure, with particular focus on areas with high potential to cultivate medicinal plants and tobacco (O. Haub)

In the last 30 years, Albania has experienced high outmigration from peripheral mountain areas towards the country's centre and its western coast. Economic activities became clustered in the recipient areas, and the development of other regions lagged behind. Since 2002, the Government of Albania (GoA) has undertaken efforts to promote a more balanced regional development. However, the reforms implemented were either top-down or entirely local, fragmented and lacking in essential national-level ownership that would enhance cohesion and ensure sustainability. In response, since 2010 the Regional Development Programme (RDP) has been supporting Albania's Regional Development Reform through piloting a comprehensive process in Shkodra and Lezha counties in northern Albania and strengthening coordination, capacity and institutions countrywide (Box). The approach has flowed into the Regional Development Policy, which, once approved, will cover the years 2021 to 2027.

Shkodra county (or "qark", in Albanian) is characterized by mountainous terrain and, despite its diverse potentials, faces challenges to promote a sustainable and competitive economy. First, travel between the region and urban hubs is lengthy and difficult. Second, its rural areas have among the highest unemployment rates (16.6 percent compared to the national average of 10.3 percent), high migration rates (–20.8 percent for 2001–2017) and low economic performance (GDP per capita has been 25–30 percent lower than the national average for the last 15 years). And third, while the region is quite rich in natural and cultural/heritage potentials (10 protected areas and 210 natural monuments), the tourism sector remains fragmented and underdeveloped.



Lessons learned

While numerous strategic documents were developed in the past to guide the development of Shkodra qark, there was no action plan to harmonize all these strategies. In 2010, the authorities of Shkodra qark initiated a future-oriented strategic process, assisted by the RDP, to coordinate and promote development in the region effectively. The process involved the following steps:

- a) **Identifying territorial potentials** by analysing the existing Regional Development Strategic Concept [1] and the region's economic patterns and territorial resources. The aim was to define the overall development goal and sectoral objectives towards regional development; central and local government institutions and socio-economic development partners in the region actively participated in the analysis.
- b) **Identifying key development actors** in the regions through an in-depth stakeholder assessment. The aim was to involve them in outlining development scenarios.
- c) **Designating subregions with similar potentials and challenges** as well as major sectors within these regions requiring development support as based on previous assessments. Four subregions and three major sectors (agriculture, tourism and environment) were eventually selected.
- d) **Elaborating a development scenario** for each of three sectors in the four subregions/territories together with the key development actors [2].
- e) **Determining development needs** and specific interventions to achieve the development goals set out in the scenarios.
- f) **Drafting a Regional Activity Plan** to prioritize projects and identify funding opportunities for implementation.
- g) Supporting the **implementation of Priority Projects** by local government institutions in partnership with other socio-economic partners (spanning NGOs, the business sector, academia, vulnerable groups, etc.).

The Shkodra Regional Activity Plan identified 35 Priority Projects, of which 22 were already funded by the RDP's grant scheme. These projects supported capacity building and employment of women in mountainous areas, small-scale enterprises focused on endogenous natural resources (medicinal herbs), mountain tourism through rehabilitation of existing infrastructure, and protection of the region's natural habitat.

- Previously, large rural and mountainous areas of Albania did not benefit from development growth. Bringing decision-making closer to local and regional actors helped to address the regions' development challenges.
- Only projects with solid local support should be funded through regional development funds. Apart from guaranteeing local ownership, this makes benefits more likely to be felt by local people and society.
- The experience of the Regional Development Programme in northern Albania shows that a development process designed with local and regional institutions, and based on a coaching approach, can lead to significant improvements in capacity and skills because of its practical orientation.



Promoting tourism in Albania's mountain areas, Eco-Park in Shkrel village (O. Haub)

The Regional Development Programme in Albania (RDP; 2010–2023)

The Regional Development Programme is a joint and long-term effort to reduce disparities among Albania's regions. It is implemented in partnership with GoA and co-funded by the Austrian Development Agency (ADA) and Swiss Agency for Development and Cooperation (SDC).

RDP I (2010–2015) supported Shkodra and Lezha qarks in northern Albania, a mountainous area, in developing effective and participative mechanisms for regional coordination across all government levels based on a comprehensive review of the qarks' potentials and competencies. RDP II (2015–2017) helped GoA to clarify and define the countrywide regional development approach and prepare guidance for the reform. RDP III (2017–2019) served as a preparation phase, setting up a legal and financial framework, piloting a grant fund mechanism and strengthening institutional capacities at regional and central level. RDP IV (2019–2023) supports the development and implementation of the national regional development policy and law through coordination of regional and local stakeholders, capacity building and financing of effective projects at the local level [3].





Lever: Ensure equitable
access to quality public
services

Citizen engagement for better public services in Ethiopia



Serkalem Tafesse

The Ethiopia Social Accountability Program (ESAP) has set in motion a new way of engagement between citizens and public officials to improve the delivery of basic services that are crucial for local socio-economic development. This is particularly important in the Ethiopian Highlands, where basic services have been inadequate and have not met people's specific needs.

Experimental planting of crops by farmers in Machakel district (ESAP)

Despite a long history of statehood, Ethiopia has deep-rooted socio-economic and governance problems. Access to basic service delivery is still a serious challenge to many Ethiopians, particularly in rural areas of the country. The Ethiopia Social Accountability Program (ESAP) is a countrywide programme that aims at strengthening local-level social service delivery in five sectors: education, health, water and sanitation, rural roads and agriculture (Box). Now in its third phase, ESAP has partnered with 76 civil society organizations to support local community-based organizations in becoming more knowledgeable about service delivery and in providing guidance on holding public officials accountable for the quality delivery of services. During its second phase, Social Accountability Committees (SACs) were established at the village and district levels. These facilitated processes with a wide range of community members, particularly members of vulnerable groups, to identify priorities for improving public social services and developing joint action plans (JAPs) that respond to the local needs of the different social groups (Figure 1). This is of particular importance to Ethiopia's highlands with their specific socio-economic and environmental conditions.

Machakel district in the highlands of Amhara region (between 1 500 and 2 000 masl) is one example where ESAP is active. It is home to about 143 000 people, more than 80 percent of whom depend on agriculture as their main livelihood. In the 1990s and 2000s the population declined by more than 30 percent [1]. A rapid assessment conducted by ESAP in 2015 revealed that 88 percent of the communities were previously not involved in the planning, budgeting or implementation of basic public services, nor in the monitoring of their quality, accessibility and equity standards. Only 28 percent of citizens had access to quality agriculture services and 17 percent were satisfied with their access to agricultural inputs [2].



"The [Machakel] woreda has become a model for East Gojjam zone, because it is making agriculture services equitable, effective, efficient, responsive and accountable. Many NGOs usually come up with cash and give us something in terms of a handout which is consumable. This project is changing the attitude and raising the awareness of the community and the awareness of service providers, which goes a long way."

Ato Tariku Tadesse, Machakel District Finance Head and SAC secretary

Lessons learned



Farmers in Machakel district visiting the Improved Farmer Training Centre (ESAP)

The social accountability process in Machakel started in 2015 by teaching citizens and service providers in the agriculture sector about the government's service standards. Several focus group discussions involving women, people with disabilities, youth, vulnerable groups and poor people revealed that the Development Agents and the Farmer Training Centre (FTC) were not providing adequate support to farmers. Seeds and fertilizers were distributed with delay and without consideration for the specific conditions of the highlands, causing declines in productivity. At an ensuing interface meeting in 2016, the community and district agricultural bureau agreed on the following improvements:

- To give farmers access to FTC land with the purpose of testing the suitability and productivity of different seeds and fertilizers before planting them on their own land;
- To address the lack of a veterinary clinic. The district authority agreed to appoint a veterinarian and purchase drugs, while the community agreed to contribute in cash and labour to set up a clinic.

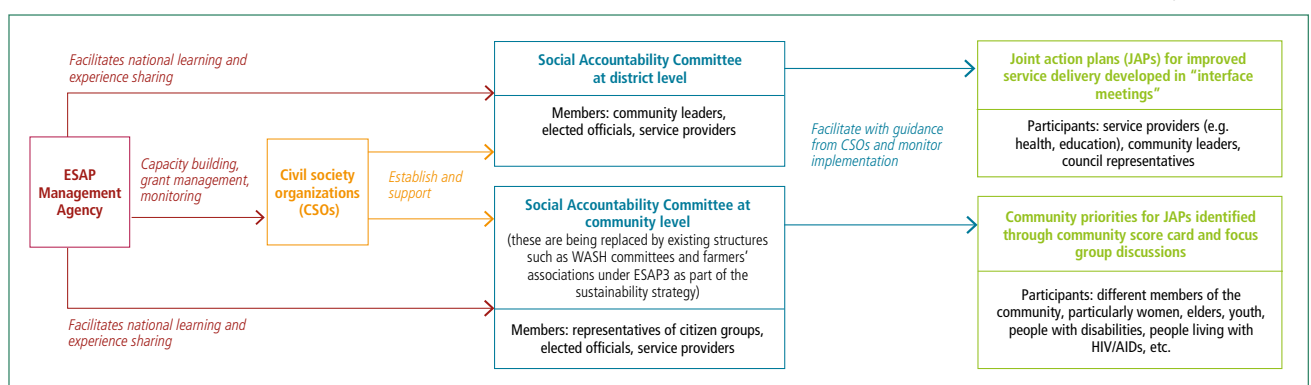
These participatory processes helped to empower citizens and resulted in improvements in basic service delivery. The existence of the programme seems to have altered how local governments provide basic services, although there is as yet no conclusive evidence that these improvements can be exclusively attributed to social accountability activities. Now, communities generally report greater satisfaction in the functioning of services, and people perceive fewer frontline service delivery problems, such as availability of textbooks in schools, timely provision of select seeds and fertilizers, medicines in health care and timely access to nurses and doctors. ESAP's most significant achievement is the establishment of platforms for citizens and public officials to have constructive dialogue about issues that matter to them.

- Fostering social accountability through citizen engagement helps to improve services. This means paving the way for citizens to influence local decision-making by engaging them in planning, implementation and monitoring. Collecting their feedback throughout this process is vital.
- Excluded and vulnerable community groups, such as people with disabilities, must be represented in the social accountability process and their needs taken into account in decision-making.
- For social accountability to be sustainable, it needs to involve existing structures such as parent-teacher-student associations, WASH committees and farmer associations. ESAP3 is setting the stage for this by shifting from using parallel structures to working with existing structures that will continue to exist without the need for external support.

Ethiopia Social Accountability Program (ESAP)

ESAP started in 2006 as a pilot and is in its third phase (ESAP3, 2019–2023), reaching citizens and local government in 317 woredas (districts). It is supported by a multidonor trust fund administered by the World Bank, based on an agreement between the government of Ethiopia and the European Union, Ireland, the United Kingdom, Austria and Sweden. ESAP is managed by a management agency that oversees implementation by local civil society organizations.

Figure 1. Process to assess and improve social service delivery through involving different stakeholders at the community and district levels



Modernized administrative services for Armenian citizens

Vardan Janazyan and Lika Mkrtchyan

Armenia, a mountainous country, has been consolidating its previously fragmented – and thus ineffective – municipal landscape. Newly established “Citizen Offices” serve as municipal operation hubs and are equipped with a Municipal Management Information System to enable the exchange of data. As a result, nearly half of the country's population outside the capital, Yerevan, can now benefit from modernized, transparent and efficient access to municipal administrative services.

Zhora, one of the oldest citizens of Tumanyan municipality, benefits from the proximity of administrative services (Good Governance for Local Development, South Caucasus)

The Republic of Armenia is mountainous, with steep slopes and deep river valleys. The country's topography and environment has influenced its population distribution as well as its historical, political and socio-economic situation. About three-quarters of Armenia's population live in mountainous areas [1, data from 2015]; 23 percent of people live below the national poverty line and 17 percent are unemployed [2, data from 2018]. The challenging economic situation has long led to high emigration.

In 2015, Armenia had 915 municipalities of greatly varying population size. The municipal landscape was highly fragmented and many municipalities were too small to fulfil their functions effectively. In response, the government launched the Territorial and Administrative Reform of Armenia (TARA). TARA's goal was to reduce the number of existing municipalities and support effective decentralization to provide better services to their citizens and businesses, make efficient use of the limited financial resources and support sustainable socio-economic development. By March 2020, 465 former municipalities had been merged into 52 multisettlement municipalities. The government foresees full implementation of the reform by the end of 2021, with the number of municipalities reduced to 150–200.

The resulting – much larger – municipalities are establishing “Citizen Offices”, to deliver modernized, transparent and efficient administrative services to the local population. Establishment of the Citizen Offices is part of a broader programme by the Ministry of Territorial Administration and Infrastructure, funded by Switzerland and Germany and implemented by GIZ, the Council of Europe and UNDP [3, 4]. The programme aims at strengthening accountability, effectiveness, efficiency and inclusiveness of local self-government bodies. In this regard, improved service



“ We can immediately provide a reference number for any enquiries received from our inhabitants here. Through the Municipal Management and Information System (MMIS) the citizens can then track and follow their requests online. And there is no further need for citizens to go to the centre.”

Iveta Mirzoyan, MMIS Operator, Mets Ayrum settlement of Akhtala municipality

Lessons learned



Rugged valleys and scattered settlements in Lori Province, Armenia (K. Faliyan/shutterstock.com)

- Strong government ownership in tandem with well-coordinated donor assistance is a prerequisite for the sustainable implementation of a complex reform such as Local Self-Governance (LSG).
- Harmonization and alignment between capacity building of municipal staff and investments in infrastructure are important factors in achieving tangible, broad-scale improvements in public service provision and local economic development.
- The success and pace of the LSG reform depend on well-targeted, consistent and continuous communication between the central and local authorities.

delivery by municipalities and enhanced citizen participation in local governance, including empowerment of women, are of particular importance.

The Citizen Offices operate following the “single window” principle and serve as a hub for municipal operations. They are equipped with a web-based Municipal Management Information System (MMIS) to ensure the seamless exchange of data among local, regional and national authorities. The official municipal websites are also operated through MMIS, enabling not only access to a variety of services online, but also a say in various planning and budgeting processes. For example, citizens can participate in municipal planning and budgeting processes, and access up-to-date information on annual/multiannual development plans as well as mayoral/local council decisions. Citizens can also file tax returns (e.g. land and property tax, local duties, other fees), submit and track applications online, consult the online guides and ask questions. Accordingly, the official municipal website is the first port of call for citizens seeking information that they are entitled to under the Freedom of Information law. Moreover, the website allows the municipality to conduct citizen satisfaction surveys online.

In 2020, nearly half of the population outside the capital had access to improved administrative services through 49 Citizen Offices and MMIS that were not only introduced in all consolidated municipalities but also in about 80 municipalities that have not yet been consolidated. Citizen Offices have made it much easier and more efficient for citizens to deal with the authorities – and for public servants to carry out their work. A 2017 survey showed that 97 percent of the respondents were satisfied with the service provision, while 93 percent of the municipal staff said MMIS had considerably facilitated their work.

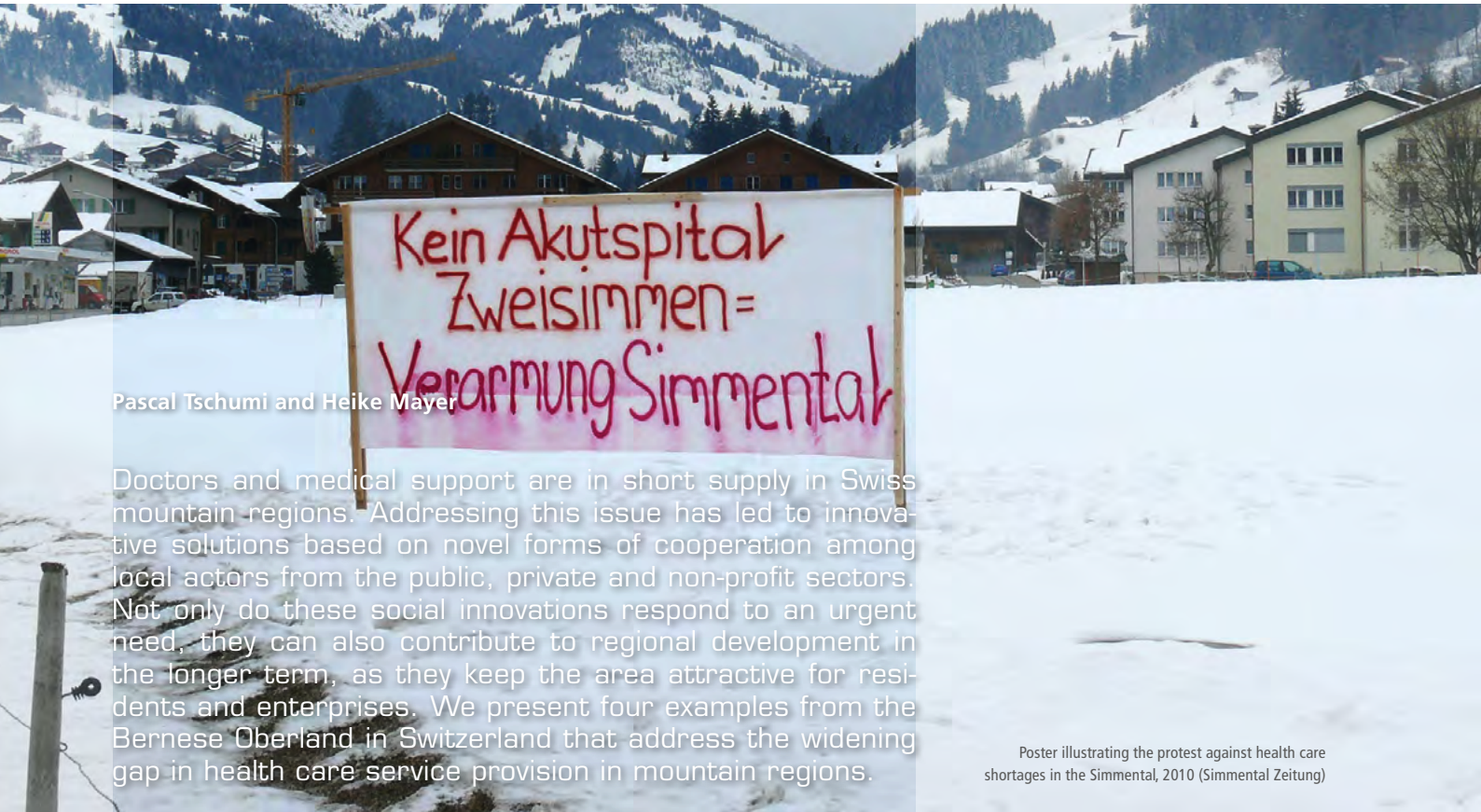
In April 2019, amid the decentralization of power and functions, the Armenian government delegated more than 60 state administrative services to the municipalities that operate a Citizen Office, enabling citizens to receive both municipal and state services in one location.

In 2015, a Citizen Office was established in Tumanyan, a 4 100-strong municipality of seven settlements. Located 150 km north of the capital at an elevation of about 800 m asl, Tumanyan is surrounded by mountains of over 2 000 m asl. “Grandpa” Zhora is one of the municipality’s oldest inhabitants. Sceptical about the merger of municipalities at first, he was pleasantly surprised at the positive results: “Night lighting has been repaired here – this means I can spend more time in my garden, especially at the height of cultivation season. The Citizen Office is near my house, so I go in person to pay the land tax. Processes are faster now, and the staff members know me and do their best to assist me.”



Zhora in his garden (Good Governance for Local Development, South Caucasus)

Addressing health care shortages through social innovations in the Bernese Oberland



Pascal Tschumi and Heike Mayer

Doctors and medical support are in short supply in Swiss mountain regions. Addressing this issue has led to innovative solutions based on novel forms of cooperation among local actors from the public, private and non-profit sectors. Not only do these social innovations respond to an urgent need, they can also contribute to regional development in the longer term, as they keep the area attractive for residents and enterprises. We present four examples from the Bernese Oberland in Switzerland that address the widening gap in health care service provision in mountain regions.

Poster illustrating the protest against health care shortages in the Simmental, 2010 (Simmental Zeitung)

As a result of national trends such as rising health care costs and falling numbers of general practitioners (GPs) and other skilled workers, the supply of health care has become a problem in almost all Swiss mountain regions. While rural areas in general are affected, the mountains, disadvantaged by their remoteness, are particularly hard hit: residents as potential patients and health care workers tend to be drawn to urban centres, where health care services are better. In addition, the generally small budgets of mountain municipalities are strained by higher health care costs of an aging population. In the cases we examined, health care service providers and civic actors have initiated a range of innovative solutions to tackle the challenge of providing health care services in their area. In some cases, the public sector has played a supportive role. All of the solutions involve novel forms of co-operation between actors, most of whom have never worked together before nor been involved in health care. As such, these solutions represent social innovations.

Four examples from the Bernese Oberland in Switzerland are particularly relevant for addressing the widening gap in health care service provision:

- The Frutigland Rescue Service Foundation (*Stiftung Rettungsdienst Frutigland*) supports the ambulance service of the regional hospital by funding and helping to train paramedics. The funding is organized through charitable donations to a foundation and covers personnel costs as well as some of the infrastructure. It was established by engaged citizens in 2000 following the closure of the ambulance service, which for financial reasons was merged with more centrally located ambulance services.
- The second social innovation is a GP emergency centre in the Thun area (*Hausarztnotfall Region Thun*), founded in 2010 by a group of GPs from the Bernese



Bernese Oberland

The Bernese Oberland lies in the southern part of the Canton of Bern, between 500 and 4200 m asl and just north of the Swiss Alps. More than 200000 people live in more than 70 municipalities in an area of about 2900 km². Its main industry is tourism, attracting over 2 million visitors per year; it also has a strong construction industry.



Small communities in mountain regions face demographic changes and challenges in health care provision (H. Mayer)

Oberland. The emergency centre helps to coordinate the periods in which the GPs are legally required to provide emergency assistance, helping to decrease their workload and thus making this type of work more attractive.

- In 2015, the regional hospital in the municipality of Zweisimmen closed its maternity ward, mainly to save costs. Shortly after the closure, nearly 50 local citizens took action to fill this gap and in January 2017, the *Geburtshaus Maternité Alpine* was opened. This privately-operated birthing facility is organized as a cooperative, which encompasses more than 300 members. It is financed by the members, donations and the revenues from birth services it provides.
- A more general approach is taken by the *Integriertes Gesundheitsnetzwerk Simmental-Saenenland*, an “integrated health network” for two adjoining valleys of the Bernese Oberland. Founded in 2018, its purpose is to secure health care provision in the Simmental and Saenenland valleys by setting up a network among relevant actors, widening the range of services at the regional hospital and establishing a new health care centre. A broad set of actors such as the regional hospital operator, the cantonal director of public health and local mayors are involved in developing the network.

These novel forms of cooperation led to solutions that had never before been implemented in the Bernese Oberland. As they tackle the same challenge, they generate value for the region as a whole, not just for the actors involved. This value manifests itself economically and socially, contributing to regional development. The availability of local health care services and infrastructure reduces travel time for residents needing a service, as well as for skilled personnel required in the case of emergency. This helps the region to retain its attractiveness to existing residents, newcomers and health care personnel. To achieve sustainable regional development, it is vital that policy-makers consider social innovations. It is nonetheless important to remember that social innovations in health care in mountain regions, while highly useful, do not replace or substitute a certain level of general health care services. The public sector is still very much needed; in our examples, government actors play an important role in supporting the innovations.

Social innovations in the Bernese Oberland

A social innovation consists of new forms of cooperation at individual or organizational level that lead to new ideas, the implementation of which is at least considered. In the context of regional development, such innovations can have a positive impact on society, improve the quality of life and/or change social or power relations [1]. We found that the 68 social innovations we identified in the Bernese Oberland involved many sectors, ranging from health care to tourism and agriculture. Details are provided in our publicly accessible inventory [2].

- In the case of the Bernese Oberland, the enabling factors to successfully implement the social innovations included an openness to work together and willingness to find suitable organizational ways to secure a minimum standard of health care supply.
- Social innovations are an effective means of addressing critical shortages in health care supply. They comprise novel forms of cooperation and bring together various actors from the public, private, non-profit and civic sectors. They have the potential to create place-specific solutions to shortages in health care supply.
- Social innovations can contribute to sustainable regional development by focusing on positive outcomes for mountain regions. They should be seen as ways to incorporate various interests and capabilities, but not as substitutes or an excuse for the public sector to withdraw from peripheral regions.



Public meeting to inform the local population about the Integrated Health Network of Simmental-Saenenland, October 2019 (N. Sager)

“Trust has been built within the region. The pressure on all actors is high. The project can only succeed if everyone stands together.”

Pierre-Alain Schnegg, Government Councillor of the Directorate of Health, Social Affairs and Integration of the Canton of Bern, presenting the Integrated Health Network of Simmental-Saenenland during a public meeting [3].





Lever: Connect actors to spark innovations

Young farmers interview a business owner in the local market of Embu at the foot of Mount Kenya to learn about developing value chains that are effective as well as fair (©FAO/Luis Tato)

Marketing native crops to improve rural Andean livelihoods



André Devaux, Miguel Ordinola, Jorge Andrade-Piedra and Graham Thiele

Native potatoes are important in livelihood strategies for most poor Andean families. A systems-oriented approach for fostering pro-poor development in value chains has helped to identify business opportunities, facilitate collaboration among value chain actors and enhance information flows to increase competitiveness.

Colourful native potatoes (S. de Haan)

Potatoes have been a staple of Andean families for thousands of years. Because native potatoes (local landraces, a unique plant genetic resource) grow better at higher elevations (above 3 300 m asl) where small-scale farmers predominate, the Peru-based International Potato Center (CIP) decided to concentrate its activities around those potatoes to promote pro-poor market innovation. Andean farmers grow over 3 000 varieties of native potato, mostly to meet household needs rather than for sale. They are often at a disadvantage when it comes to doing business in high-quality food chains and ensuring compliance with standards, given scant access to financial and other services, and limited capacity for collective marketing.

CIP coordinated with its partners to develop new value chains for native potatoes anchored on the Participatory Market Chain Approach (PMCA). The PMCA, an innovation systems approach, applies principles of action research and collective action to foster inclusive value chain development. It engages multidisciplinary research teams and small farmers with other value chain actors, public officials and service providers, such as NGOs, in facilitated group processes in which business opportunities are identified and market-oriented innovations developed. The PMCA process was implemented over 12 to 18 months and comprised three phases, each ending with a public event for sharing and promoting results with value chain actors, service providers and policy-makers (Figure 1) [1, 2]. To empower small farmers, the PMCA was complemented by local platforms that facilitated interactions between potato producers, local authorities, the private sector and service providers. The platforms proved useful for consolidating innovation processes after a PMCA process. Through its emphasis on building on the assets of the poor and mobilizing local as well as scientific knowledge, the PMCA is consistent with gender transformative approaches. Subsequently, CIP issued a guide for integrating gender in the PMCA [3].



"My husband and I made the decision together. He also thinks it's good to invest in native potatoes. By reinvesting in seed, this year I was able to plant 2 000 kg. Half of the profits from the sale will go towards expanding the crop, and the other half towards improving the house. We also want to invest in livestock."

Nolberta Hinostroza Laureano,
vice-president of the Atacocha/Chicche
community, Junín, Peru

Lessons learned



Collaborating with chefs to promote the image of native potatoes (© CIP)

The PMCA identified opportunities and developed commercial innovations for high-value niches. It contributed to raising the visibility and uses of native potatoes. Selection, labelling and creation of new processed native potato products, such as gourmet chips, added value and expanded the market for these colourful and extraordinary potatoes (Figure 2). In Peru, the PMCA process proved to be an innovation trigger contributing to technological, institutional and commercial innovations.

These innovations had several outcomes: enhanced social networks which stimulated value chain innovation; a dramatic expansion in demand by urban consumers for native potatoes (the volume of native potatoes sold by farmers increased by more than 70 percent as prices rose); and policy changes recognizing these potatoes in the formal seed production system [4]. Institutional innovation such as the establishment of a National Potato Day in Peru further promoted native potatoes and stimulated demand [5]. NGOs strengthened the capacity of small producer organizations and improved links to market agents and processors. They also provided technical support to improve quality and consistency in production, and to achieve economies of aggregation. Women involved in the intervention were empowered to make choices and decisions about production and marketing issues, giving them greater authority to negotiate with other value chain actors [6].

The approach was also successfully implemented in Ecuador and Bolivia. Experiences in disseminating the PMCA highlight the importance of promotion and institutional support, capacity development, organizational change and funding. CIP is building on this experience and seeking to include a broader set of crops with the Andean Initiative, to address the threats of agrobiodiversity loss, climate change and malnutrition in an integrated manner [7].

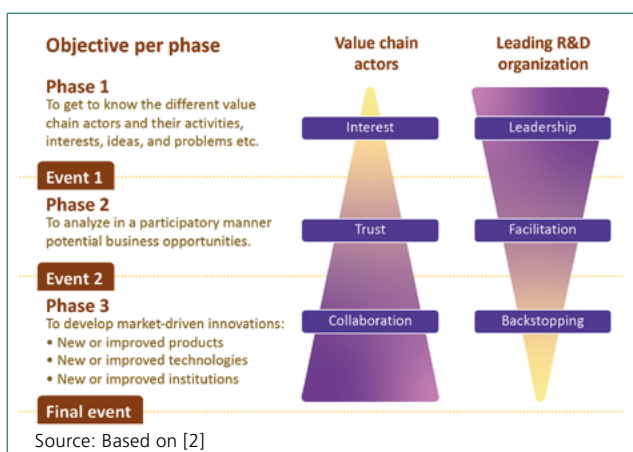
- Making use of new market opportunities will require an array of other innovations including institutional and technological ones. The approach used to improve native potato value chains in the Andes could be expanded to other Andean crops and to crops with similar potential in other regions.
- It is possible to utilize the unique genetic resources of mountain regions to generate income for farmers, by revaluing these resources as heritage foods in urban markets.
- Innovation-oriented approaches like the PMCA require flexible research and development programmes that allow creative adjustments to fit local circumstances, while respecting the basic principles of the approach.



Potato harvest in the Andes (© J-L. Gonterre)

Figure 1. The Participatory Market Chain Approach (PMCA)

Figure 2. New product development triggered by the PMCA in Peru



Linking actors to promote sustainable development in rural areas: Grosses Walsertal

Armin Kratzer, Nils Unthan and Martin Coy

The Grosses Walsertal Biosphere Reserve in western Austria has gained increasing attention as a model region for sustainable development. Its main objectives are to strengthen cooperation and create joint projects by linking previously isolated rural actors. Working together, municipalities, local businesses and civil society initiatives can develop concerted responses to pressing issues such as nature conservation and rural migration, in a valley facing the challenges of sector dependency and climate change.

View over the deeply incised Grosses Walsertal valley in summer (A. Kratzer)

Located in the westernmost Austrian state of Vorarlberg, the Grosses Walsertal is a long, deeply incised, V-shaped valley, with elevations ranging from 586 to 2 704 m asl. Its meadows and pastures, in particular, are rich in biodiversity. But with industrialization came the region's vulnerability, as people sought employment outside the valley to escape economic dependence on a single sector (agriculture and forestry). The result for the remote valley was poverty – and the need, which still persists today, for inhabitants to commute for work. Cut off from new economic trends, the valley has preserved its rural and peripheral character. But this also has upsides: the valley's cultural and scenic identity can be a unique selling point over modernization at any price, for the 3 400 people living in the six municipalities.

Limited development opportunities and a species-rich landscape (two protected areas already existed in the Grosses Walsertal) led to the idea of becoming a Biosphere Reserve (BR) [1]. In addition to improving the regional economy while preserving natural and cultural landscapes (Box), the UNESCO label would increase visibility and encourage interregional and international cooperation. A mixture of top-down and bottom-up initiatives ensued, leading to establishment of the Grosses Walsertal BR in 2000. The BR's regional planning association (REGIO) is the legal entity of the BR and is comprised of all municipalities and the BR management. It steers the region towards the goals of its regional strategy, which is developed in accordance with UNESCO's general principles. The regional strategy sets out its goals over a five-year period, for a range of thematic fields (e.g. agriculture, environment and energy, the economy), most of which are covered by thematic subcommittees that help to develop new project ideas [2]. A Board of Trustees



Biosphere Reserve (BR)

Biosphere Reserves (BRs) are protected areas that go far beyond the usual aim of nature protection. They are multifunctional landscapes designated by UNESCO's Man and the Biosphere programme (MAB) with a conservation (preserve ecosystems), a logistic (support demonstration projects, research) and development (sustainable economic development) function within a "spatial framework" of three interrelated zones [9, 10]. By 2020, the worldwide network comprised 701 BR sites in 124 countries. By 2011, 322 BRs were located in mountain areas [11].

Lessons learned



A multifunctional building in the Biosphere Reserve combines an alpine dairy, the Biosphere Reserve Management, a café shop, post office and visitor information centre (N. Unthan)

consisting of two representatives per municipality, regional multipliers (e.g. representative of the Grosses Walsertal economic association) and REGIO's chairperson advises the BR in its strategic planning. The BR has an annual budget of around €225 000, with funding from the Environmental Protection Department of the State of Vorarlberg, the municipalities (€11 per inhabitant per year) and sponsors.

Through the governance model described above, the BR management drives sustainable development by interacting with local people to identify needs and ideas, assisting with the funding application process or connecting applicants to funding institutions (e.g. the European Union's LEADER programme [3]), promoting co-operation among rural actors and helping to solve coordination problems where they arise [4]. By 2020 it had developed and supported a total of 27 projects. Especially in the early phase, "green products and services" were important and resulted in initiatives such as "Bergholz", a cooperation of manufacturers that in 2000 began to use local timber for ecological houses and furniture [5]. Today, "Bergholz" is a certified trademark and involves actors from all municipalities. Innovations gradually became more diverse. For example, "Alchemilla", a non-profit women's initiative that focused at first on herbology and organic cosmetics, is now increasingly engaged in promoting new social practices for resource conservation [6, 7]. Their initiatives include a repair café (up to now, a concept mainly associated with urban areas) and a firewood exchange network that connects firewood seekers and forest owners. In this context, the BR acts as an intermediary platform that connects different actors and institutions (Figure 1). Today, the Grosses Walsertal is well connected and can benefit from diverse networks at various levels. These networks have helped the region to overcome its former peripherality and accelerate the transition to sustainability by aligning innovative practices and testing nature-based solutions to global challenges [8].

- The integrative BR approach of conservation, sustainable landscape use and socio-economic development has led to greater sustainability in the region. It preserves the natural and cultural landscape while simultaneously releasing endogenous potential.
- Through committed management, the Grosses Walsertal BR has been able to increase locally led planning cooperation and broaden funding sources. Their projects and initiatives address global and local challenges alike and lay the groundwork for more regional value added.
- Small regions need strong multilevel networks (see Figure 1) to gather local knowledge and develop robust projects. The BR serves as a platform to support new ideas and coordinate new initiatives.



A sawmill in the Biosphere Reserve. Forestry is one of the main sources of livelihood in the valley (A. Kratzer)

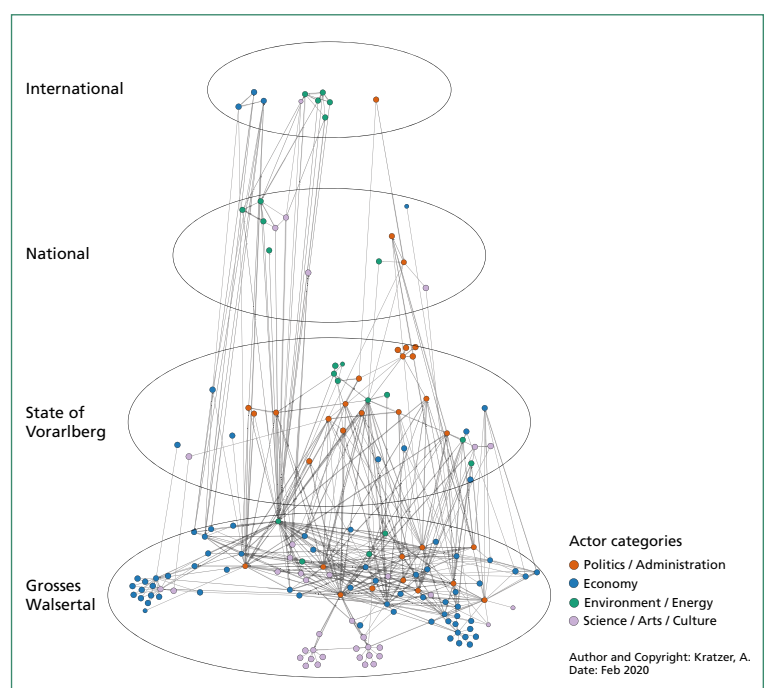


Figure 1. With its governance approach and various projects, the Biosphere Reserve established a multilevel network that connected otherwise isolated actors, increased cooperation and fostered innovations. Source: own data 2018

Transboundary cooperation for mountain tourism in the Kangchenjunga Landscape

Nakul Chettri, Anu Kumari Lama, Kailash S. Gair, Aseesh Pandey, Kezang Dema, Yadav Uprety and Eklabya Sharma

The Kangchenjunga Landscape has huge potential for increased tourism, mainly due to its pristine nature, aesthetic value and rich biodiversity. A transboundary initiative conceived in 2012 is investing in redefining the opportunities that tourism can provide for marginalized rural communities. Measures include jointly developing unique products that reflect the shared heritage of Bhutan, India and Nepal, as well as engaging in landscape conservation at the nexus of science, policy and practice.

Mount Kangchenjunga, third-highest peak in the world (N. Chettri)

The Kangchenjunga Landscape spreads across eastern Nepal, Sikkim in India and western Bhutan. It is home to the third-highest mountain in the world, Mount Kangchenjunga (8586 m asl), which is considered sacred by the diverse ethnic communities in the area. The landscape contains the headwaters of vital rivers such as the Meechi, Teesta and Toorsa, and harbours exceptional biodiversity. The ethnic communities, including the Kirat, Lepcha, Bhutia, Brokpa and Dukpa, are linked through strong religious and traditional practices such as marriage, herding, foods and festivals. This combination of rich natural resources as well as cultural and aesthetic value make the region a unique destination for tourism.

A total of 7.2 million people live in the 25086 km² area. There have been few alternatives to the main livelihood strategy of agriculture. Between one-fifth and half of the population live in absolute poverty [1]. Despite the huge potential of tourism, access has been limited due to the region's remoteness, poor infrastructure, lack of attractive products and market linkages, and different national strategies to promote tourism. Tourism is a key economic sector of Nepal, India and Bhutan and contributes between 8 and 10 percent of the countries' GDPs, but often it is concentrated in cities and some protected areas. This leads to unequal opportunities, especially for women, and increases disparities.

In 2012, the intergovernmental organization ICIMOD, in agreement with the three national governments, initiated the idea of promoting conservation and development in the transboundary Kangchenjunga Landscape through regional collaboration. A feasibility assessment helped to identify opportunities and challenges. The science-based and participatory assessment process involved local communities, experts from different disciplines, development partners and policy-makers [1]. Subsequently, a systematic and consultative planning process integrating the local, national and regional levels resulted in the endorsement in 2015 of a Conservation and Development Strategy and Regional Cooperation Framework for the next 20 years [2].



"India, Nepal and Bhutan are uniquely connected through culture, tradition and geography: tourism could bring us closer through our shared, rich heritage."

Dr Amita Prasad, Additional Secretary,
MoEF&CC, Government of India

The first five-year plan was operationalized in 2016 with the support of Austria and Germany. Nepal, India and Bhutan each designated a focal implementing agency. They jointly identified tourism, particularly the development of community and nature-based tourism, as a common area of interest and a means for poverty alleviation in the remote communities. They also pointed to the conservation of the sensitive but diversity-rich Kangchenjunga Landscape as a way of enhancing the countries' overall economy. Accordingly, the focal agencies identified nine pilot areas in remote regions (three in each country) and engaged in five broad fields of intervention:

1. Diversifying tourism products and making each pilot area unique for tourists, potentially lengthening stays and packaging these as a regional product.
2. Fostering the skills of women, youths, the private sector, development agencies and policy-makers that are needed along the value chain, with the aim of offering better services and unique products. This is particularly important considering the competitive tourism market.
3. Developing tourism-related, community-based livelihood opportunities rooted in traditional practices. This would enable more people to benefit than only those directly involved in the tourism sector.
4. Ensuring long-lasting tourism by developing a common brand and jointly marketing the Kangchenjunga region as a tourist destination.
5. Facilitating policy processes to develop and agree on a joint roadmap and gain the needed policy support for ensuring the viability and sustainability of the efforts.

By connecting these five fields – or “dots” – the programme has contributed to a holistic and integrated development in the Kangchenjunga Landscape, so far benefiting about 500 households directly and about 2 500 indirectly.

Tourism is currently extremely hard hit by the COVID-19 pandemic throughout its value chain. Transboundary cooperation for coping with this situation is inevitable and the three countries have already started focusing on the domestic tourism market to stimulate demand in the Kangchenjunga Landscape. However, in the post-COVID-19 scenario, greater emphasis must be put on diversifying tourism products in rural areas to focus on nature, culture and health.

- The government-owned participatory planning process was instrumental for identifying and developing a joint strategy and enhancing regional collaboration and sustainable development in a remote transboundary landscape.
- Identifying tourist destinations and developing related products, as well as improving services and market linkages, resulted in finding “the lost glory” of villages and revitalizing their culture and traditions, enhancing their economic development and conserving the landscape.
- The inclusive development opportunities for marginalized communities including women contributed to enhancing equality. Positive results through synergies in turn led to further government support and co-financing of common projects by the governments of Bhutan, India and Nepal.



Table 1. Achievements of the community and nature-based tourism programme in the Kangchenjunga Landscape

Action areas	Key interventions	Results
Uniqueness in tourism product development	<ul style="list-style-type: none"> – Identification of new tourism products in seven out of nine pilot areas with unique branding, e.g. Lepcha cultural hub in Sikkim, Sacred Lake in Mai Pokhari, Nepal – Participatory planning and implementation 	<ul style="list-style-type: none"> – Seven new destination management plans – Inclusion of management plan in local and national development interventions
Enhancing tourism services	<ul style="list-style-type: none"> – Training on homestay and culinary issues and as nature guides – Exposure visits for cross-learning between the three countries and at different levels (e.g. among tourism entrepreneurs or government agencies) – Soft loan for service quality improvements (toilets, bed-sheets, etc.) 	<ul style="list-style-type: none"> – Improved service quality and better sanitation – Visitor numbers up by 10%
Linking with ancillary services	<ul style="list-style-type: none"> – Promotion of, and training in, organic farming – Capacity building on mushroom cultivation – Waste management training – Promotion and training in handicrafts and handloom use – Exposure visits for cross-learning 	<ul style="list-style-type: none"> – Income up by 15% – Better waste management – Wide range of ancillary products including traditional foods – Improved community organization (e.g. formation of self-help groups, committees)
Linking with markets	<ul style="list-style-type: none"> – Media visit to pilot destination – Tour to showcase new tourism products to travel agents – Outreach through festival organization 	<ul style="list-style-type: none"> – Uptake by numerous media – More visitors attracted by showcasing products at festivals – Wide dissemination of information through festivals
Policy support	<ul style="list-style-type: none"> – Facilitating local and regional networking by providing platforms for discussion, planning and action – Policy review and recommendations – Promoting dialogue among policy-makers 	<ul style="list-style-type: none"> – Local network strengthened – Policy support for local implementation – Co-financing by local government agencies

From mountain law to effective national strategy in Georgia

Tinatin Tkeshelashvili and Magdalena Nowakowska

Almost half of all settlements of Georgia are located in high mountain areas. However, only nine percent of the country's 3.5 million people live there. Highlander communities face challenges related to accessibility, depopulation and a lack of public services and amenities. A four-year Strategy for Development of High Mountain Settlements of Georgia offers a systemic approach to tackle these challenges.

The mountainous landscape of Tsageri municipality in northwestern Georgia offers the potential for tourism but also for agriculture, e.g. for vineyards (M. Kurashvili)

Georgian mountain regions suffer from a shortage of employment opportunities and infrastructure, and from impacts related to climate change. But these regions also offer prospects, such as tourism, which has the potential to become an engine for growth. Since 2012, the United Nations Development Programme (UNDP), in close partnership with the Government of Georgia and with support from the governments of Switzerland and Austria, has been implementing a US\$ 11.6 million project on fostering regional and local development (FRLD) [1]. The Ministry of Regional Development and Infrastructure of Georgia is the key partner in this endeavour, which puts special focus on mountain municipalities in four regions.

The FRLD project follows a holistic, multilevel approach to create sustainable change in Georgia's mountain municipalities. At the national level, the project supported the government in developing and adopting a Law on High Mountainous Regions of Georgia [2, 3]. To operationalize the law, the country's first four-year Strategy for Development of High Mountain Settlements 2019–2023 and a two-year Action Plan 2019–2020 were formulated. This was done in a participatory process involving different sectors and stakeholders, led by the Ministry of Regional Development and Infrastructure and assisted by the project. The strategy was adopted in 2019 (Box) and the government committed projects/programmes with new funding of GEL 784 million (US\$ 260 million) for 2019–2020. The strategy provides an overarching framework to promote economic development, improve social welfare and common infrastructure, and expand access to services for the approximately 300 000 people in the nearly 1 800 high mountain settlements. It is thus a crucial instrument to guide development initiatives and investments by different actors at the national, but also at the local level.



"Our goal was to create new job opportunities for unemployed, socially vulnerable or internally displaced women. They were given the opportunity to learn new skills – in this case, we taught them different types of handicrafts. Currently 80 women are taking part in the training courses. Eventually, 25 of them will be permanently employed in the workshop."

Inga Metreveli, WERKS project manager

Lessons learned

- A holistic, multilevel approach is needed to guide sustainable development of mountain settlements in a more systemic way by joining efforts of various national, international and local actors.
- A participatory approach towards development and multistakeholder engagement is key to success. It is important to bring together representatives of the public, private and civil sectors who will bring their own expertise and added value.
- Developing local capacities and attracting new financial resources is crucial to multiply the effects of assistance to local actors.



Women in Oni revive and modernize traditional crafts as new income sources (V. Valishvili/UNDP)

In order to contribute to the strategy's overall goal, the FRLD project also engages with local authorities and communities by building their capacities through various training/learning programmes. It helped them to create municipal development documents that define specific goals and priority areas. To effectively contribute to these priorities, the project pioneered various grant schemes. One scheme provides direct funding for municipalities, and so far, ten municipalities have been awarded grants worth up to US\$ 25 000 each. The first recipient was the high-mountain municipality of Tsageri, at the foot of the Greater Caucasus range. It used the money to improve the municipality's visibility to promote job-rich local tourism ventures. This involved providing the local tourist information centre with equipment, erecting road signs and creating promotional materials to showcase local culture and touristic sites.

Another funding scheme targets local civil society organizations to foster participation of local communities and support them in advancing local potential. Local initiative groups are currently working on seven projects. One of them is WERKS – Women Empowerment in Racha-Lechkhumi-Kvemo Svaneti – which is based in the high-mountain town of Oni. The organization, in partnership with a group of artisans, trained local women in traditional craft. The works produced by the women in Oni are sold abroad as well as in an ethno-shop renovated as a part of the project. In 2019, a Sustainable Development Goals Festival was held in Ambrolauri, a unique mountain municipality with enormous development potential. Attended by national and international partners, the purpose of the festival was to highlight the importance of the mountains and draw attention to highland development challenges.

The socio-economic damage caused by the COVID-19 pandemic heightens the need for, and importance of, local economic development initiatives that strengthen the resilience of highland communities. In response to this urgent need, UNDP is re-designing and adapting the funding scheme to help municipalities, local entrepreneurs and communities to reduce the effects of the pandemic.

Strategy on the Development of High Mountainous Settlements

The strategy envisions equitable and sustainable development of Georgia's highland regions and defines three strategic goals [4]. Specific activities are laid down in a two-year Action Plan (2019–2020) which also identifies agencies and their responsibilities, as well as concrete implementation measures.

Strategic goal 1: Sustainable development of highland settlements focuses on the development of tourism, support to agriculture and entrepreneurship, improvement of road infrastructure, and environmental protection and management of natural resources. Concrete measures include construction and rehabilitation of museums, development of tourist infrastructure and rehabilitation of cultural heritage monuments.

Strategic goal 2: Social support to local communities fosters the improvement of quality education, health care, access to communal services, communication, culture and sport-related infrastructure. It supports youth and addresses demographic dynamics. Concrete measures include: construction of facilities for emergency medical assistance as well as for preschools, schools and solid waste disposal; the rehabilitation of potable and irrigation water systems; preventive measures for mitigating impact of natural disasters; and the improvement of electricity and gas networks.

Strategic goal 3: Access to public services aims at introducing innovative systems in the management of public services and increasing access to public services. Concrete measures include improvement of Internet coverage and introduction of integrated information management systems in the municipalities.

“Despite the pandemic, tourism remains a priority for our economic development. Its potential still needs to be unpacked and presented to the world for the benefit of local people.”

Mikheil Meshveliani, Deputy Mayor of Tsageri municipality

The Aosta Valley's Smart Specialization Strategy

Thomas Dax, Tamara Cappellari and Massimo Lévêque

The European Commission's efforts to support lagging regions through Smart Specialization Strategies since 2014 have proven effective also in different mountain regions. In Italy's Aosta Valley, local actors have built on previous collaboration and agreed on strategic development priorities. They have created new organizational structures to promote synergies between technological innovation and socio-economic development.

The valley's capital city, Aosta, surrounded by high mountains (G. Allheilig)

The Aosta Valley, home to about 126 000 people, is the smallest region in Italy. Located in the country's north-west and bordering France and Switzerland, it lies at a linguistic and cultural crossroads and has the constitutional status of an autonomous region. The valley is home to high mountains, including the highest European peak, Mont Blanc (or Monte Bianco, in Italian). With its renowned ski areas, the Aosta Valley's economy is based mainly on tourism. And while the valley once boasted the country's third-highest GDP per capita, it was hard hit by the 2008 economic crisis and is still struggling to recover.

In 2014, the regional government embarked on the opportunity to develop a "Smart Specialization Strategy (S3)" (Box) under an EU-funded programme that enables regions to identify their own competitive advantages [1]. Accordingly, Aosta's resulting S3 proposes a long-term vision emphasizing the region's mountains as a unique asset. It aims at strengthening sectors where the mountainous territory has clear competitive advantages and at promoting innovation and sustainable development in the valley, involving businesses, research centres and civil society [2]. It also seeks to enhance regional partnership and trans-regional cooperation (with neighbouring regions, including France) to overcome structural weaknesses and restrictions. It focuses on three interconnected specialization areas: "Smart Mountain", "Excellent Mountain" and "Green Mountain" (Figure 1). The following specific technologies have been identified as enabling ingredients to develop the region as a "laboratory":

- Innovative ICT tools to support manufacturing systems, tourism and environmental management, and to improve residents' quality of life;



Smart Specialization Strategy (S3)

"Smart specialization" is a place-based approach to identify niche areas of competitive strength and to solve societal challenges. Conceived within the European Commission's Cohesion Policy, the approach aims at fostering innovation partnerships and entrepreneurial discovery processes. It emphasizes greater coordination and better alignment of resources and strategies between private and public actors from different levels of governance. The development and implementation of a Smart Specialization Strategy (S3) is supported by the European Structural and Investment Funds and national/regional funding [5, 6].

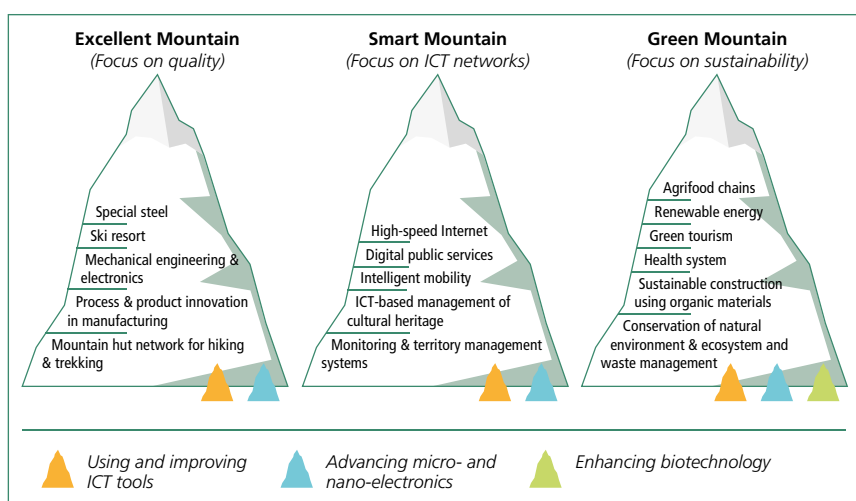


Figure 1. The three interconnected specialization areas under the Smart Specialization Strategy (S3) in the Aosta Valley, Italy

- Micro- and nano-electronics provide complementary components for smart ICT applications and offer opportunities for international cooperation among industries;
- New biotechnologies trigger innovations in agrifood chains and enhance the management of ecosystems and biodiversity.

The valley's S3 operational programme triggered public interventions of about €103 million between 2014 and 2020. It has also attracted additional support from other EU programmes, such as the European Regional Development Fund or the trans-regional innovation programme ALCOTRA [3]. The S3 programme has helped to support regional discourses and communication processes. It has also strengthened stakeholder consultation to develop an effective governance model that encourages investments in capacity building, technological development and diffusion of ICT-based solutions. Through these activities, it has stimulated user-oriented innovation, e.g. in the fields of energy efficiency, intelligent mobility, transport and territorial monitoring.

Through the S3 programme, the Aosta Valley is striving for progress on social and economic issues (Table 1). Issues of core concern that are monitored closely are increasing the level of research and development in the region as well as customer satisfaction and engagement of inhabitants. The regional authorities are highly committed and support local research institutions ("Centres of Excellence"), network building, involvement of intermediate bodies (e.g. associations representing manufacturing and service companies and the Chamber of Commerce), targeted communication actions and auditing activities. The S3 has also led to a diversification of the economy in the Aosta Valley.

Table 1. Selected impact indicators for S3 implementation (2013–2023). Notes: ¹⁾ 2016 ²⁾ 2019. Source: [2, 4]

Indicator	Baseline 2013	Mid-term assessment 2017	Target 2023
School dropout rate (%)	19.8	15.2	17.0
At least a Bachelor's degree in science or technology (%)	2.4	n.a.	4.0
Share of investment in research & development (in % of regional GDP)	0.57	0.68 ¹⁾	1.00
Value added of productive industry (% of regional GDP)	11.0	13.3	14.0
Export rate (% of regional GDP)	13.4	15.2	20.0
Enterprises with innovative products/processes (%)	29.3	28.3 ¹⁾	35.0
Enterprises with broadband access (%)	90	98.8 ²⁾	100

In the Aosta Valley, S3 has been driven and implemented by the highly committed regional government. The joint vision to harness the specific assets of the mountain location and put these to strategic and sustainable use ("Smart, Excellent, Green Mountain") has been a compelling argument bringing together the different stakeholder groups. The following factors have been decisive for effective implementation of the Strategy:

- The EU's financial support for S3, which in turn helped to mobilize other regional and national funding;
- Continued stimulation of awareness and participation of stakeholders; and
- Linking professional development and administrative support through regular consultations and working groups to improve mutual understanding and the details of the implementation process.



AYLAS





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DE LA REGION

Promising futures for
mountain regions and
people



Susanne Wymann von Dach, Anila Gjika, Heike Mayer and Fernando Ruiz Peyré

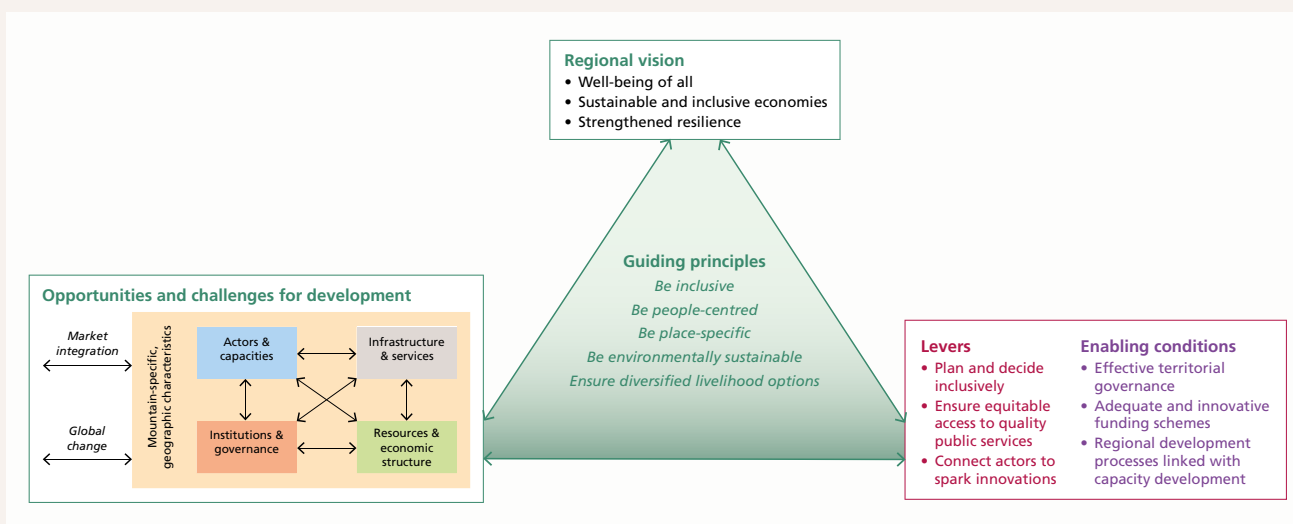
Messages for policy-makers

To leave no one and no region in mountains behind calls for concerted policy action. Despite progress, mountain regions continue to lag behind lowland areas in many respects: poverty incidence is high, employment options are limited and public services fragmented – and mountain regions are often politically marginalized. Mountain dwellers are especially vulnerable to global change and many, mainly young people, are migrating. But the unique social capital and cultural heritage of mountain communities, and the ample natural assets of mountains, offer prospects for development. Targeted policy interventions can unlock these potentials and lead to development pathways that enhance the well-being of all, foster sustainable and inclusive economies, and strengthen the resilience of communities and ecosystems in mountain regions.

The good practices presented in this report have identified three promising levers for transformation of mountain regions: inclusive planning and decision-making, equitable access to quality public services, and collaborations to spark innovation. Using these levers, which are described in more detail below, would benefit people living both in mountains and the adjacent lowlands, and thus drive progress towards a jointly agreed regional vision. It is important that such interventions are guided by sustainability principles, and that they focus on a region's opportunities and address its challenges (Ruiz Peyré et al., pp. 14–15).

Regional development processes require multistakeholder partnerships and collaboration across sectors, between public, private and civil society actors. In the following, we outline how three groups of key development actors can help to shape interventions and create enabling conditions for the three levers to work ef-

The future of these young women in Laya, Bhutan depends not only on their own capabilities but also on the concerted actions of regional and national policy-makers (A. Treadway/ICIMOD)



fectively (Figure 1). These groups of actors are: policy-makers at the national level, regional actors (e.g. government actors at subnational levels, non-governmental organizations or civil society organizations) and donors (not only international, but also government agencies that provide funding for regional development in mountains). The actions proposed in the right-hand column below, while by no means comprehensive, provide an entry point for the engagement of these key actors in regional mountain development.

Figure 1. A regional vision based on principles and on the potential of a mountain region can guide sustainable and inclusive development; investing in levers promotes the transformation. To ensure success, certain enabling conditions must be met

Three levers for transformation

Plan and decide inclusively

Develop a joint regional vision and development scenarios

to guide and coordinate actions of all involved actors from the local to the national level. Key to designing context-specific development pathways and scenarios are: common visions rooted in the region's culture, social capital and proactively considering the dynamic context and global trends. A common goal enhances actor ownership and forms a strong foundation for a more self-determined socio-economic development. It is particularly important that vulnerable social groups (e.g. women, the elderly or indigenous communities) participate in such processes effectively and that their agency is strengthened. In Laos, villagers who were engaged in land use planning complied with the resulting plan (Hett et al., pp. 18–19).

Recommended action (who/what)

- **Regional actors** facilitate the multistakeholder process.
- **National policy-makers** provide an enabling framework.

Focus on potentials and the uniqueness of a region

to increase the chances of successful regional development and to strengthen the region's self-reliance and identity. An enabling environment that equally allows mountain women and men to make use of their knowledge, skills and the region's unique resources is a key step towards developing quality products. Products that have a chance on the competitive market (both national and international) can thus help to diversify mountain people's income, as shown by the pro-poor value chain of native potatoes in the Andes (Devaux et al., pp. 32–33). It is important that the commodification of resources does not impair local food security or lead to an unequal distribution of labour, but that it offers opportunities to reduce poverty.

- **Regional actors, national policy-makers and donors** shift perspectives on opportunities with special attention to marginalized regions and groups.

Implement adaptive planning approaches

to harness emerging opportunities, address potential trade-offs and respond to disruptive changes such as the COVID-19 pandemic [1]. It is essential to monitor the outcomes and impacts of regional development processes and external drivers that affect the different social groups, particularly the most vulnerable, and mountain ecosystems. Incorporating flexibility and scope for adaptation in planning and decision-making processes enables mountain communities to respond to changing conditions and to strengthen their resilience, as in the Kangchenjunga region (Chettri et al., pp. 36–37).

- **Donors at all levels and regional actors** allow for flexibility in the set-up of interventions.

Ensure equitable access to quality public services	Recommended action (who/what)
<p>Improve supply and quality of public services</p> <p>to meet the needs of mountain people. This is key for regional development. Reliable and place-specific services enhance trust and provide transparent conditions, both of which are crucial for long-term investments. In Ethiopia, for example, the social accountability programme led to improvements in the agricultural extension service, a prerequisite for development in the highlands of Ethiopia (Tafesse, pp. 24–25).</p>	<ul style="list-style-type: none"> • Regional actors consciously consider the needs of different social groups. • National policy-makers decentralize decision-making along with adequate funding.
<p>Invest in, and make use of, information and communication technology (ICT)</p> <p>to improve local opportunities, the quality of life in mountain areas and a region's attractiveness, also for young people, as in the Aosta Valley in Italy (Dax et al., pp. 40–41). Combining decentralized physical facility hubs with online services increases people's access to essential information and services, which is particularly important in dispersed settlements with a low population density. ICT solutions need to pay special attention to marginalized groups and their capabilities to develop capacity in using ICT. Telemedicine, e-government and online agriculture extension services have improved local opportunities and the quality of life in mountain areas.</p>	<ul style="list-style-type: none"> • Regional actors pay attention to the needs of marginalized groups and foster ICT implementation. • National policy-makers set targets and provide incentives and funding. • Donors provide funding for new ICT-based solutions.
<p>Promote and recognize social innovations</p> <p>to complement service delivery by the public sector. New forms of cooperation among civil society – but also between mountain communities, the private sector, and local and regional government – can create place-specific solutions and address gaps in service provision, for example in health care, as shown in the Swiss case (Tschumi & Mayer, pp. 28–29).</p>	<ul style="list-style-type: none"> • Regional actors value social innovation and support its development and implementation.
Connect actors to spark innovations	Recommended action (who/what)
<p>Build on indigenous and local knowledge and external expertise</p> <p>to promote co-creation of novel ideas and added-value products. Combining new forms of collaboration with product development can diversify options, overcome challenges of scaling up and open up new economic opportunities. Appropriate management, as shown by the example of the Grosses Walsertal in Austria, facilitates the identification of needs, promotes the generation of innovative ideas and seeks adequate funding (Kratzer et al., pp. 34–35).</p>	<ul style="list-style-type: none"> • Regional actors connect actors with complementary knowledge and skills.
<p>Stimulate and use synergies across sectors</p> <p>to link equitable socio-economic development with sustainable management of mountain ecosystems, and to efficiently and effectively use the limited financial resources. This requires coordination and collaboration across sectors, as in north-western Albania (Gjika & Imami, pp. 20–21).</p>	<ul style="list-style-type: none"> • Regional actors link actors across sectors and levels. • National policy-makers collaborate across sectors.
<p>Empower local entrepreneurs in building and diversifying networks</p> <p>to enable value chains that are beneficial for all parties involved, such as farmers, cooperatives or local businesses and external actors. The transboundary cooperation in the Himalayas helped to diversify tourism and increase the benefit to the local population (Chettri et al., pp. 36–37). In addition, a robust network based on a wide range of products reduces dependency and increases the resilience of mountain communities. This is particularly important in cases of disruptive change such as the COVID-19 pandemic or natural hazard-related disasters in the context of climate change.</p>	<ul style="list-style-type: none"> • Regional actors link farmers and small-scale entrepreneurs with potential "customers". • National policy-makers provide an enabling framework.

Three enabling conditions for the above levers to work effectively

Effective territorial governance	Recommended action (who/what)
<p>Employ mountain-specific policy instruments to take advantage of a region's assets and address its critical issues. Such instruments can be specific policies and laws, such as Georgia's mountain law (Tkeshelashvili & Nowakowska, pp. 38–39). But also national development strategies as well as government reforms can effectively strengthen good governance in regions and allow for people-centred and place-sensitive solutions. Such national efforts can include decentralization or self-governance reforms, as in Armenia (Janazyan & Mkrtchyan, pp. 26–27).</p>	<ul style="list-style-type: none"> • National policy-makers develop and effectively implement policies tailored to mountain regions.
<p>Ensure long-term engagement to promote trust building, support political negotiations and complex decision-making across different levels and sectors, as well as experimentations with creative new ideas. Such regional development processes go far beyond short-term project interventions, as shown by the example of Shkodra district in Albania (Gjika & Imami, pp. 20–21).</p>	<ul style="list-style-type: none"> • Regional actors, national policy-makers and donors support programmes that consist of several project phases.
<p>Implement committed regional management bodies to facilitate and coordinate regional development processes, as in the Grosses Walsertal in Austria (Kratzer et al., pp. 34–35). These bodies can be either state actors or non-state actors, or ideally a combination of the two. They should have a clear mandate, sufficient capacities and competences, and adequate funding. They may facilitate the co-development of regional visions, policies and strategies; promote bilateral and multilateral cooperation; and support lobbying. Such a facilitating body must enjoy the trust of all stakeholders, a factor that is particularly important in mountain regions with a high diversity of different social groups, or with scattered communities who have not yet been engaged in efforts across village or country boundaries.</p>	<ul style="list-style-type: none"> • National policy-makers implement effective decentralization. • Regional actors have the persuasive power and trust to coordinate and support actions.
Adequate and innovative funding schemes	Recommended action (who/what)
<p>Allocate funding for both strategy development and concrete actions to effectively implement the regional strategy. A funding basket which is stocked up by different government agencies, international cooperation agencies, charities and private sector funds would ease the financial burden for each actor and enhance their commitment to the process over a sufficiently long period. Funding programmes should be gender- and generation-sensitive, taking into account the specific needs of vulnerable social groups, as in the Kangchenjunga Landscape (Chettri et al., pp. 36–37).</p>	<ul style="list-style-type: none"> • Donors and national policy-makers earmark funding both for the development of mountain-specific policies and strategies and for action on the ground. • Regional actors support projects that contribute to the regional vision and strategy.
<p>Provide seed money for innovative projects to trigger additional financial resources. Often local farmers, engaged citizens, small-scale entrepreneurs or community-based organizations are creative and have innovative ideas, but lack the capital for implementation. Traditional financial institutions are often reluctant to invest venture capital in rural mountain areas with a potentially low return on investment in the short term. The experience in Georgia shows that innovative funding schemes providing seed money and complemented by the actors' own resources are effective (Tkeshelashvili & Nowakowska, pp. 38–39).</p>	<ul style="list-style-type: none"> • Donors at all levels fund innovative funding schemes that spark innovative ideas. • Regional actors have the capacity to set up transparent schemes and back innovative projects.

Regional development processes linked with capacity development	Recommended action (who/what)
<p>Empower local actors, including marginalized social groups to effectively participate in regional development processes and enhance their negotiating power, as in the Andes (Devaux et al., pp. 32–33). This will enable them to negotiate fair prices for their mountain products, decent working conditions and equal labour sharing within households and communities. This helps to proactively address the risk of unequal workload and payment that is often connected with commercialization of agricultural mountain products.</p>	<ul style="list-style-type: none"> • Regional actors coach marginalized social groups. • National policy-makers implement policies that ensure fair prices for producers and safe working conditions.
<p>Enhance local, regional and national government capacities to promote and facilitate integrated and inclusive development in mountain territories. Coaching local and regional authorities increases their competences in multilevel and cross-sectoral planning and implementation, and ensures effective local governance, as in the Shkodra region in Albania (Gjika & Imami, pp. 20–21).</p>	<ul style="list-style-type: none"> • National policy-makers and donors consciously engage in capacity development at all levels.
<p>Establish institutional mechanisms for informing regional development policies through bottom-up approaches to strengthen mountain regions' position in national policy processes. Multilevel regional development processes that are informed by sound evidence on the mountain regions' potentials and specific challenges offer joint learning for all those involved – from local to regional and national levels. In the Hindu Kush Himalaya region, involving actors from the central level was crucial for finding transboundary solutions (Chettri et al., pp. 36–37).</p>	<ul style="list-style-type: none"> • Donors support advocacy efforts. • Regional actors have the persuasive power to bring together actors from all levels. • National policy-makers pay attention to remote – but potentially rich – mountain regions.

Concerted efforts are needed to support the sustainable development of mountain regions. Policies and strategies that focus on the above levers, and that address the unique strengths and weaknesses of these regions, can help to steer them onto promising development pathways. Taking care to ensure that the enabling conditions are in place – effective governance, funding and capacity development – will provide a robust framework to leverage a transformation. Paying special attention to the guiding principles described in this publication – being inclusive, people-centred, place-based, environmentally sustainable and offering diversified livelihood options – will help to achieve a region's vision. Designing policies and strategies – and implementing them – with the above points in mind can drive progress on the 2030 Agenda [2] in mountains, in countries as a whole and globally.

Authors, advisory expert and acknowledgement

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Marketing native crops to improve rural Andean livelihoods

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Transboundary cooperation for mountain tourism in the Kangchenjunga Landscape

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From mountain law to effective national strategy in Georgia

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The Aosta Valley's Smart Specialization Strategy

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Acknowledgement

Part of this report is the result of the HIGHLANDS.3 project and received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 872328.

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Note: URLs were last checked on 23 September 2020.

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