

Migration and Sustainable Mountain Development

Turning Challenges into Opportunities



Sustainable Mountain Development Series

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Cover photo: Providing quality education in mountain areas can help to reduce one factor causing young people to leave their homes in mountains; and should they later decide to migrate, they will be more firmly rooted in their place of origin and better prepared for making a livelihood elsewhere. Children on their way home from school, Laos (BTWImages/shutterstock.com)

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Foreword

People living in mountain areas have long used migration as a strategy to make optimal use of natural resources, ensure food security, strengthen their social and economic networks, and fulfil personal aspirations. Even today, migration continues to be an adaptive response to environmental, societal, economic and political pressure. Experience from around the world shows that labour migration can help to reduce poverty and diversify livelihoods in mountains and beyond, but its success is determined by several factors. Which member of the household is migrating and under what conditions, and how effective is the transfer, management and investment of remittances?

Across the globe, migration from rural mountain areas has reached such a scale that depopulation and the seasonal absence of people of working age are widespread. This can have far-reaching consequences for the lives of those who stay behind, for the social fabric of mountain communities, and for the management of mountain ecosystems. Understanding why people migrate as well as the social, economic and ecological consequences of their action is key to enhancing the benefits and addressing the downsides of migration in mountain areas.

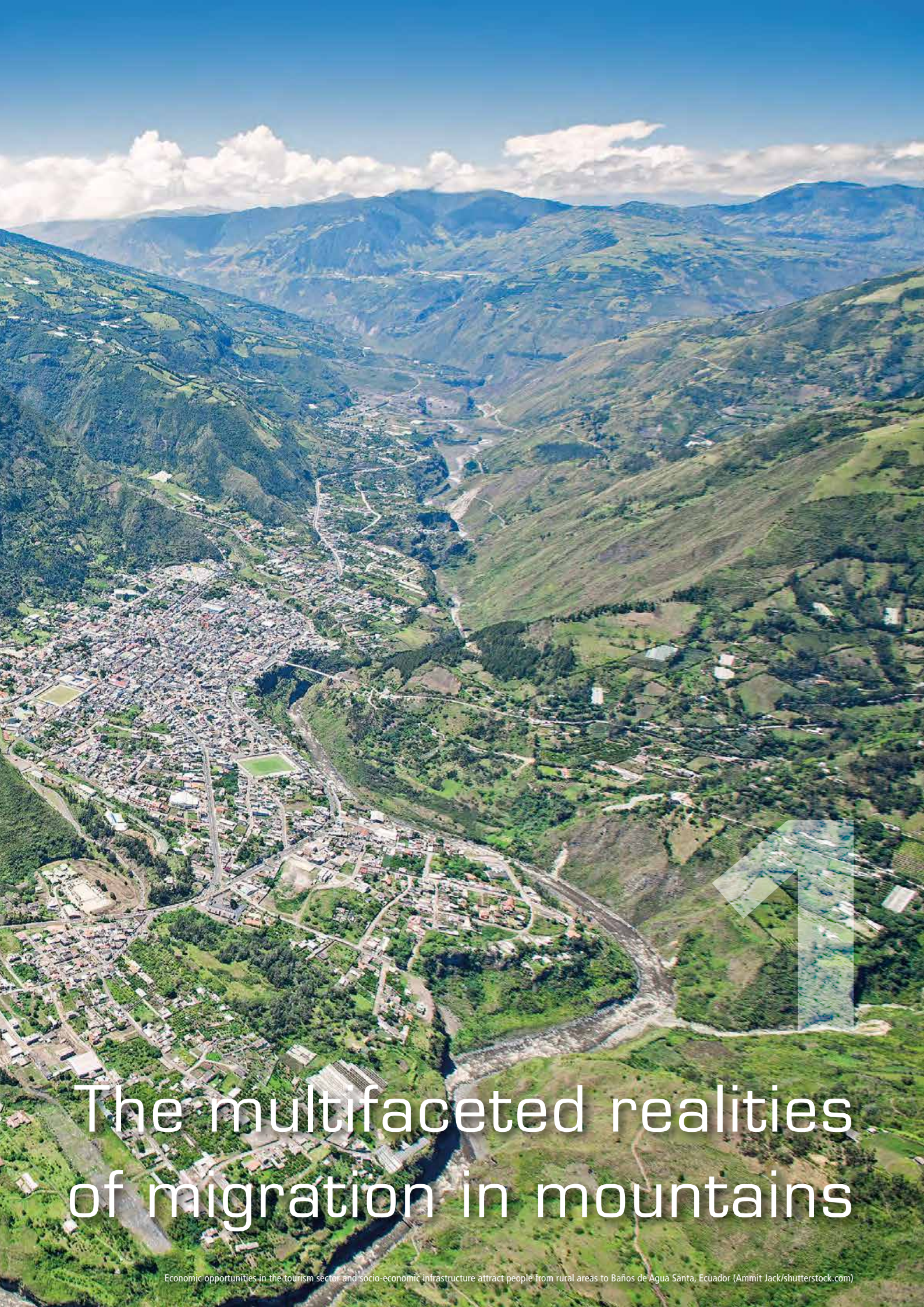
This issue of the *Sustainable Mountain Development Series* focuses on the situation in rural areas, where about 70 percent of mountain people still live. It seeks to provide insights into the complex migration processes and the resulting opportunities and challenges for mountain communities and regions. It also presents a selection of good practices that contribute to sustainable development in rural mountain regions, either by reducing people's distress at leaving the mountains or by facilitating positive outcomes of migration. The publication concludes with a set of policy messages that outline how migration can be integrated into policy- and decision-making effectively, to promote the sustainable development of rural mountain areas.

We hope that with this publication we can contribute to strengthening the benefits and reducing the drawbacks of migration for rural mountain people.

The editors

Felicitas Bachmann, Amina Maharjan, Susan Thieme,
Renate Fleiner, Susanne Wymann von Dach





The multifaceted realities of migration in mountains

Economic opportunities in the tourism sector and socio-economic infrastructure attract people from rural areas to Baños de Agua Santa, Ecuador (Ammit Jack/shutterstock.com)



Migration: More than a livelihood strategy for mountain people

Worldwide, one billion people are estimated to be migrants. Most of them – 763 million – have moved within their own country [1] and 258 million [2] internationally. Many are women, men and children from mountain regions. Understanding why they migrate and the social, economic and ecological consequences of their mobility is pivotal to enhancing the benefits and addressing the downsides of migration in mountain areas.

Traditionally, people living in mountain areas have used migration as a strategy to diversify their livelihoods, reduce their direct dependency on natural resources, and adapt to environmental, societal, economic and political pressure [3]. But people have not only been moving away from mountain areas; some have also moved to the mountains, particularly where favourable conditions allowed them to pursue new livelihoods. The last decades have seen substantial changes to the dimension, patterns and dynamics of mountain people's mobility, with positive and negative implications for mountain societies and ecosystems.

Today, it is increasingly recognized that migration is closely linked with sustainable development, as it contributes significantly to economic and social development in migrants' places of origin and destinations [4]. International frameworks like the United Nations 2030 Agenda for Sustainable Development and the Global Compact for Migration aim to reduce reasons for people to leave, to improve the situation of migrants, to enable them to realize their development potential, and to further the governance of migration processes at the local to international levels [5, 6, 7]. Conversely, safe, orderly and regular migration can effectively contribute to achieving the sustainable development goals (SDGs) [6, 8, 9]. However, this latter aspect has received less international and national attention, particularly with respect to mountain areas affected by internal and international migration.

Migrants from rural mountain areas find income opportunities in Ho Chi Minh City, Vietnam (J. Krauer)

Focus on migration realities in rural mountain regions

In 2012, more than 900 million people lived in mountain regions worldwide; 70 percent of these lived in rural areas [10]. But this is changing: the main trend indicates that people are moving away from rural mountain areas, either to urban centres in the mountains, to lowland areas or abroad – temporarily or permanently. In this publication we therefore focus on internal and international migration dynamics and their implications for rural mountain areas, rather than on the consequences of urbanization for mountain societies and landscapes, as this would merit a separate analysis.

This publication is organized into four parts. Part 1 provides an insight into the drivers and patterns of migration processes. While we cover the range from voluntary to distress migration, we focus less on the forced displacement of people through armed conflict or human rights violations. Part 2 looks at outcomes of migration processes for mountain areas and illustrates these with selected case studies. Part 3 presents good practices that aim to maximize benefits and minimize adverse effects of migration in mountains. In Part 4, we propose four fields of action for integrating migration in policy- and decision-making effectively, for the benefit of rural communities and families with absent members. In doing so, we link the messages to relevant international efforts such as the 2030 Agenda.

Definition of migration

Migration is the “movement of a person or a group of persons, either across an international border, or within a State. It is a population movement, encompassing any kind of movement of people, whatever its length, composition and causes; it includes migration of refugees, displaced persons, economic migrants, and persons moving for other purposes, including family reunification.” [11]

For definitions of key terms see the glossary on p. 62.

Multiple drivers, diverse types of mobility

Leaving rural mountain areas

There are several, often intertwined reasons why people leave rural mountain areas (Figure 1). They seek to escape poverty and food insecurity, as agricultural productivity in the rugged topography of the mountains and the sometimes harsh climate is low and pressure on natural resources high. They seek to escape the lack of economic opportunities in remote areas. And they seek to fulfil their aspirations of professional and personal development, in a place that offers access to vocational training and higher education, as well as better social and health services. Some – especially women – migrate for marriage, or to break free from traditional gender roles. People may be forced to migrate due to ethnic and armed conflicts. And increasingly, environmental and climate change and natural hazards add distress to the already precarious situation of small-scale farmers, especially where there is little support for climate change adaptation or for risk insurance. But while climate change impacts are important drivers of migration in mountain regions, they are often not the primary or only ones [12, 13].

Several factors influence the spatial and temporal pattern of people’s movements: their reasons for migrating, their resources, skills and social networks, their distance to urban centres, and the situation at their destination. For many, seasonal mobility during the agricultural lean season in mountains is essential for survival and food security, and is determined largely by the lack of local non-farm livelihood opportunities [3, 15]. In general, but also in mountain areas, international migration is

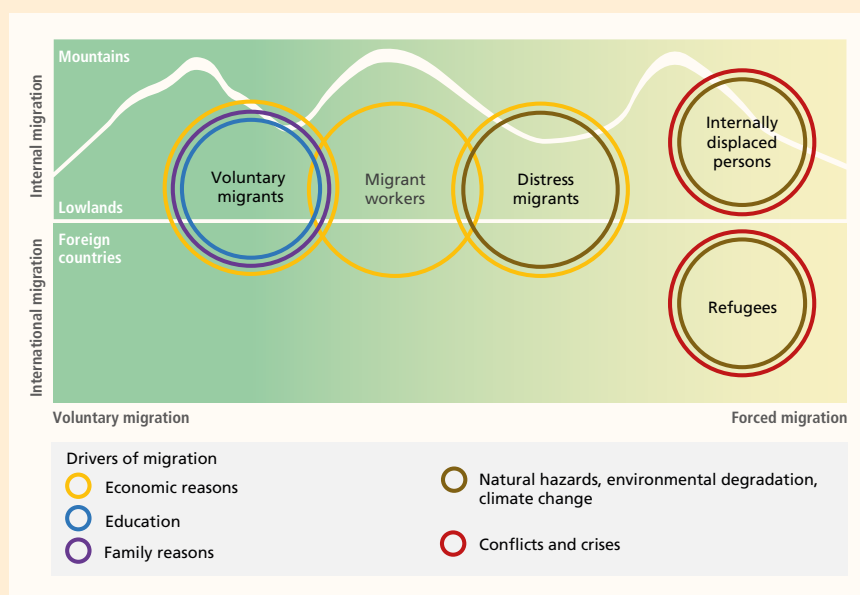


Figure 1. Mountain people's motives for leaving rural mountain areas are influenced by various drivers associated with different degrees of pressure (adapted from [14]).

more likely to occur when connections and support networks are readily available through other migrants or recruitment agencies. In the context of economic globalization, migration movements have changed, with circular migration becoming increasingly widespread. Accordingly, ever-greater numbers of short-term labour migrants commute repeatedly or regularly between their places of origin in mountains and one or several countries of destination. And finally, many migrants from rural mountain areas settle permanently at their new destinations.

Migration processes also vary depending on which member of the household migrates and to what extent people stay connected with their places of origin in mountains. How these processes play out is not only influenced by people's reasons for migration (education, economic motives, family, environmental constraints, conflicts) but also by the available resources and the migrants' skills. Apart from migration due to violent conflicts, the majority of migrants are young people, particularly those who move for education, employment or marriage. Often only some members of a family migrate; children, elderly and maybe one adult offspring remain in the place of origin and continue farming activities as far as possible. While migration used to be a predominantly male phenomenon, today increasing numbers of young women migrate internally and abroad. It is often not the poorest of the poor who migrate – especially long-distance – but people who already have a minimum of capital or who can rely on the support of their family and social networks to cover migration costs and facilitate access to job opportunities. When poor people migrate, it is often internally and to take up low-paying, low-skilled work.

Migration patterns in the Peruvian Highlands

Huancayo, the capital of the Junín region in the Central Peruvian Highlands, lies at an altitude of 3 260 m. People living at lower altitudes tend to combine activities in rural and urban areas by having one or several family members commute daily to Huancayo. But for people from the highlands above 3 900 m, daily access to the town is difficult. In their case, it is common for one or more family members to take care of the animals on the communal land in the highlands, while the rest of the household stays in Huancayo to benefit from urban economic and educational opportunities [16].



Small-scale farmers have migrated to this mountainous area in Kenya, where the potential for farming is high. (M. Giger)

Moving to rural mountain areas

Newly emerging economic opportunities are attracting people to move to – or move back to – mountain areas. In regions with tourism potential, former migrants return to, and invest in, the mountain community of their birth, or newcomers settle in rural mountain areas with the intention of developing and exploiting new economic niches, such as offering tours or selling regional products (see R. Gracheva et al., pp. 34–35). Similarly, a wave of return migration to quinoa-growing areas in the Bolivian Altiplano was observed during the quinoa economic boom (M. Tschopp et al., pp. 36–37). People also migrate to mountain areas with favourable environmental conditions. This is the case in some tropical countries in East Africa, e.g. in Rwanda and Uganda (J.M.B. Tukahirwa & R. Kamugisha, pp. 54–55), and in mountain zones at lower elevations, such as the Sub-Andean valleys in Bolivia (S. Wymann von Dach et al., pp. 22–23).

Finally, mountain areas in developed countries – which have long experienced depopulation – have seen new migration trends emerge in the last few decades [17]. On the one hand there is “amenity migration”, where people who are usually well-off choose to settle seasonally or permanently. They are motivated by the scenic beauty of the landscape, the peace and quiet, the fresh air and the pure water. The other newcomers are known as the “new highlanders” – they move from lowland urban or peri-urban areas to live and work in mountain areas [18]. They, too, are often well-educated and in possession of financial capital and connections to urban centres. They are entrepreneurially active, engage with their local communities and contribute to the economic and social life of their chosen new locations.



Current population and migration dynamics in mountains

Rural-to-urban migration is contributing to poverty reduction in Bolivia, but it also poses new challenges. La Paz, Bolivia (C. Devenish)

Migration in mountain regions is taking place, but to what extent? An overview of population changes based on a global population model provides tentative indications on recent trends of people's movements. Census-based, mountain-specific information is key to understanding how the local situation in mountains, the respective country's socio-economic context and its migration history influence migration today. Examples from Nepal, Georgia, Rwanda and Bolivia illustrate the diversity of migration patterns.

Global overview of population changes

What is the scale of migration to and from mountain regions, and how does migration differ according to region? While there are now more data available on migration in general – particularly on international migration – the specific case of migration from and to mountains remains undocumented at the global scale. A comparison of the worldwide spatial distribution of population between 2000 and 2015 based on a model [1] provides a tentative overview of the population dynamics in mountains. These changes are the compound result of people's mobility and natural population growth rates (fertility and mortality rates) in a given area, e.g. in mountains. The findings must therefore be interpreted with caution and cannot be understood as the results of migration flows alone.

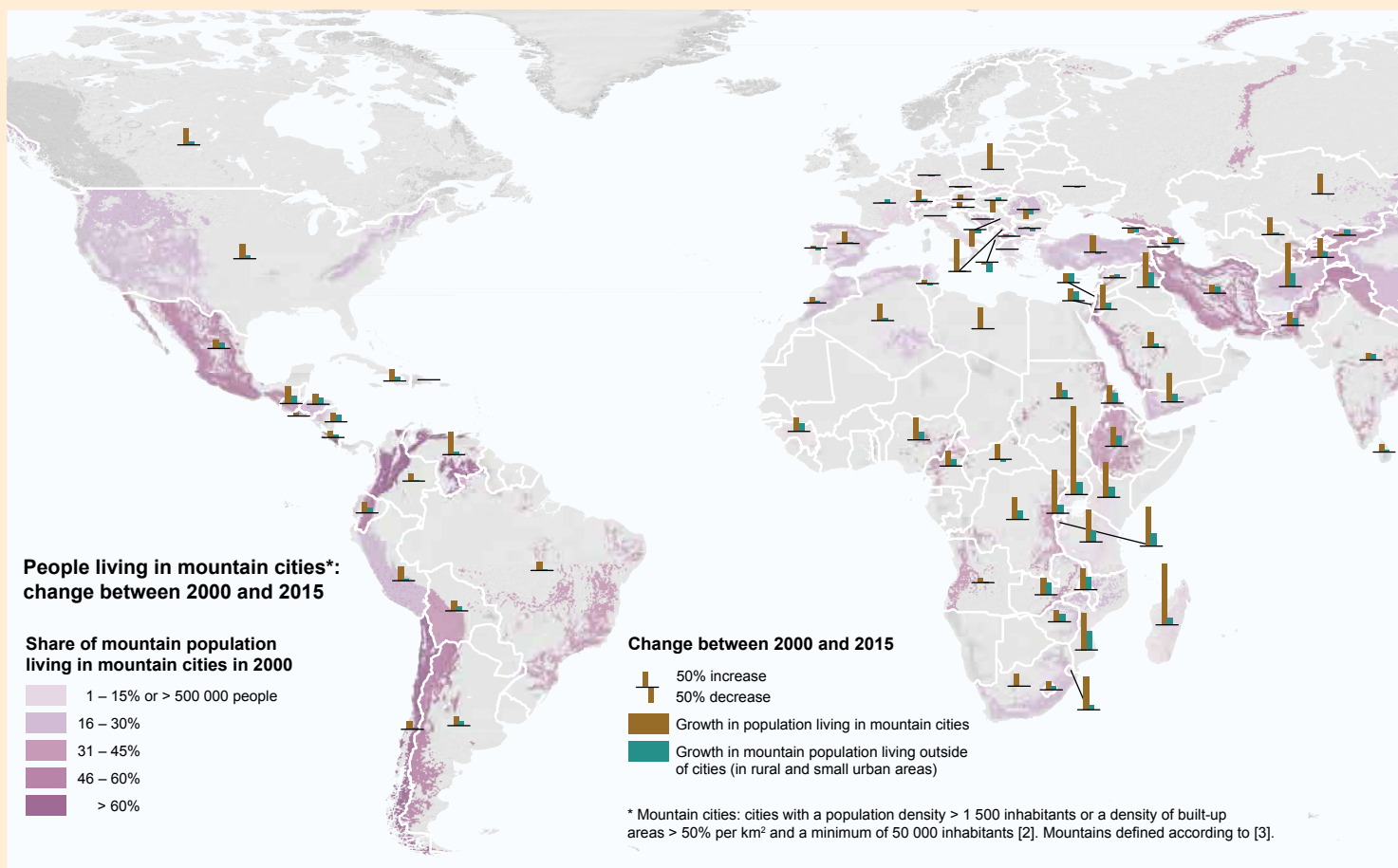
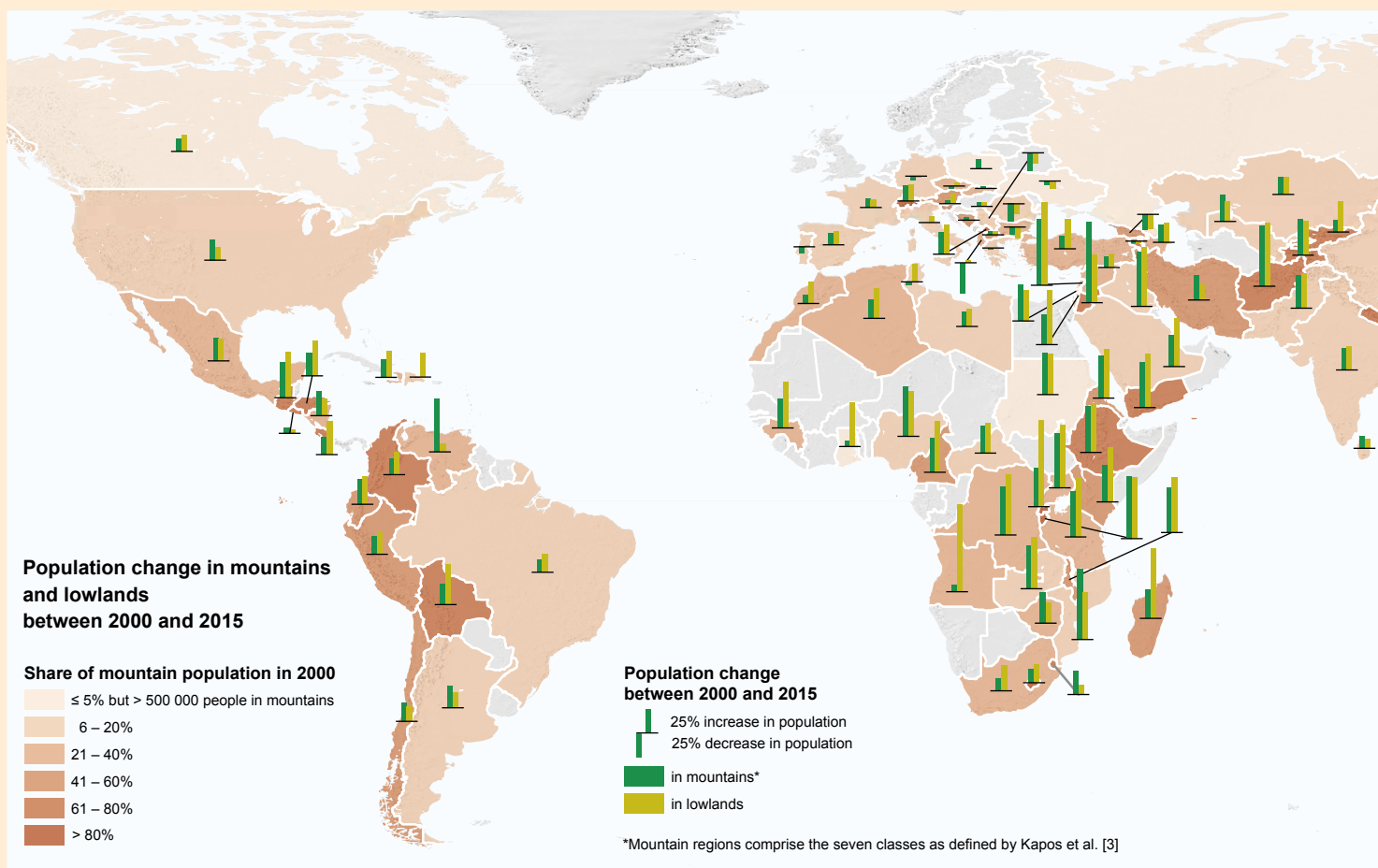
Remarkably, the population growth in mountain areas – if all seven mountain classes are considered (see Box on p. 15) – corresponds to the worldwide population growth between 2000 and 2015 of close to 20 percent. However, the pattern of population change in mountain areas varies from country to country. It reflects the high diversity of mountain environments and socio-economic, cultural and political conditions, and is the result not only of the recent but also of the long-term population development in a country. Figure 2 contrasts the relative population changes

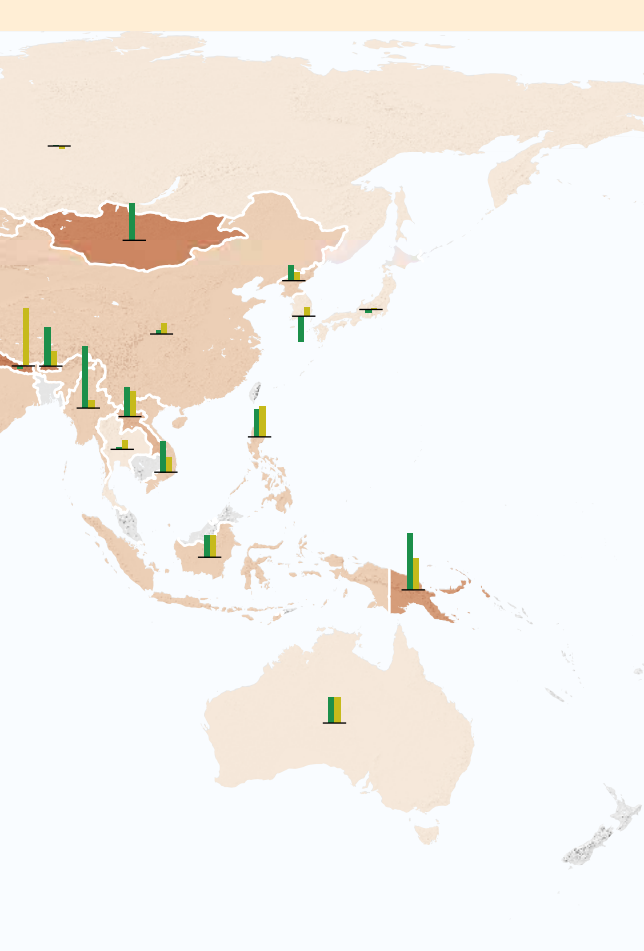
in mountains with the changes in lowland areas of a given country, while Figure 3 compares the population changes in cities and outside cities in mountains (for definition of cities, see Box on p. 15). Despite the differences, we can observe a few trends between 2000 and 2015:

- **Of all countries with mountain areas, nearly two-thirds are experiencing lower population growth there than in the lowlands.** Some countries have a very large difference in relative population changes in mountain and lowland areas. Nepal, for example, is facing negative growth of its mountain population and a large increase in its lowland population. This significant difference cannot be explained by a decrease in birth rates alone and therefore indicates a movement of people from highlands to lowlands. The remaining countries with mountain areas – more than a third of the total – are experiencing a higher population growth in their mountain areas than in the lowlands, but with no discernible geographic pattern.
- **In mountain areas, population growth in cities is generally higher than outside cities.** In line with the global trend, urban growth rates in mountains are higher than the overall population increase. Rural-to-urban migration is the most likely cause of this dynamic, and is particularly pronounced in African mountain areas (e.g. Rwanda), where urbanization rates are higher than in other mountain regions. This can be explained by the overall higher population growth rates in Africa coupled with a level of urbanization that is still relatively low. In Latin America, although the urbanization rate is low, the absolute increase in city dwellers is high (e.g. in Bolivia), as the share of the population living in Andean cities is already very high.
- **A few countries face a decline in the mountain population in urban areas.** This is particularly so in Eastern Europe and Western Asia, where countries face an overall population decrease (e.g. Georgia, Armenia), due to either emigration or a low birth rate.
- **Population changes in mountains vary markedly according to elevation.** An analysis by FAO [2] of population dynamics between 2000 and 2012 shows that the population decreased by more than one-third in the highest elevation class (> 4 500 m), while the population increase was highest in mountain areas between 1 500 and 2 500 m.

Country-specific migration patterns

At the country level, census data and specific surveys on migration provide in-depth insights into people's movement from, within and to mountain regions. However, these data are often disaggregated by administrative units (districts, provinces) and not along mountain boundaries, limiting the scope of a mountain-specific analysis. In addition, the data can only partially reveal the different spatial and temporal patterns of seasonal or circular migration. For Nepal, Rwanda, Georgia and Bolivia, spatial population and migration data enable the analysis of migration dynamics from and within their mountain areas, i.e. the Hindu Kush Himalayas, Eastern Rift mountains, the Caucasus and the Andes (see pp. 16–23). These geographically spread-out examples reveal some migration characteristics shared with other countries in their region. Some characteristics, however, are unique – and specific to their socio-economic, institutional and environmental context as well as their migration history.





Mapping recent population changes

To map recent population changes in mountain areas and compare them with changes in the lowland areas, we superimposed the *Global Human Settlement Layer* (GHSL) by the Joint Research Centre of the European Commission [1] with a mountain map according to Kapos et al. [3] at two time-points, 2000 and 2015 respectively. The GHSL depicts the spatial distribution of population based on census data and built-up areas.

Based on the GHSL model we distinguish between

- Cities: contiguous cells with a density > 1 500 inhabitants or a density of built-up areas > 50% per km² and a minimum of 50 000 inhabitants.
- Outside cities: small urban areas (contiguous cells with a density > 300 inhabitants per km² and a minimum of 5 000 inhabitants) and rural areas (cells outside large and small urban areas).

The mountain delineation comprises seven classes:

1. Elevation > 4 500 m
2. Elevation 3 500–4 500 m
3. Elevation 2 500–3 500 m
4. Elevation 1 500–2 500 m and slope > 2°
5. Elevation 1 000–1 500 m and slope > 5° or local elevation range (7 km radius) of > 300 m
6. Elevation 300–1 000 m and or local elevation range (7 km radius) of > 300 m
7. Isolated inner basins/plateau < 25 km²

Figure 2. Population change in mountains and lowlands between 2000 and 2015. Map by Jürg Krauer, Susanne Wymann von Dach and Manuel Abebe. Data source: [2]

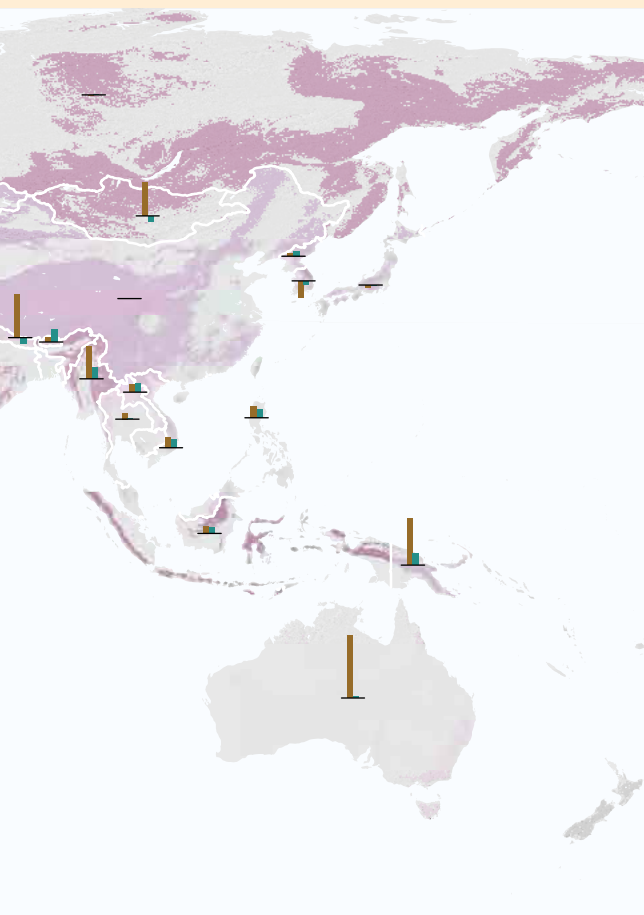


Figure 3. People living in mountain cities: change between 2000 and 2015. Map by Jürg Krauer, Susanne Wymann von Dach and Manuel Abebe. Data source: [2]

Nepal: Migration to mountain cities, lowlands and abroad

Population change in Nepal



The surface of the two squares represents the country's total population in 2000 and 2015, the surface of the rectangles the population in the respective contexts. The change in size is proportional to the respective population change.
Data source: [1]; mountains comprise all seven Kapos classes [2]

The population model indicates that between 2000 and 2015 Nepal's mountain population decreased by 2 percent, while the overall population increased by 20 percent. In 2015, about half of the country's 28.3 million residents lived in mountain areas. Rural mountain areas saw a decline in their population, while cities grew substantially.

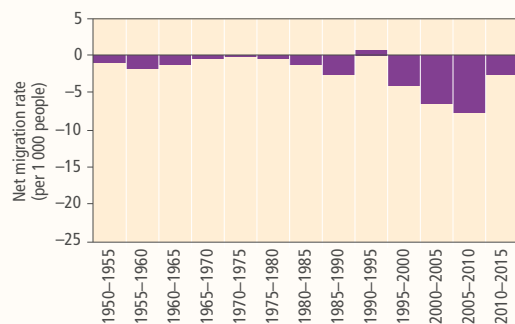
Context

Nepal is spread across three ecological zones: the Mountains (high Himalayas), the Hills and the Tarai (the lowlands in the South). The high Himalayas and the Hills roughly correspond to the seven mountain classes defined by Kapos et al. [2].

Traditionally, Nepali people moved within their country – from rural to rural areas and to the few cities – but also to India. For a long time, the statistics did not reflect the movements to India. Moreover, the level of urbanization was one of the lowest in South Asia [3]. However, the mobility pattern has significantly changed in the last decades. The civil war (1996–2006) accelerated people's movement to more secure urban centres. Today, Nepal's urbanization rate is among the highest in the region [3], leading to a shrinking rural population in the mountains. About 22 percent of households in the Mountains zone and 28 percent in the Hills zone report at least one member as absent [4].

International migration

- **Emigration has become an important economic factor.** In the context of Nepal's economic liberalization, the Foreign Employment Act of 1985 facilitated labour migration abroad, especially to the Gulf States, while migration to India remained important. In 2011, 80 percent of the 1.9 million international migrants moved for employment. In 2017, remittances corresponded to 29 percent of Nepal's GDP, nearly four times what tourism contributes to Nepal's GDP. Salaries in India are often lower than those in the Gulf States, so less money is sent home. But India provides access to health care and schooling, and having one less person in the household takes pressure off the household budget.
- **Fewer remittances for the high Himalayas.** People from the high Himalayas are less likely to migrate abroad than people from the Hills: 5.7 percent compared to 8.7 percent of the people. Overall, only 8 percent of the remittances flow to the high Himalayas, 36 percent to the Hills and 56 percent to the Tarai [5].



Nepal's balance of emigration and immigration. A negative net migration rate means more people emigrate than immigrate. The increase in emigration coincides with the Foreign Employment Act of 1985.

Data source: [6]

- **Young men represent the largest group of international migrants.** Close to 88 percent of the international migrants are men, mostly between 15 and 29 years old. Members of wealthier families are considerably more likely to migrate than members of poor households. However, the poorer the household, the more likely a member is to migrate abroad, often as an unskilled or semi-skilled worker to India [5].

Migration within Nepal

Internal migration remains important, with 57 percent of all absent household members moving within Nepal [5].

- **People mainly move from rural areas in the mountains to the lowlands and cities** [3]; the major urban destinations are the Kathmandu valley and Pokhara. Increasingly, people are also moving to emerging new urban areas, particularly in the lowlands [7]. Rural-to-rural migration remains important mainly for family reasons.
- **Many internal migrants are young and from wealthy households.** Nearly half of all internal migrants are aged between 15 and 29. About 35 percent of internal migrants belong to the wealthiest households; only 7.5 percent belong to the poorest [5].
- **Reasons for internal migration differ between women and men.** The majority of internal migrants are women [4]. They mainly move for family reasons (70 percent), while men move for work (31 percent), family reasons (31 percent), education and study (21 percent) [5].

Rwanda: Rural-to-rural migration prevails

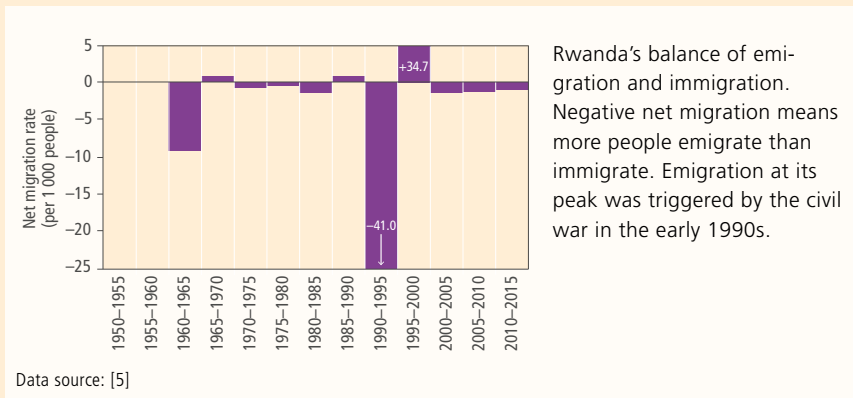


Context

Rwanda is a hilly and mountainous country and has one of the highest population densities in Africa. It is part of the Eastern Rift mountains, which are rich in high-potential farming areas, a characteristic that sets them apart from most other mountain regions in the world. However, population growth in the mountains puts pressure on agricultural land in a country in which the primary sector dominates, employing three-quarters of the workforce. This is also reflected in one of the lowest levels of urbanization worldwide (17 percent). Rwanda's economic development and poverty reduction strategy (2013–2018) has facilitated urbanization and the development of other cities, as a means of propelling economic growth. The actual urbanization rate might be substantially higher than official figures indicate [3].

International migration

- **Emigration is not a major livelihood strategy**, nor does the flow of remittances contribute considerably to Rwanda's economy. Between 2007 and 2017, remittances corresponded to only 1–3 percent of GDP [4].
- **Internal conflicts** in the early 1960s and the civil war in the early 1990s forced hundreds of thousands of people to flee the country. Since then, more than 3 million people have returned to Rwanda.
- **Immigration of foreign-born people is low** and accounts for about 3 percent of the Rwandan population. They mainly settle in urban areas and do not contribute substantially to the population pressure in rural mountainous areas.



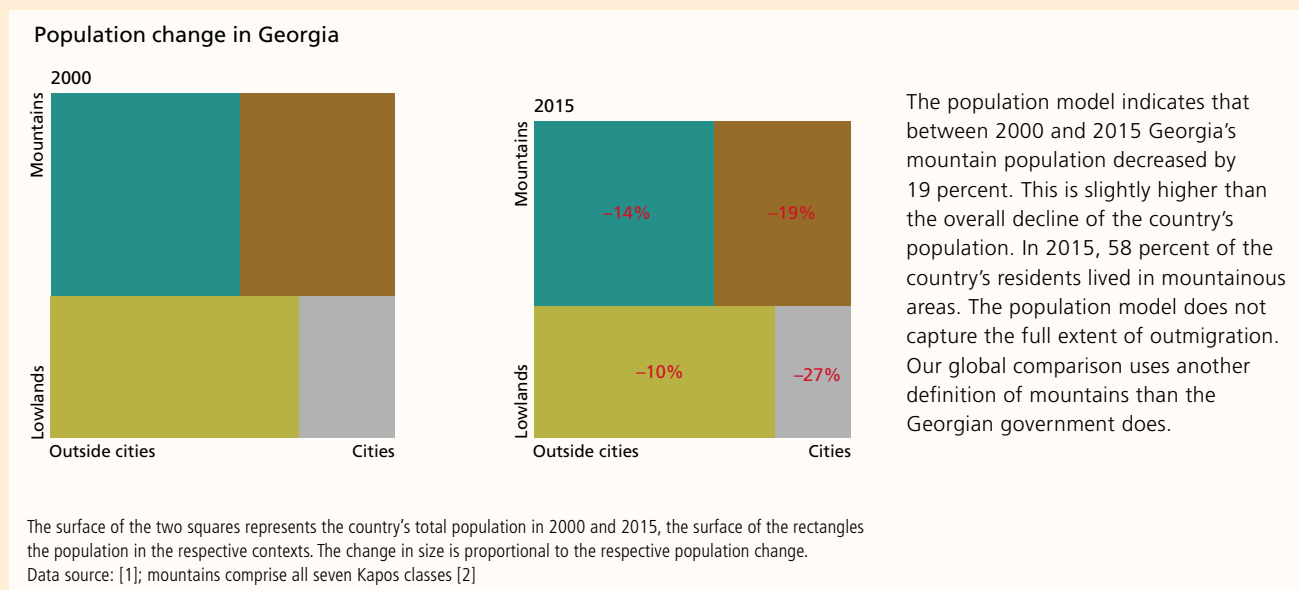
Migration within Rwanda

There is little internal migration in Rwanda: less than 10 percent of the population changed their district of residence between 2011 and 2014. Push factors for migration in rural areas were land scarcity and a lack of public services, while in urban areas it was the high cost of living. Well-educated people tended to move to urban areas, while less educated people lacking suitable skills mainly sought economic opportunities and employment in rural areas.

Rwanda's main migration pattern is as follows:

- **The dominant form of migration is rural to rural**, accounting for 34 percent of internal migrants. Urban-to-rural migration accounts for 27 percent, while rural-to-urban migration accounts for only 20 percent of all people migrating internally [3].
- **People move from densely populated to less populated districts.** The densely populated North, West and South Provinces with higher mountain ranges experienced higher outmigration than in-migration. The less densely populated East Province, with lower mountain ranges, had a net positive in-migration of more than 860 000 people [6].
- **Urbanization has played a positive role in economic development.** Kigali City, Rwanda's capital, recorded a positive net migration of slightly more than 600 000 people between 2011 and 2014 [6]. Migration to urban areas has contributed to poverty reduction [7].
- **Migrants were just as likely to be female or male, most of them in the 20–29 age range.** Women tend to relocate to rural areas, while men move to cities. Due to the generally high birth rate and limited migration, there has been no pronounced aging of the non-migrating population in the mountains [6].

Georgia: Outmigration from mountains and lowlands

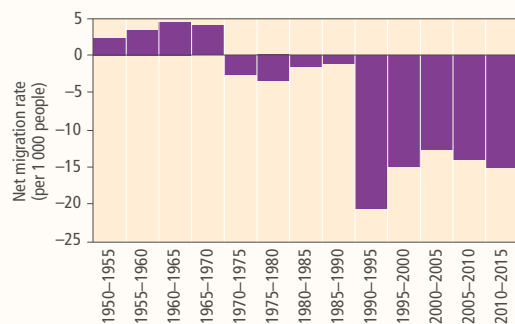


Context

Georgia's landscape is dominated by the Greater and Lesser Caucasus ranges, which cover close to 80 percent of the country's territory. Georgia has experienced a significant decrease in population since the demise of the Soviet Union in December 1991. This political disruption severely affected Georgia's economy and led to an almost complete breakdown in industry and large-scale agriculture, with high rates of unemployment and exorbitant inflation. The situation was further exacerbated by political tension and open conflicts with Russia over Abkhazia and South Ossetia [3]. The current population decline is affecting rural and urban areas in both highlands and lowlands and is the combined result of high international as well as internal migration and a low birth rate.

International migration

- **Emigration has been high and remittances have helped to meet basic needs.** In 2016, emigrants numbered 98 288 (55 255 men and 43 033 women) in a population of about 3.7 million [4]. The high emigration results in remittances exceeding US\$ 1 billion a year, equivalent to 10–12 percent of Georgia's GDP in recent years. In half of all households with emigrants, remittances made up 50–75 percent of the family's budget [4]. However, it is mainly the wealthier households who benefit; only about 4 percent of the poorest households receive remittances [5]. A large share of remittances is used to meet basic needs like food, clothing and healthcare, whereas hardly any money is invested in business development [4].
- **Those who emigrate tend to have a high level of education,** but emigration does not help to further enhance their education. About 75 percent of emigrants were 20 to 54 years old [4].



Georgia's balance of emigration and immigration. Negative net migration means more people emigrate than immigrate. The significant increase in emigration was driven by the demise of the Soviet Union in December 1991.

Data source: [6]

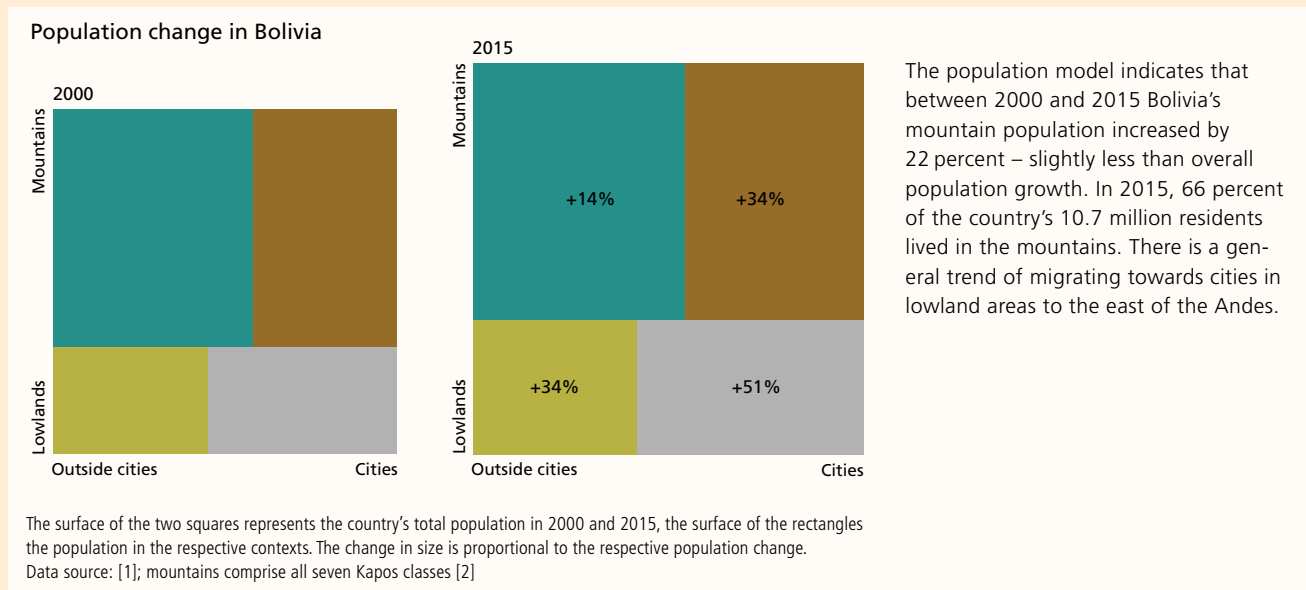
- **Rural areas in higher mountains had a low rate of emigrants** between 2002 and 2014 [7]. Most international migrants come from urban areas, particularly from Tbilisi. This can be linked to the significantly higher unemployment rate in urban areas (27 percent) than in rural areas (8 percent) [5], but also to previous outmigration: many left rural areas already before 2002. Elderly people in rural mountain areas are less likely to migrate abroad.

Migration within Georgia

In 2014, nearly 20 percent of the people declared that they had lived in a different place of residence for 12 months or more. Thus internal migration remains important and affects mountain areas, even though it has slowed down since 2009 [8].

- **Rural-to-urban migration prevails**, but the pattern is more complex: urban-to-urban and rural-to-rural movements are also important. More women than men migrate internally.
- **High outmigration from the mountains.** Mountainous regions belong to areas with the highest population decreases (Racha-Lechkhumi and Kvemo Svaneti [–37 percent] and Samegrelo-Zemo Svaneti [–29 percent]). This points to the depopulation trend in the mountains [4].
- **Internally displaced persons (IDPs) constitute a major group of migrants.** More than 268 000 people had to leave their homes due to the two conflicts with Russia between 1991–1993 and in 2008. There are slightly more women and more young and middle-aged persons among the IDPs [4].
- **5 000 households are officially considered “eco-migrants”**, having been forced to leave their homes due to natural hazards, which Georgia's mountain areas are highly prone to [4].

Bolivia: Growth of mountain population and migration to cities

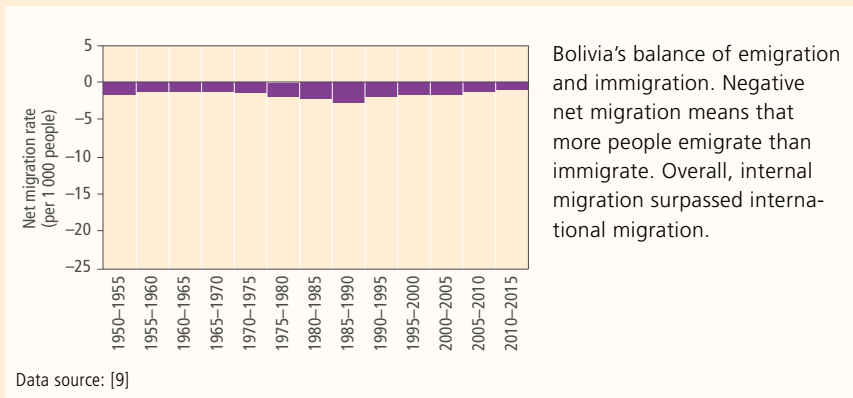


Context

The Andes and their foothills cover more than a third of Bolivia and are home to about two-thirds of Bolivia's population. For rural people in Bolivia, migration and transhumance have always been important strategies enabling them to harness resources at different altitudes. The Spanish colonization triggered migration of indigenous people to remote places or to cities. In the 19th century, new mining sites for tin attracted people from other places, eventually leading to an economic boom that fuelled the growth of cities like La Paz and Cochabamba. Since the national revolution in 1952, the government has promoted settlement in the Andean foothills and lowlands through various programmes [3]. The revolution also opened up new economic opportunities for a broader social stratum. Economic growth, driven by the extractive industries, as well as decentralization processes and urbanization have significantly reduced poverty and inequality [4, 5, 6]. At the same time, Bolivia's population has grown rapidly.

International migration

- **Emigration has been increasing** since the beginning of the 20th century. Many Bolivians emigrated to Argentina, mostly as labourers in the agricultural sector. The second most popular destination was Spain, although the economic crisis between 2008 and 2014 there has caused many to return. In 2017, the official number of emigrants was about 880 000, around half of them women. However, other estimates show that up to 2.5 million people or about 25 percent of Bolivia's population live outside the country [7].
- **Urban households receive nearly half of all remittance flows** (49 percent), followed by households in rural areas (29 percent) and in peri-urban areas (22 percent). In terms of geographic distribution, 42 percent of all remittances go to the Sub-Andean valleys, 35 percent to the lowland Llanos region and 23 percent to the Andean region [8]. While remittances are certainly important for the recipient households, overall, they contribute only minimally to the national economy, corresponding only to 3.5 percent of Bolivia's GDP in 2017.



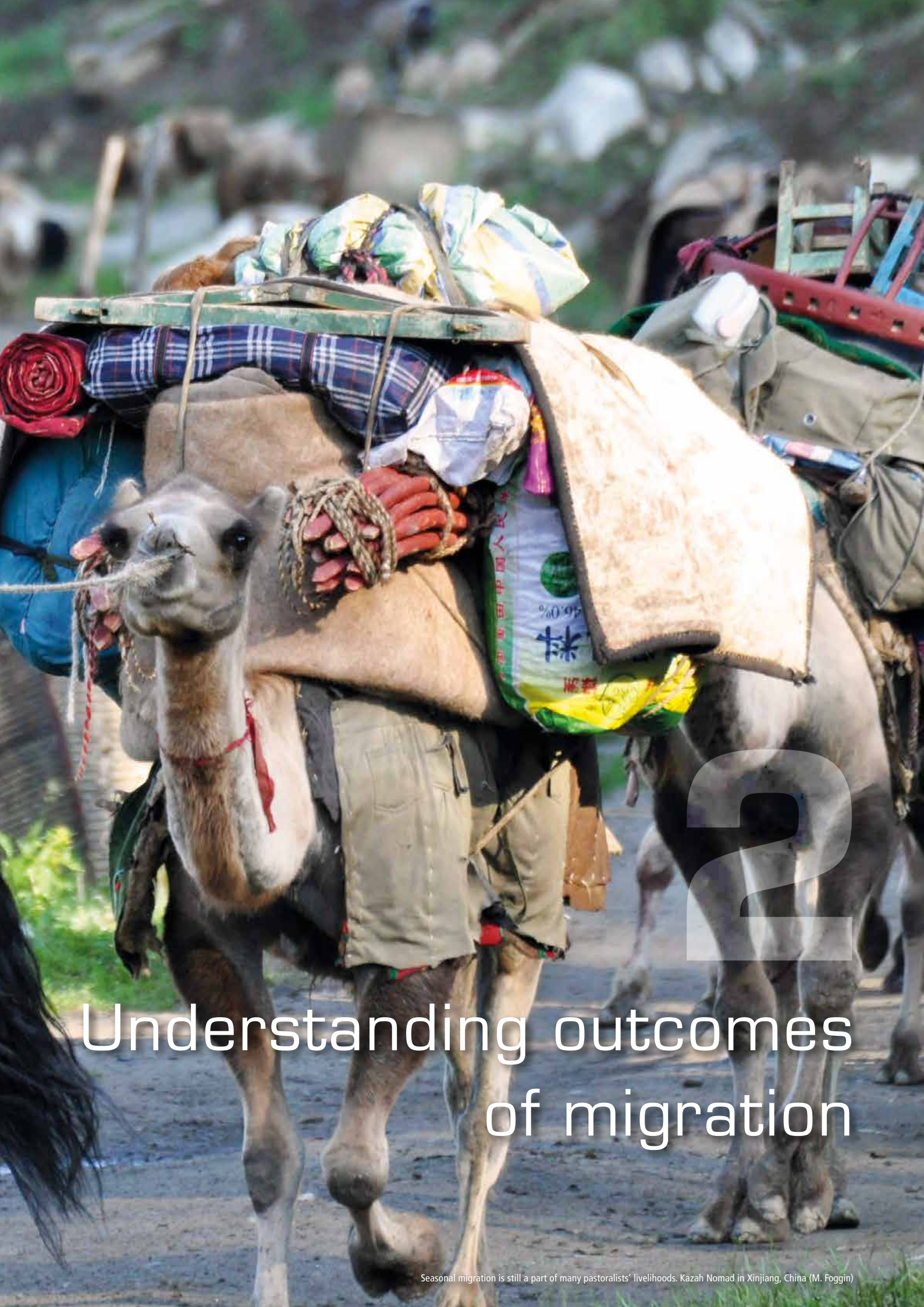
- **Circular migration, common in some parts of Bolivia**, changes the distribution of wealth and the fabric of local society. Returnees bring back new skills and ideas.

Migration within Bolivia

Two shocks in the 1980s accelerated rural-to-urban migration: first, a nation-wide drought in 1982–1983 that affected part of the Altiplano region and the Sub-Andean area, and second, an economic crisis in 1984–1985 partly caused by a decline in tin prices followed by hyperinflation and an adjustment programme by the government [4]. Today, climate change is one of the factors contributing to migration from rural areas in the Bolivian Andes.

- **High internal migration from rural to urban areas:** approximately every second head of household is a permanent migrant. Most migrants move from rural areas to cities (52 percent), or from small towns to larger cities (27 percent) [9]. Santa Cruz de la Sierra in the lowlands is the most attractive destination, followed by El Alto and Cochabamba in the Andean mountains [5]. Urbanization is also triggered by substantially higher wages in urban than in rural areas. Many rural areas mainly in the Sub-Andes face a shrinking population.
- **Migrants are more often women, well-educated and young.** In most cases, rural and small-town migrants have more years of schooling than those who do not move. Migrants from rural regions belong to the lower social strata in large cities. Studies also show that some female migrants in cities face discrimination in terms of unequal wages. Overall, permanent migrants tend to belong to the middle class: there is less migration by the poorest of the poor from rural areas.





2

Understanding outcomes of migration



Opportunities and challenges for mountain communities

Remittances from their sons in Russia contribute to the livelihoods of families in this village at 2 500 m in Varzob Valley, Tajikistan (B. Wolfgramm)

Migration links mountain communities with lowlands, urban areas and foreign countries. It alters the social fabric and traditional gender roles. Migration reduces poverty – through financial and social remittances – and sparks innovation and transformation in mountains. And migration results in changes in the use of land, with positive or negative consequences.

Migration has diverse outcomes – both on people and on the environment. The extent to which migration affects mountain people's livelihoods and their resilience depends on their household assets such as land, finances, labour force, education and social networks. It also depends on environmental conditions and the institutional and political context, both national and regional. Migration from and to rural mountains results in opportunities and challenges for sustainable mountain development (Table 1).

Through migration, mountain communities are increasingly connected with places outside the mountains. Migrating community members continue their engagement with their place of origin through their land rights and through formal and informal diaspora associations. Some migrants develop multilocal livelihoods, moving between several places or countries including their original home (see S. Thieme & A. Murzakulova, pp. 30–31; and A. Maharjan, pp. 32–33); others opt to return home as soon as new economic opportunities emerge (M. Tschopp et al., pp. 36–37; and R. Gracheva et al., pp. 34–35). Translocal connectedness [1, 2] is particularly important for mountain people living in remote areas that are difficult to access. Here, having dual residency, carrying out multiple livelihood strategies and maintaining social and cultural ties allow mountain people to remain in their areas of origin, but still be part of and benefit from a larger community spread over multiple locations, even multiple countries.

Table 1. Outcomes of migration for sustainable mountain development (SMD)

	Opportunities for SMD	Challenges for SMD
Migration from rural mountain areas	<ul style="list-style-type: none"> • Remittances that secure livelihoods, improve living conditions and facilitate local investment • More resilient livelihood strategies through multilocality • Reduced pressure on natural resources and ecosystems • Potential for technical, social and institutional innovation through new skills, knowledge, attitudes and technologies brought back by migrants • Empowerment of women through changes in responsibilities and power relations within families and communities 	<ul style="list-style-type: none"> • Imbalance of remaining population in terms of gender and age • Lack of labour force increases workload for those remaining (mostly women, children and elderly people) • Lack of skilled people • Lack of labour force impairs agricultural production and sustainable land management, and may lead to land abandonment • New economic disparities in mountain communities • Jeopardizes the delivery and maintenance of social services and infrastructure
Migration to rural mountain areas	<ul style="list-style-type: none"> • Decreases local labour shortage • Develops economic niches and generates new jobs • Ensures a critical population size to maintain social services • Potential for economic, technical and social innovation • Influx of economic resources and investments 	<ul style="list-style-type: none"> • Increasing pressure on natural resources and social and technical infrastructure • Potential for social conflicts and new social and economic disparities • Integration of newcomers

Remittances and poverty reduction

Remittances are hugely important for the economies of developing countries: in 2011, the money migrants sent home exceeded that of official development aid threefold [3]. Half of the 20 countries with the highest GDP equivalence of remittances in 2017 are countries whose share of mountain areas in the total land area is greater than 50 percent. These countries include the Kyrgyz Republic, which received remittances corresponding to 33 percent of its GDP in 2017, as well as Tajikistan (31 percent) and Nepal (28 percent) [4]. Often, these countries are located near countries with comparatively strong economies or have had other ties with their emigrants' destination countries. Labour migration thus not only has a positive effect on poverty reduction for migrants and their families, but also at the national level of remittance-receiving countries [5, 6]. In Nepal, one-fifth of the reduction in poverty achieved between 1995 and 2004 can be attributed to remittances [7]. Remittance-receiving households are usually more resilient to adverse events: they tend to have more savings and are better able to withstand external economic shocks [3, 8]. Even small remittance transfers are valued by mountain people, helping them to cope with seasonality, food shortages, harvest failure or disease [9]. The health and education-related outcomes of remittances are particularly positive for children [3]. International migration has the potential to generate higher remittances than internal migration, in turn triggering investments in housing, higher education, agricultural innovation, sustainable land management or business development in mountains [10]. However, remittances do not automatically result in substantial and continued improvements in well-being, or investments and innovation in the places of origin [9, 11].

But remittances can come at a cost. They may widen inequality between households with and those without migrating members [12]. Dependence on unreliable remittances may lead to higher vulnerability. Initial migration costs often require



families to take out risky loans, miring households in poverty and excluding the poorest from migrating at all [13]. Whether labour migrants succeed in strengthening their own resilience and that of their families can depend on how well they are embedded at their destination and how precarious their situation there is [14].

Social remittances, capacity development and innovation

Migration can lead to a loss of traditional knowledge and skills crucial to agricultural production in a highly variable mountain environment. But migrants develop “social remittances” – they acquire new skills, knowledge, practices, social capital and identities [16]. This enables them to return with innovative ideas and practices which eventually result in new entrepreneurship, higher incomes, more efficient use of natural resources, social innovation in mountains and, ultimately, in higher resilience to environmental and climate change (S. Thieme & A. Murzakulova, pp. 30–31). And migrants need not return long-term for innovation to occur. Such change can be initiated during transnational and circular migration, or simply through communications between the migrant and the home community via networks and social media. However, migrants’ new attitudes and values can also create tensions with the non-migrating population.

In remote mountain regions, the permanent or temporary absence of high numbers of skilled and educated people may challenge the provision of basic services and the maintenance and improvement of social and technical infrastructure. Nonetheless, remittances invested in capacity development of children and adults may benefit mountain communities in various ways [1, 17]. Migration can play a crucial role in reducing child labour, provided that remittances are high enough to compensate for the loss of household income from withdrawing children from economic activities [18, 19].

Gender, generations and social cohesion

Migration challenges the social fabric and cohesion in local mountain communities: it redefines the division of labour and responsibilities not only between women and men but also between the generations. Women who migrate from remote mountain regions may gain access to education and careers previously unavailable to them. Returning female migrants can disseminate newly discovered norms of behaviour and practices that improve the position of women in their home community. Sending money back home redefines a migrant woman's role in the household. Having been in a situation of high dependency prior to departure, they are now a financial mainstay for their families [20, 21].

When male members of the family migrate, the women remaining behind in mountain communities face a greater workload, although they also gain more autonomy in decision-making within their families [18, 22]. Besides taking over additional agricultural, land management, family and other tasks, they are alone in taking care of the elderly and their children. In some areas, agriculture has become feminized [23, 24]. Work routines must be reorganized among the remaining household members, between households and at the community level. Decision-making competences shift, particularly in terms of who heads the household, who manages the finances and who attends community meetings. However, despite the fact that women increasingly participate in local committees and resource user groups, they rarely gain long-lasting and real decision-making power at the community level, due to the rigid power structures and the resulting social norms and gender stereotypes (R. Verma, pp. 38–39, [25]). In this respect, the experiences of women differ depending on the type of household (small or extended?), importance of the decision and level of decision-making (household or community?), and duration of absence of male household members. As migrants tend to be young people of working age, the elderly also see their burden increase. Older and thus less physically fit, they are left to care for the family home and land amid a demanding mountainous topography. At the same time, they see their influence eroding, as land ownership, once a symbol of security and authority within the household, becomes less important where migrants contribute a big share of the household income. Consequently, elderly people may feel marginalized and without a say in the family [26].

Environment, sustainable land use and disaster risks

Migration has diverse effects on the environment. Remittances may facilitate investments in improved technologies and sustainable land management. But migration from mountains may lead to labour shortages and a fall in agricultural productivity, resulting in an extensification of land use. This can have positive or negative consequences. On the one hand, it reduces pressure on land and natural resources. On the other, it imperils a well-established agricultural system and eventually leads to land abandonment and shrub encroachment (L. Muheim, pp. 40–41). Soil and water conservation measures such as terraces or irrigation systems fall into disrepair. The neglect of maintenance together with the mountain topography results in more soil erosion, land degradation and disaster risks [27, 28], and can ultimately increase food insecurity [29].

Migration to a mountain environment occasionally leads to competition over the use of natural resources. This is the case in the Mount Kenya region, where the uplands offer more favourable conditions for agriculture than the lowlands, and competition over land and water resources between smallholders and commercial farms is widespread [30]. But, if well-managed and facilitated by inclusive national migration policies, even migration to a highly populated mountain environment can trigger innovative impulses and improvements in terms of sustainable land management (J.M.B. Tukahirwa & R. Kamugisha, pp. 54–55).

Investing in livestock: risks and opportunities

Investing remittances in rural mountain areas harbours both risk and opportunity. Investments in livestock in Kyrgyzstan are a case in point. Socio-economically, labour migration and animal husbandry can complement each other, providing work for daily labourers paid by remittances. But environmentally, the consequences may be negative. Increasing the number of livestock raises pressure on pasture resources, leading to eventual overuse and, in time, land degradation [15].

Migration, multilocality and the question of return in Kyrgyzstan



Susan Thieme and Asel Murzakulova

Kyrgyzstan's capital Bishkek as well as Russia and Kazakhstan are major destinations for migrants from mountain areas in southern Kyrgyzstan. While some migrants return home with new skills, many people start to put down roots in other places. Livelihoods take on a multilocal dimension when people have responsibilities in different places. Impacts on rural development are remittance dependency, increasing labour shortage and a changed social care situation.

Southern Kyrgyzstan: grandparents look after their grandchildren while the parents are working in Kazakhstan (K. Ahmed)

According to official statistics, 13 percent of Kyrgyzstan's population is seeking better economic opportunities abroad [1]. Southern Kyrgyzstan is particularly affected by migration. In the mountain areas of Batken and Osh oblasts, the working-age population migrates, while children and elderly people stay at home. As a result, people's livelihoods take on a multilocal dimension (Figure 1), with different implications for men and women of different generations. The elderly expect the younger generation to return to their home villages in the mountains, whereas younger people increasingly envision their future in urban areas of Kyrgyzstan, which offer better opportunities. They cannot imagine returning to their rural place of birth until after retirement.



Consequently, people invest their remittances both in a new urban home in Kyrgyzstan (particularly in the cities of Bishkek and Osh) and in their rural home. They keep up their transnational and national rural–urban linkages in order to retain the possibilities of returning to an urban centre in their home country and moving back to their rural mountain area of origin after retirement. Remittances have significantly improved the economic situation of households in the mountain areas of southern Kyrgyzstan. Nationally, remittances account for 30.3 percent of GDP [1]. Case studies in southern Kyrgyzstan have shown that a majority of households receive US\$ 50–100 per month [2]. Migrants also provide networks of access to medical care and education in urban areas, as well as jobs for subsequent migrants. Non-migrating family members take care of children, livestock and personal belongings and maintain the emotional base of the home. They also reduce the risks and uncertainty inherent in international mobility by providing a home that migrants can return to in the event of illness or deportation.

Lessons learned

- Improve provision of social and economic services, health care and child care in rural areas. This will benefit non-migrants and encourage migrants to return.
- Encourage specific vocational education schemes to promote entrepreneurship, encourage investment by (returning) migrants and raise rural income levels.
- Devise mechanisms to include migrants who are absent for most of the year into local development initiatives, decision-making and training in fields that they continue to invest in and are keen on returning to. This will foster social cohesion and sustainable development in mountain areas.



But migration also has adverse side effects. It exacerbates the shortage of qualified services sector personnel in mountain areas, giving people more reason to migrate or not to return. Further, it entails the risk of illness or a job loss disturbing the delicate balance of debt and repayment, with potentially drastic effects for households that hardly have access to other sources of cash income than migration. Investment of remittances in animal husbandry poses a challenge to sustainable pasture management. Most people in mountainous southern Kyrgyzstan consider animal husbandry to be their main future source of livelihood, but they continue to use pastures in unsustainable ways. Investments may thus further exacerbate pasture overuse. A degraded natural resource base can then again become a driver of migration [3].

Besides remittances, migrants bring new skills and ideas to their places of origin. In the Kyrgyz–Tajik border region, for example, they have invested in horticulture. A number of villages have developed into important hubs for the trade and processing of apricots, which have become a profitable cash crop for export to Russia. In the arid Fergana valley, remittances are invested in drip irrigation. These kinds of investments can strengthen households' resilience to economic or environmental adversities, such as the Russian economic crisis starting in 2014, or spells of cold or dry weather.

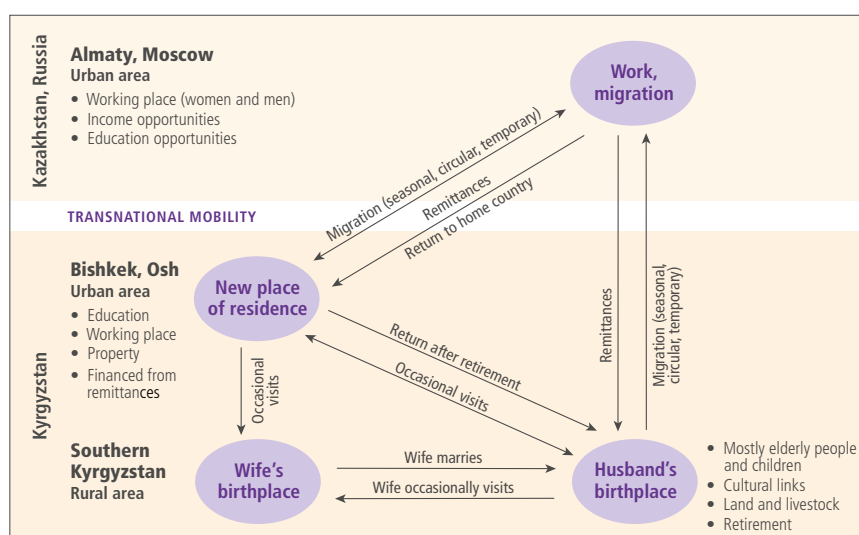


Figure 1. Multilocal work and family life, and places with different meanings (Chart: S. Thieme)

New trends in Trans-Himalayan labour mobility

Amina Maharjan

Trans-Himalayan mobility and trade have long been part of life in the Nepal–China borderlands. As socio-economic conditions in the region have evolved, so has this traditional practice. New trends in labour mobility have had a positive impact on food security in Nepal and on labour scarcity across the border in China. A win-win situation has emerged.

Limited arable land under pressure: Simikot, district headquarters of Humla (A. Maharjan)

Trans-Himalayan mobility between Humla District in Nepal and Pulan County in the Tibet Autonomous Region (TAR) of China is an important lifeline for people living in this dry and isolated border region. They move between the two areas to trade, take part in pilgrimages, practise pastoralism and visit family, supported by an enabling legal framework that has been in place since 1956. This special territorial entity status preceding the Sino-Nepal treaty gave people living within 30 kilometres of the border zones in Humla District and Pulan County special rights to travel within the area. The agreement was renewed in 2002 and the “Nepal–China border citizen card” introduced [1].

However, despite the legal framework, this cross-border mobility is informal and unregulated. The lengths of stays vary from a few days to an entire year. Most mobility takes place during the summer months, as snow prevents access in winter. While it takes 2–3 hours by vehicle from Hilsa on the border to Pulan, the journey to Hilsa from elsewhere in Humla District is largely done on foot and can take up to three days.

Being able to cross the border is indispensable to the people of Humla, where half of all households live below the poverty line. Livelihoods are agriculture- and forest-based, but while the 51 000-strong district is one of the largest in Nepal, less than 1 percent of the land is arable. The climate is harsh and only 20 percent of all farming households can produce enough food to meet annual household consumption needs. The rest face food insufficiency for six or more months [2], further exacerbated by climate variability and climate change. The district depends on food grain imports, but its remoteness means that transport is difficult and expensive. The



“I just finished my Bachelor’s degree and will now work for a year in Pulan to save enough money to support my Master’s study in Kathmandu afterwards.”

A young migrant

Lessons learned



- Trans-Himalayan labour migration currently takes place informally. Government involvement is needed to improve migrant safety.
- Investments are required to build skills and develop institutional mechanisms for secure, cost-effective remittance transfer.
- The road between Humla and Pulan is in urgent need of improvement. Prioritizing this would directly benefit households by reducing transportation costs for basic food and non-food goods. This could help to transform labour migration to Pulan from a coping to a wealth accumulation strategy.

Nepal Food Corporation provides food grains at subsidized rates but fills less than 50 percent of the food deficit. Seasonal labour migration is an important strategy to cope with food insecurity [3].

New trends in Trans-Himalayan labour mobility have emerged over the past decade. Pulan is experiencing a labour shortage, due to greater connectivity between TAR and mainland China, where economic prosperity is increasing. Humla remains isolated and struggles with food insecurity and a lack of economic opportunity. More people from Humla are thus travelling to Pulan in search of work and markets to buy basic food and non-food goods for household consumption. This has directly affected household-level food security in Humla District, creating a unique labour migration stream benefitting communities on both sides of the border.

There is no record of the exact number of people migrating to Pulan for work. Estimates suggest that about 4 000 people migrated in 2017/18, or 8 percent of the total population. People interviewed in several villages said that at least one member from virtually every household is part of this labour mobility. Women also migrate, although to a lesser extent than men, working mostly in the agricultural sector. The main driver of migration is reported to be household food insecurity. However, people also migrate because of wage differences (Table 1), and for young Humlis, migration is an opportunity to fulfil their aspirations.

	Wages in US\$	
	Pulan, TAR	Humla, Nepal
Low-skilled worker	20–30 per day	6–7 per day
Semi-skilled worker (mason, carpenter)	43–50 per day	10–12 per day
Waiter	360–430 per month	100 per month
Helper in retail shops	170–215 per month	–
Animal herder	430 per month	100–150 per month
Cook	860 per month	150–250 per month

Table 1. Wage differences: a driver of migration

Remigration as an opportunity

Raisa Gracheva, Thomas Kohler, Rustam Gakaev and Konstantin Popov

Outmigration has affected the North Caucasus since at least the mid-19th century and has continued to the present day. Entire villages lie deserted, and large tracts of land abandoned. But there are signs of a turnaround. Recent years have seen a trend of returning to the mountains, largely fuelled by societal change and supported by civil society actors. This remigration has been tolerated, rather than actively supported, by governments.

Tourist recreation centre. Kezenoy-Am Lake, Chechen Republic (A. Bersaev)

Remigration to the mountains began spontaneously around 2010, neither spurred nor supported by the authorities but based instead on opportunities to rent land or on having retained ownership of land and buildings. Most incoming “new highlanders” have brought in new ideas, money and experience. Two cases from the Russian Federation – the Republic of North Ossetia-Alania and the Chechen Republic – illustrate this new trend.

In North Ossetia-Alania, the mountain population today accounts for less than 1 percent of the total population, compared with 55 percent in the mid-19th century [1, 2]. The current move back is not yet visible in the statistics, but new or renovated houses have appeared in remote villages – often, unfortunately, in styles not in keeping with the traditional architecture of the area. The “new highlanders” engage in very diverse fields. They revive livestock and set up agrarian enterprises, usually renting land and applying for state loans for agricultural development, such as seed potato production on formerly abandoned land. Their technical staff often consists of young local residents – “old highlanders” – who also benefit by letting their renovated houses and servicing the equipment of the new enterprises.

But the main and rapidly growing activity of the “new highlanders” is in recreation and leisure services. A real boom in the construction of guest houses, hotels, restaurants and campsites has occurred in recent years in the mountains. “New highlanders” are aware of new concepts of tourism, and they are usually well linked with financial providers and tourism experts. “Old highlanders” also benefit from tourism as they increasingly offer accommodation in the local guest houses. Overall, the mountains of the Republic are slowly developing into a regional recreation area, though without assistance from the state.



Lessons learned



- The revived public interest in mountains is an opportunity that should be seized by governments, policy-makers and civil society to support mountain development.
- Support should go to initiatives from within the regions. Such initiatives may come from enterprising mountain residents or "new highlanders", i.e. people new to the mountains but determined to make their living there, often by engaging in innovative activities.
- Critical areas of policy support concern the regulation of land tenure, provision of credit and loans, and safeguarding of the local cultural and natural heritage.

In the Chechen Republic, the mountain population comprises about 10 percent of the total, compared with 40 percent in the late 19th century [2, 3]. The return to the mountains developed after 2010 as a public movement informally known as "Back to ancestral lands". The movement is supported by public activists, and the government is not preventing the return of land to the owners. Many houses, including ancient abandoned settlements, have been restored or newly built by people returning to the mountains. They are used as summer or permanent residences: many of the "new highlanders" have a job in the towns, but their families stay in the mountains and engage in cattle farming. In contrast to North Ossetia, "new highlanders" in Chechnya are only marginally involved in tourism, which is concentrated in a few centres and supported by the government.

For both republics, this recent remigration to the mountains is benefitting the "old highlanders" through new infrastructure, jobs and opportunities. It is also leading to demographic improvement in the mountains. This gives hope that remigration is a long-term trend and can become a path towards sustainable mountain development.



Table 1. Characteristics of migration

	Republic of North Ossetia-Alania	Chechen Republic
Migration history	Migration: an old phenomenon documented since about 1850	Migration: an old phenomenon documented since 1860
Reasons for migration	Lack of economic opportunity in mountains; new opportunities in foreland plains and Russian urban areas in general	Exodus after Caucasian War (1860) and Civil War (1920). Deportation 1944–1957; not all people returned to the mountains. 1970s: lack of economic opportunity led to a wave of outmigration. 1990–2010: civil war and insecurity again forced many to leave
Trend of returning to mountains	Since about 2010	Since about 2010
Scope of trend	About 10 percent of total mountain population; a dynamic increase	About 2 percent of total mountain population; a dynamic increase
Drivers of trend	New public economic interest in mountains; increased tourist demand and economic opportunities; some policy support (credit and loans, infrastructure development)	End of civil war; unorganized public movement "Back to ancestral lands" supported by the desire to strengthen traditions and ethnic identity and return to traditional lifestyles
Activities which characterize trend	Mainly tourism and recreation business for profit; summer residences (second homes); retirement (old-age homes). Gradual revival of agriculture.	Mainly residence with cattle farming for subsistence; some commuting to off-farm jobs in towns and central places; summer residences (second homes); tourism still nascent (very few small guest houses).

In- and outmigration in the context of the quinoa boom



Maurice Tschopp, Bianca Binggeli, Elizabeth Jimenez and Sabin Bieri

The past decade has seen quinoa prices explode on international markets, altering the pattern of labour flows in the Bolivian southern Altiplano. Prices of this traditionally cultivated crop – until 2008 largely unknown outside South America – rose from US\$ 100 per quintal (46 kg) in 2000 to almost US\$ 300 in 2013, the year in which the United Nations inaugurated the International Year of Quinoa. The quinoa boom led to a back-migration of labour migrants, resulting in massive land use changes.

Quinoa fields in San Pedro de Quemes (S. Bieri)

Before the quinoa boom, peasant families from the southern Altiplano in Bolivia had developed livelihoods that were adapted to the harsh climatic conditions of the area and involved high geographic mobility. To boost their farming income, they sought temporary employment in local mining ventures or other work opportunities in Bolivian cities or neighbouring Argentina and Chile [1]. Nonetheless, many migrants chose to keep a house in their village of origin and to cultivate some quinoa on the side. While in some cases many household members remained in the community, in other cases the entire household would migrate to the city, returning only to sow and harvest quinoa.



The steep rise in quinoa prices between 2008 and 2014 was a major incentive for quinoa-producing families to return to their native communities in the Altiplano and expand their area of cultivation (Figure 1). This agricultural intensification process resulted in the large-scale conversion of commonly owned pastures into quinoa fields [2, 3]. Some reports warned that the sharp increase in quinoa production coupled with the ensuing decrease in llama herding could lead to land degradation and a long-term decline in soil fertility [4]. A 2015 survey estimated that between 2008 and 2014, the average area of quinoa cultivation per household doubled (from 3.8 to 7.8 ha), while the average number of llamas per household fell by 20 percent [5]. But in many communities, a few families undertook a much larger expansion (up to 50 or 60 ha), and migrants with limited links to the community were accused of carrying out unsustainable agricultural practices [6, 7]. However, this behaviour rarely resulted in sanctions from traditional authorities.



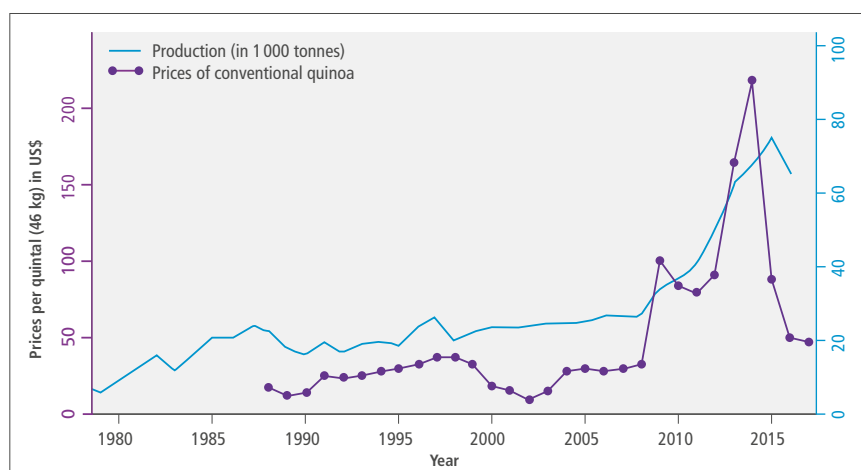
Lessons learned

- People in the region pursue geographically mobile livelihood strategies and can adapt quickly to emerging economic opportunities.
- In- and outmigration can create pressure on land. Sustainable land use largely depends on the capacity of local institutions to manage access to, and use of, local resources. Policies must enhance local capacities to act collectively at the level of communities, associations and cooperatives.
- Orientation towards niche markets and specific production labels can offer interesting alternatives and reduce pressure on natural resources.

The local authorities subsequently tried to strengthen community rules that would have the potential to reduce pressure on land, with varying degrees of success [5]. To retain the right to cultivate their land, migrant families had to comply with obligations such as sending their children to community schools and participating in community meetings. Other actors also tried to reduce the potential environmental impacts of the quinoa boom. Cooperatives, in particular, established quinoa production norms, limiting the amount of land that could be cultivated by their members and reducing the use of pesticides [5, 6].

Since 2015, the prices of quinoa have fallen to pre-boom levels, in particular because of increasing production in Bolivia and other countries. Many families have returned to their previous livelihood strategy of pursuing several activities, and communities have noted an increase in recent outmigration. While these departures have helped to reduce pressure on the land, the decline in quinoa prices has also led to a reorientation of production towards more sustainable niche markets. Multiple stakeholders including cooperatives, private companies and the Bolivian State are working to establish a Designation of Origin for quinoa from the southern Altiplano. This label would guarantee the quality of the quinoa produced, but also bind all quinoa producers from the southern Altiplano to common production norms (e.g. organic, fair trade).

Figure 1. Evolution of price and production of quinoa in Bolivia (1980–2017).
Source: P. Laguna, M. Tschopp, FaoStat (graph by M. Tschopp)



Migration and household labour structures

The division of labour in households in the southern Altiplano in Bolivia has remained largely traditional despite the quinoa-induced economic boom, but is influenced by spatial mobility and different migration constellations. Where the men work abroad, the women have been left to do both household and agricultural work. Recent research suggests that the quinoa price hike only increased the women's workload, especially that of single women/mothers. Married women were relieved slightly by the return of their husbands, but most of household work still fell to the women [8]. As quinoa prices dropped, a new wave of outmigration occurred as many returnees – mostly men – left their communities of origin again. This traditional division of labour within households persists as men often have better employment opportunities because of the labour market structure and their generally higher level of education compared to women in Bolivia.

Gender dimensions of rural–urban migration in Bhutan

Ritu Verma

Bhutan, a country that recently opened up to the outside world after years of isolation, is undergoing socio-economic change as a consequence of rapid development. Rural–urban migration of men from remote villages has led to a subsequent increase in women's workloads. As a consequence, more women are attending local governance meetings – but this has not necessarily resulted in meaningful participation or decision-making.

Local women's group in Kenkhar, Mongar
(© R. Verma)

The Himalayan Kingdom of Bhutan has followed an alternative development path as defined by the concept of “Gross National Happiness” introduced by the Fourth King of Bhutan, Jigme Singye Wangchuck, in the early 1970s and implemented by the government in the early 2000s. This has led to innovative policies and propelled the nation from Least Developed Country to Middle Income Country at groundbreaking speed [1]. Some unintended effects of this accomplishment are reflected in new emergent challenges, particularly in terms of rapid rural–urban migration. In 2005, 47 percent of the urban population were rural migrants [2, 3]. Of these, the majority were men seeking better livelihood opportunities: in urban centres, the population comprises 10–50 percent more men than women [3, 4]. Due to gendered sociocultural relations, women often remain in their communities – with a range of consequences, as illustrated by research carried out by the Tarayana Centre for Social Research and Development in remote communities in Southern Bhutan. Research in four study sites found that 45 percent of rural–urban migration was seasonal and that about 77 percent of the migrants were men [6]. Outmigration from remote communities is further exacerbated following the recent establishment of centralized boarding schools, with youth temporarily out-migrating in pursuit of formal education.

In the absence of men and youth, women who remain behind have seen their workloads increase, with multiple responsibilities in agriculture, income generation, community and household work, as well as child and elderly care. But at the same time, their decision-making power pertaining to the management of households, livelihoods, natural resources and land remains inadequate. While in some contexts women are title deed owners of land and property, they are not



Lessons learned



always considered “heads of household” or the main income earners, nor do they always have control over money, spending and the management of resources – or the power to make strategic household decisions. Due to high rates of male outmigration, more women than men participate in local governance meetings, but their power is limited. Notably, they are constrained by social norms that require them to consult with men or obtain their approval regarding final group decisions, which impedes their empowerment [5].

Gender roles and responsibilities are increasingly contested by women and men, which creates space for transformations in gender power relations. Such transformations are emerging through initiatives that address women’s strategic needs, such as enhanced leadership in local governance, as well as their practical needs, such as maternity leave, early child care development centres and micro-credit schemes.

In the face of male outmigration, opportunities are created to enable meaningful participation by women. Targeted efforts to strengthen leadership skills and confidence can address women’s strategic needs. Expanding livelihood and income-generating options and programmatic support in areas such as climate change adaptation and access to social services can address women’s practical needs. However, critical attention must also be paid to women’s holistic needs, to mitigate against increasing women’s workloads at the expense of their well-being [5]. In the context of extreme and rugged mountain topographies, urban-biased development might seem expedient, but will likely lead to societal costs and negative unintended consequences in the long run that disadvantage women, and ultimately undermine equitable and sustainable development.

Development programmes need to:

- rigorously integrate a systematic, context-specific understanding of complex gender power relations that constrain women’s participation;
- address women’s practical, strategic and holistic needs;
- avoid urban bias while ensuring equitable, balanced rural–urban development.



Land abandonment in the Alps affects ecosystem services



Luis Muheim

Agricultural land in the European Alps is increasingly abandoned due to outmigration. This abandonment results in changes in land use and vegetation cover, affecting ecosystem processes and ecosystem services ranging from protection from natural hazards to water provisioning. Solutions are required to enhance sustainable development in the Alps.

Shrub encroachment (Erika Hiltbrunner, Swiss National Science Foundation)

The Alps are a diverse mountain range in Europe covering an area of 190 568 km². Beset by outmigration dating back to the end of the Second World War [1], particularly of the young, the Alps have an ageing population. The main reasons for outmigration are tertiarization in the developed countries surrounding the Alps, increased urbanization and abandonment of the rural way of life, and lower agricultural productivity compared to the lowlands. Outmigration is seen all over the Alps, despite their heterogeneity, but is particularly pronounced in the southern and eastern parts.



Farming in the Alps is a centuries-old tradition that has resulted in specific cultural landscapes with small-scale patches of different land uses. These extensively used (agro-)ecosystems have multifunctional values such as high biodiversity, high aesthetic value and high-quality food production. However, shrinking activity in mountain agriculture has led to agricultural land abandonment ranging from 20 to as high as 70 percent, stimulating scrub encroachment and forest regrowth (Figure 1) [2]. This vegetation cover change affects ecosystem services positively or negatively, depending on the regional climatic, physio-geographic, socio-economic and land use change context. Five ecosystem services seem particularly relevant for the Alpine region: protection from natural hazards, carbon sequestration, water provisioning, biodiversity and cultural services.

Forests protect against different natural hazards by preventing rockfalls and avalanches and stabilizing soils [3]. It can take centuries, however, for protective forests to grow out of abandoned grassland, and the process may be inhibited by shrub encroachment [4]. In the short term, therefore, there is an increased risk of soil and snowslides, due to elevated above-ground biomass on formerly mown grasslands [2].

Lessons learned

To enhance sustainable development in the European Alps, solutions are required to:

- raise public awareness about the value of Alpine ecosystem services and the problem of land abandonment;
- promote case studies valuating ecosystem services at local level to capture region-specific circumstances;
- establish regional parks to make the region more attractive, also for young people;
- strengthen rural value chains by cooperative production and product labelling;
- combine farming with tourism and conservation;
- promote moderate and planned rewilding.

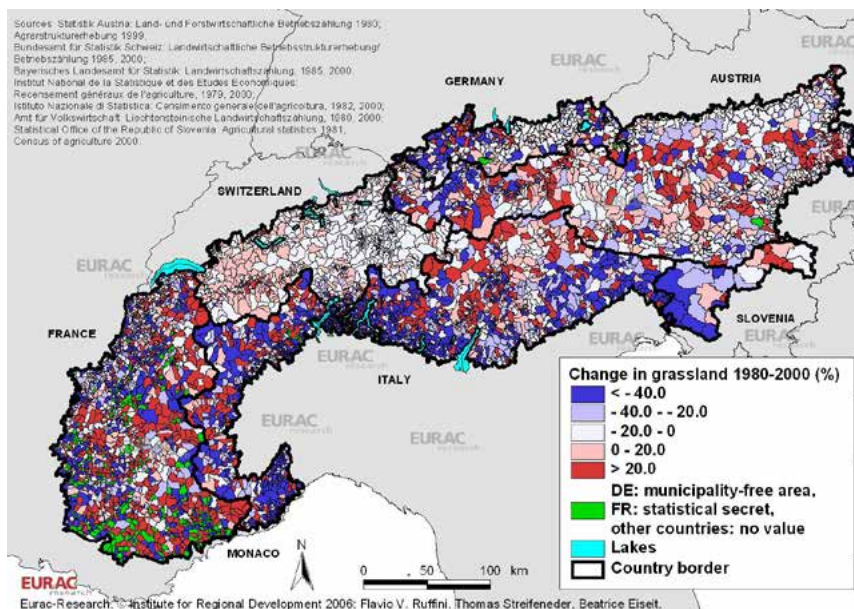
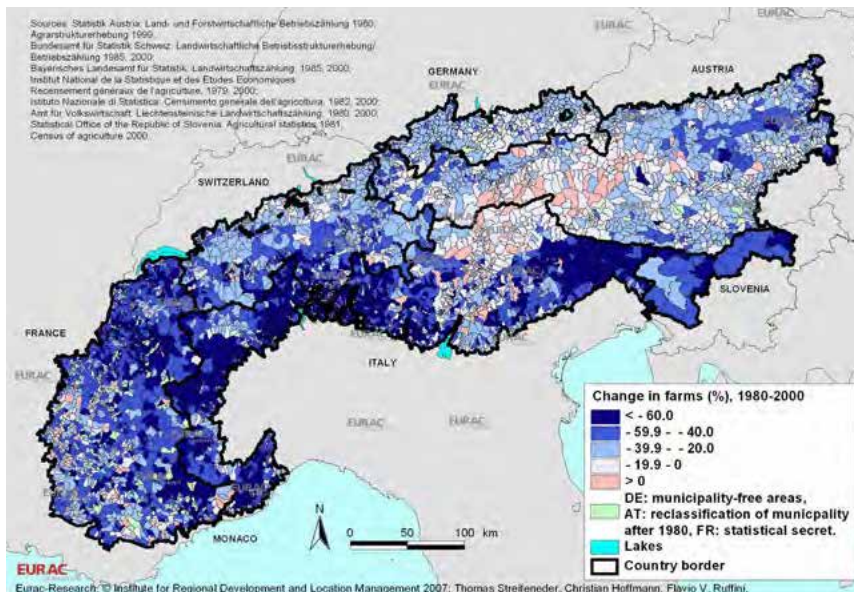


Figure 1. Change in the number of farms and in grassland in the European Alps

Forests are also beneficial when it comes to carbon sequestration: forestation of Alpine grasslands leads to increased carbon accumulation in biomass. In the Swiss Alps, reforested areas account for a carbon sink of about 3 percent of Switzerland's current anthropogenic carbon emissions [5]. Increased forest regrowth can affect water provisioning, as forests have higher evapotranspiration and interception than grasslands. This reduces run-off and spring recharge for freshwater availability or hydropower production [6, 7]). Rewilding can also pose a threat to biodiversity, an important issue as the Alps are a biodiversity hotspot in Europe. Biodiversity is generally enhanced by extensive agricultural practices and decreases when open land habitats become overgrown. At the same time, reduced human activity enlarges connected habitats for certain species.

Finally, another factor is that the loss of open areas correlates with a decrease in traditional knowledge on medicinal and food plants [8]. It also affects gentle sustainable tourism outside of tourist centres, due to lower availability of accommodation, fewer hiking paths or a decrease in scenic beauty [9]. Overall, it may be said that traditional life in the Alps, characterized by a culture based on a nature-related sustainable lifestyle, is slowly disappearing.

Present policies and actions towards the SDGs in the Alps

Policies to support Alpine farmers and reduce migration are in place throughout the EU and Switzerland. Some Alpine associations exist and there is an international treaty, the Alpine Convention, whose target is conservation and sustainable development in the Alps. In Switzerland, for example, mountain farmers are heavily subsidized. The demand for high-quality Alpine products is high. Furthermore, some agriculturally valuable land that has been abandoned by farming activity is being maintained by NGOs (e.g. chestnut fields). The powerful tourism sector in Switzerland also has an interest in maintaining cultural landscapes.





3

Good practices for a sustainable future

A new value chain based on river weed offers a business opportunity for women in the uplands of Laos, reducing the need to migrate (TABI, C. Flint)



Addressing the causes of migration – and enhancing its benefits

Quality education in mountains must go along with income opportunities in mountains to reduce the pressure to migrate, Bolivia (S. Bieri)

Promoting sustainable mountain development means enhancing the prospects of mountain people. As migration has become an inextricable part of life in many mountain regions, this involves supporting mountain communities in making the most of migration while minimizing the risks and social costs. Targeted initiatives and enabling frameworks reduce the pressure to migrate, enhance the benefits from financial and social remittances, increase the well-being of those left behind and promote sustainable land use.

There is no blueprint for safeguarding a rewarding future in mountain areas, where migration is often considered the better – or the only – option. Policies, approaches and interventions must therefore consider the causes of migration, many of which are interwoven. They must create conditions that promote the well-being of mountain communities and ecosystems – and, ultimately, reduce the need to outmigrate. Key to this is improving the local economy and creating jobs, which goes hand in hand with improving access to remote regions, and expanding basic technical and social infrastructure as well as education and health services. Importantly, “soft factors”, such as strengthening mountain people’s cultural identity and identification with their place of origin, should not be neglected.

This publication presents a selection of good practices from different mountain regions in the world. The practices presented enhance the prospects of people living in mountains or support them in making the most of migration.

In Kosovo (see D. Svab, pp. 46–47), developing local value chains and small rural businesses gives mountain inhabitants prospects and reduces the pressure to migrate – and it facilitates return migration. A flourishing local economy has thus

made it possible to work towards sustainable mountain development thanks to the sound cooperation of multiple actors, targeted and inclusive measures, and institutional innovations.

In Georgia, the government introduced legislation to counteract outmigration from mountains through financial incentives. The Law of Georgia on the Development of High Mountain Regions guarantees financial benefits for mountain inhabitants as well as tax exemption for companies registered in mountain regions (N. Shatberashvili & J. Salukvadze, pp. 48–49).

In Switzerland, mountain villages whose future is threatened by the outmigration of young people have launched the “youth-friendly mountain villages” label. The scheme aims to improve prospects for young people in their home municipalities, strengthen cultural identity and promote intergenerational cooperation. The label encourages mountain municipalities to actively heed the needs and aspirations of young people and families, ultimately making mountain regions a more attractive place to live (P. Herrmann & D. Jutzi, pp. 50–51).

In Nepal, financial literacy training has been shown to be successful in reducing a social cost of migration – domestic violence – and it increases the positive effects of financial remittances in the place of origin (P. Fendrich & S. Sapkota, pp. 52–53). Reducing the risks and costs (financial and social) of migration and remittance transfers increases the potential of migration to reduce poverty and to help modernize agriculture and housing. In many cases, better financial management and control enable people to save, which eventually becomes a basis for initiating income-generating activities.

In Uganda, a progressive and inclusive refugee-hosting policy has had positive effects on sustainable land management (J.M.B. Tukahirwa & R. Kamugisha, pp. 54–55). Under the policy, refugees are allocated plots of land on which to put up shelters and grow food, enabling them to start their own businesses and attain some level of self-reliance [1].

It is our hope that the examples contained in this publication can inspire efforts to reduce people’s distress in leaving their mountain homes, as well as efforts to harness the innovative potential of returnees or new migrants to mountains.



Local solutions create opportunities for sustainable livelihoods in Kosovo



David Svab

There is plenty of rural development potential in the southern Kosovan* Sharr/Šar mountain range, an area of pristine natural beauty. But an underdeveloped private sector, a skills mismatch and low productivity have hampered job-rich economic growth, and residents are often forced to outmigrate. To counter this, the InTerDev initiative applies locally-designed solutions for inclusive economic development.

Over 800 families now cultivate raspberries in Shtërpçë/Štrpce, earning a steady income and creating jobs for many others (A. Llapashtica for UNDP Kosovo)

Agriculture and rural entrepreneurship can be a promising source of income for Kosovans willing to work the land. With unemployment in the Sharr/Šar mountain range higher than the already staggering Kosovo-wide rate of 30 percent, growing and selling produce can help to make ends meet in the municipalities of Dragash/Dragaš and Shtërpçë/Štrpce.

High unemployment and economic inactivity of many residents (in particular women and youth), growing demographic pressure on the labour market, uncompetitive farm production, increasing urban–rural income disparities and limited business development services are some of the barriers to developing a thriving local economy in these mountain areas. As a result, thousands of young graduates migrate to urban centres or high-income countries such as Switzerland, Germany or Austria in search of office jobs and better living standards, leaving the local potential for sustainable development untapped.

Opportunities to start or expand rural production, develop locally-sought skills and find local employment offer an alternative to the pull factors of urban centres and abroad. Since 2014, the Integrated Territorial Development project, or InTerDev, financed by the Austrian Development Cooperation and implemented by the United Nations Development Programme (UNDP) in the partner municipalities, has joined forces with local authorities, the private sector and civil society to help the local economy to flourish. The initiative implements tailor-made solutions, such as Territorial Employment Pacts (TEPs; see Box), which promote the growth of small rural businesses and creation of local jobs. The project focuses strongly on empowering women, strengthening local value chains and improving an inclusive dialogue among the diverse stakeholders.



* For UNDP, references to Kosovo shall be understood to be in the context of Security Council resolution 1244 (1999).

Lessons learned



In remote areas of Dragash/Dragaš, jobs are in short supply, especially for women. Social entrepreneurship can be part of the solution, merging economic and social objectives (A. Llapashtica for UNDP Kosovo)

One TEP, for example, works with smallholder raspberry growers. It helps them to increase production through grants and by providing access to advisory services, disseminating best farming practices and encouraging them to join forces in associations. It also helps social enterprises to expand local processing into higher-value products and achieve social goals, particularly to empower women, and offers business-to-business matchmaking. So far, over 300 household-based smallholder raspberry farms, of 20–40 ares each, have been upgraded, generating substantial additional income.

Building on the potential for rural and mountain tourism and a growing demand for healthy and “traditional” produce, vigorous local businesses in the Sharr/Šar will do more than reduce pressure to outmigrate. They will also lead the development of a productive and sustainable economy in the area, creating jobs and attracting skilled labour, with an increasing customer base also in the diaspora summering in the region. The 34 000-strong population of Dragash/Dragaš municipality is estimated to have temporarily swelled by about 8 500 during the summer of 2018.

Territorial Employment Pact

The Territorial Employment Pact (TEP) is an institutional innovation based on a process of “negotiated planning” of employment objectives by a partnership of actors at the local level. The leading body of partners – known as the “Local Action Group” – comprises municipal authorities, business associations, civil society organizations, financial institutions and other key stakeholders. The Local Action Group drives the TEP by collaborating with other partners in the assigned geographical area to generate and formalize employment. The success of the TEP rests on ensuring local ownership from the start, to deliver services built on local potential. First, in a participatory process, the Local Action Group identifies local industries and economic activities with the biggest potential to grow and create jobs. Next, it designs and revalidates a package of service lines for the population (e.g. access to grants, training or association building), to create a two to three-year TEP. This process strengthens the local coordination of activities, programmes, private sector investments and interventions oriented towards human and economic development. The TEP is a highly replicable and scalable model of local economic development that targets the most vulnerable.

The experience of the TEPs in southern Kosovo shows:

- Greater attention must be paid to vulnerable people and the environment. Local economic development has often relied on a market-oriented approach, overlooking economic activities that normally happen in a context of a survival economy but are extremely important for the community.
- Locally-led initiatives such as the TEPs innovatively draw attention to all three dimensions of sustainable development – economic, social and environmental. Further, they generate a strong multiplier effect among the local population, in terms of both production and job creation.
- Key elements of the TEPs are: local ownership of the process, investment in local potential, inclusiveness and “leaving no one behind”, and promoting learning among local actors to work in cooperation with others.



The Sharr/Šar mountains are known for their high-quality produce such as honey. Beekeepers often receive orders for their entire harvest before it has even begun (A. Llapashtica for UNDP Kosovo)

Reducing outmigration through legislation

Nina Shatberashvili and Joseph Salukvadze

More than one-third of Georgia is covered by mountains, but these have been depopulating. Mountain municipalities registered a 30 percent decline in population between 2002 and 2014, a rate twice as high as in other areas of the country. The main drivers are high unemployment and poor infrastructure. The government is seeking to counteract this trend with specific “mountain laws”.

Svaneti region, Mestia central square, King Tamar Statue
(© Saakashvili Presidential Library)

A first mountain law, the Law of Georgia on the Socio-Economic and Cultural Development of High Mountain Regions, was adopted in 1999 [1]. It aimed at reducing outmigration by promoting businesses and creating job opportunities, measures which were expected to enhance socio-economic conditions and living standards of mountain people. However, implementation mechanisms were not sufficiently defined, and the concept of sustainable development – a keynote for the legal act – was purely declarative. Consequently, the first mountain law was never enforced. The overall economic conditions in Georgia also prevented the law from being implemented smoothly and achieving the positive effects that were expected. Due to the lack of efficient complementary policy tools, depopulation of the mountain regions continued, and the 2002 census reported some 300 barely inhabited or deserted villages, mostly in mountain areas [2]. The first mountain law, formally in force until 2005, lost its status as a potential tool for economic development.

From 2004 to 2012, the Georgian government focused on developing mountain regions through targeted investments. Some regions, such as Svaneti (Mestia municipality, Western Georgia), became attractive touristic centres through the rehabilitation of roads, construction of the airport and creation of tourist infrastructure. In Tusheti (Akhmeta municipality, Eastern Georgia), a network of protected areas was established with donor support. Promotion of environmentally friendly tourism, in which the local population plays a key role, resulted in economic development and improved welfare (Table 1). However, despite an overall improvement in the economic situation in the country, outmigration from the mountain regions not covered by the reconstruction programmes continued.



Lessons learned

New legislation, the Law of Georgia on the Development of High Mountain Regions, was adopted in 2015 and became fully operational in 2017 [3]. It was developed combining previous experiences from two different approaches. There were, first, social benefits (Table 2), some of which were guaranteed by the old mountain law (1999–2005), and second, targeted development and reconstruction as implemented between 2004 and 2012. The legal reform was financially sustained by the Swiss Agency for Development and Cooperation and the Austrian Development Agency, through a UNDP programme [4].

Scope of the Law of Georgia on the Development of High Mountain Regions (adopted in 2015)

The law defines high mountain regions as: "... a mountainous region at approximately 1 500 metres or higher according to hypsometric analyses". Considering different social and geographical criteria, mountain settlement status can be granted to settlements located above an altitude of 800 metres, but in exceptional cases even to settlements located at a lower altitude.

Consequently, the law guarantees special benefits for some 237 000 residents (6.4 percent of the Georgian population) of 1 715 mountain settlements.

The law provides the following benefits:

- **Tax exemption for companies in the production sector:** those excluded are service providers (e.g. tourism), trading and mining companies, and other activities requiring licensing;
- **Improved social benefits for local residents:** a 20 percent top-up to the social package for residents eligible for social assistance, and 50 percent compensation for monthly electricity costs;
- **Higher salaries:** teachers receive a bonus of at least 35 percent of the basic salary, and medical staff a bonus equal to the amount of the state pension;
- **Higher pensions:** a bonus of at least 20 percent of the assigned state pension.

The law also supports the establishment of a High Mountain Settlements Development Fund to support local initiatives; the budget for 2016–2018 is approximately US\$ 8 million.

During 2016–2017, certain positive dynamics were observed, especially in terms of social benefits for mountain people, mainly through salary and pension supplements and electricity compensation. However, tax exemption for local businesses, a main economic incentive intended to attract companies, did not yet have much impact in terms of job creation. This is because only selected companies in the production sector can benefit from the legislation: service providers (including tourism) or mining companies are excluded. Since tourism is the key economic sector in most mountain regions, tax exemption provisions of the law do not benefit large proportions of the local population. Therefore, the highlands need targeted balanced reconstruction efforts to encourage mountain people's involvement in production. Additionally, reconsidering the existing tax exemption policy for some service sectors may also prove promising for sustainable development of the mountain areas.

Table 2. Social benefits guaranteed by the 2015 mountain law. Source: [5]

	2016		2017	
Social benefits	No. of beneficiaries	Sum paid (US\$)	No. of beneficiaries	Sum paid (US\$)
Salary supplement (teachers)	7 031	307 908	5 297	236 479
Pension supplement	63 402	904 868	65 479	954 647
Supplementary social package	12 188	110 841	12 792	118 993
Total	82 621	1 323 617	83 568	1 310 119

- The country's overall economic evolution and the welfare growth of the whole population are both crucially important for the development of mountain regions.
- Sustainable mountain development requires a balanced and effective development policy. It also requires targeted development projects aiming at cohesive development of the country's entire territory.
- Decision-makers must carefully consider local conditions when developing policy and legislation, to ensure an effective increase in job opportunities and improvement in living conditions of mountain people and a reduction in outmigration.



Table 1. Georgia's overall economic development. Source: [2]

	1999	2012	% increase
GDP per capita (US\$)	628	4 143	660
GDP (billion US\$)	2.8	15.848	566

Swiss mountain villages work to become more attractive to young people



Peter Herrmann and Deborah Jutzi

The outmigration of young people is threatening the future of Swiss mountain villages. The Swiss Center for Mountain Regions has launched a label for “youth-friendly mountain villages”, with the aim of fostering the creation of better prospects for young people in their home municipalities. The label encourages mountain municipalities to take action and increase their attractiveness to young people and families.

Students enjoy their break outside the school in Veysonnaz (P. Herrmann)

A survey made by the Swiss Center for Mountain Regions (SAB) in several mountain municipalities showed that 89 percent of young inhabitants enjoy life in the mountains and 74 percent can imagine living there in the future. Yet many mountain villages are confronted with the outmigration of young people. Narrow prospects and limited training and employment opportunities make them move to more populated or developed areas. The result is a vicious circle: the infrastructure and services desired by young people are cut down rather than expanded, which in turn scares off potential new young residents. Outmigration is difficult to stop once it has started.

To counteract this dynamic, SAB launched a label for “youth-friendly mountain villages” in 2015. The aim is to motivate municipalities to take targeted measures for the benefit of their young inhabitants and to promote the participation of young people in village development. At present, 15 municipalities in the Swiss Alps are certified. Young people are actively involved in the certification process. Every year, the SAB Youth Forum – a delegation of young people from certified municipalities – assesses all label candidates against a list of criteria (see Box) and audits the performance of certified municipalities. The Youth Forum also fosters networking and exchange of experience among young people and municipalities from different mountain regions. So far, the label has proved a successful means of motivating municipalities to take action. The focus is on efforts that benefit young people over the long term and encourage young families to consider living in a mountain village.



*“Mountain regions are alive!
Mountain regions have a soul! Let’s
take care of our mountain region!”*

Urs Kiener, Mayor of Hergiswil,
at the certification ceremony



Representatives of Veysonnaz proudly show the municipality's newly earned certificate (SAB)

Lessons learned

- It is crucial to create better prospects for young people in mountain areas, as many would prefer to stay in their village if it offered them enough opportunities.
- Active involvement of young people in developing their municipality and consideration of their specific needs may eventually reduce outmigration from mountain areas.
- Counteracting outmigration from mountain areas requires proactive engagement by public authorities and the willingness to move forward and towards young people.

Measures to increase the youth-friendliness of mountain villages are developed in collaboration with young people, as they know best what is missing now and what they will need in the future if they decide to live in the village. There is no standard procedure for collaboration, but SAB encourages municipal authorities to create a working group that includes representatives of the young population, the local authorities, the educational system, as well as youth workers, where they exist. This working group then jointly assesses the municipality's current level of youth-friendliness and develops visions for the future. The label criteria developed by SAB help them to identify key areas of action and inspire them to come up with new and sometimes innovative ideas.

The label generally brings fresh impetus to certified municipalities. New opportunities emerge, services improve, exchange and interaction between the generations intensifies, and young people become more involved in village development and community policy processes. This strengthens social cohesion and young people's identification with their village. Experiencing that committed people can change things shows them that life in the village is worth living and offers a future. Despite difficulties in measuring the actual effects of changes made, experiences so far show that mountain municipalities are aware of the challenges that come with their peripheral situation and are looking for ways to address them.

Veysonnaz: A mountain village increases its attractiveness to young people

In Veysonnaz, the municipal authorities have introduced a flat-share platform and accommodation allowances. This improves access to affordable housing for young people who would like to stay in the village but do not have the means to rent a flat on their own. Young villagers in turn have initiated and organized a shopping support service for elderly people with limited mobility. The municipality ensures intergenerational exchange by inviting elderly villagers to talk about the village history, show historical pictures and films, and tell stories from the past at an annual school theme day on "young people in mountain areas". In addition, it offers the young generation courses on the preparation of traditional dishes and on the local dialect.

Label criteria

The label criteria for "youth-friendly mountain villages" were developed together with young people from mountain areas and their parents. Certified municipalities must take action in the following key areas:

- School system (e.g. inclusion of "young people in mountain areas" as a topic in the curriculum)
- Vocational training and job opportunities (e.g. internships in local businesses)
- Child care facilities
- Mobility and accessibility (e.g. harmonization of public transport schedules, night bus)
- Housing situation (e.g. facilitation of access to affordable housing for young people)
- Leisure time and recreation (e.g. promotion of local associations)
- Exchange between generations (e.g. on local history and traditions)

In addition to developing concrete actions in these areas, certified municipalities must delegate two young people to represent them in the SAB Youth Forum. Further, they must hold regular feedback meetings with these delegates. The label is awarded for ten years and may be renewed for another ten years if the requirements continue to be fulfilled.

Promoting financial literacy to secure the benefits of labour migration



Pascal Fendrich and Sanat Sapkota

The Safer Migration Project (SaMi) in Nepal provides financial literacy training to the families of migrants – in particular, to the women left behind. Thanks to better financial management, migrants' families are now in control of their budget and able to save (more) money. Some use these additional resources to start income-generating activities. This changed behaviour also improves family relations.

A financial literacy class © SaMi/Helvetas

In Nepal, many households turn to foreign employment for their livelihoods (see Box). From July 2016 to June 2017, more than 415 000 labour permits were issued to Nepali citizens – mainly young men – willing to work in the United Arab Emirates, Saudi Arabia, Qatar or Malaysia. During this time, remittances to Nepal totalled 695 billion Nepali Rupees (NPR) (US\$ 6.2 billion), about 30 percent of the country's GDP.

Nearly half of Nepali households receive remittances, but many remain ill-equipped to make considered use of this money. Remittance management is often poorly discussed prior to migration and can cause tensions within the family.

The Safer Migration Project (SaMi) is a bilateral initiative of the Governments of Nepal and Switzerland, implemented jointly by the Nepali Ministry of Labour, Employment and Social Security and Helvetas. Its goal is to promote safer and more beneficial migration, by supporting migrants in taking informed decisions on foreign employment and linking them to support services throughout the migration experience. Together with the Nepal Federation of Savings and Credit Cooperative Unions Ltd. (NEFSCUN), SaMi developed a training course on financial literacy. The course targets remittance-receiving households, especially the women left behind. Its 28 modules are conducted in the villages and help participants to apply the principles of financial management. They practise making family budgets and planning expenditure and savings. They also learn about services of financial institutions, entrepreneurship and how to draft a business plan.

Between 2014 and 2018 SaMi supported nearly 4 800 persons, of which 97 percent were women. Activities covered the districts of Khotang and Ramechhap (Hill region), and Sunsari, Sarlahi, Nawalparasi and Kailali (Tarai lowlands).



"I will not send my husband to foreign employment again, because I am now able to better manage money and the family. I have started fish farming activities from which we earn more than from foreign employment."

Bhumika Shahi, Tikapur, Kailali

"My two sons are in foreign employment. Now I take records of each and every receipt and expense so that our money-related family conflicts stop. I have regained the trust of my sons and my father-in-law. Before the financial literacy class I did not have records of expenditures. I could not say on what the money was spent."

Bhumisara Rai, Khotang



A small village shop, started by a participant of the financial literacy classes (© SaMi/Helvetas)

An assessment of project activities undertaken in October 2017 found:

- Changed behaviour on financial management: About 83 percent of the participants now keep household records and 67 percent prepare a household budget.
- Substantial increases in savings: Before the training, only 13 percent of the households reported saving; after training, 67 percent did. Monthly savings per household increased by 25 percent on average, from NPR 637 (US\$ 6.0) to NPR 810 (US\$ 7.6). The increase was stable 12 months after the training.
- Initiation of income-generating activities: Increased savings led several participants to invest in new activities such as farming (for subsistence or sale of products).
- Use of (semi-)formal financial institutions: Most participants opened accounts in banks, microfinance institutions (MFIs) and cooperatives. The use of MFIs rose from 12 to 57 percent among participants.
- Women's empowerment: Increased capacity in financial management strengthened women's position in taking household decisions on spending, reducing the need to "ask for permission" for every expenditure.
- Improved family relationships: Regular in-house discussions on the best use of money improved mutual trust between family members at home and migrants abroad.

Adequate capacities to manage remittances are a prerequisite for securing the financial benefits of foreign employment, for their productive use and for ensuring that migration contributes to development. SaMi will now test the modalities for the institutionalization of this successful approach.

Migration dynamics in Nepal

Migration – both internal and international – has increased over the past decades in Nepal. Internal migration increased sixfold from 445 128 migrants in 1971 to 2 654 047 in 2011, and mostly takes place from the Hills to the Tarai lowlands and from rural to urban areas, mainly as a result of regional imbalances in the distribution of resources, access to services, poverty, unemployment and difficult livelihoods. The proportion of the population living in the Mountain and Hill districts has declined from 62 percent in 1971 to 50 percent in 2011 and is expected to fall to 47 percent by 2031. From 2001 until 2011, eight Mountain and 19 Hill districts showed a negative growth rate [1]. In parallel, international labour migration has long been a key characteristic of Nepal, with India the main destination until the end of the 20th century. In the last two decades, overseas migration to the Gulf and Malaysia has gained enormous momentum [2]. While the majority of the 415 000 Nepali citizens going abroad for employment last year came from the densely populated Tarai, international migration from the Hill and Mountain districts is increasing. Today, most international women migrants come from the Hills. Foreign remittances per head are higher in the Hill districts (NPR 34 283 [US\$ 315] per month) than in the Tarai districts (NPR 24 102 [US\$ 221]) [3, 1].

- Long-term training for lasting results: 28 modules are conducted over five to seven months, giving participants time to learn, digest and apply the new knowledge.
- Involve the head of household / man: This will increase the likelihood that the women have a say on the use of the remittances and can make use of the acquired tools.
- Adapt methodology to local context: Literacy rates in the Hill districts are higher than in the Tarai, giving women a stronger position in the household and thus a more central role in remittances management.
- Link with other support services: The capacities developed through the training may lead participants to request other types of support, e.g. to initiate income-generating activities.



A piggy bank – a way of saving (© SaMi/Helvetas)

Immigrants catalyse the adoption of sustainable land management

Joy M.B. Tukahirwa and Rick Kamugisha

Refugees' right to have access to land and public service facilities is a key factor in Uganda's outstanding refugee-hosting policy, which aims at integrating immigrants into local communities and providing them the means to sustain themselves. As a result, refugees, migrants and host communities coexist peacefully, with positive outcomes for their livelihoods – and for scaling up sustainable land management practices.

Climbing beans on bench terraces: this sustainable land management practice was introduced to Kagyera by Rwandan refugees (A. Issa)

The conflict-prone African Great Lakes Region is surrounded by peaceful areas [1] such as Kabale district in southwestern Uganda, which is located at 2 000 m above sea level. Population pressure is high here, with a population density of 528 people per square kilometre, a high fertility rate and recurrent immigration of refugees from neighbouring countries [2]. Immigration from Rwanda started in the aftermath of the Second World War and peaked in 1994 during the Rwandan genocide. In recent years, Uganda experienced a massive influx of refugees from Rwanda, Burundi and the Democratic Republic of the Congo [3, 4] (Figure 1).

In 2006, Uganda adopted a liberal and progressive refugee-hosting policy that guarantees refugees a number of rights. These include property rights – which translate into access to land officially set aside for refugees, enabling them to farm and sustain themselves – as well as the right to use services, freedom of movement and the right to work [5, 6] (Table 1). Accordingly, instead of being concentrated in camps, refugees can settle and work in existing local communities. The Refugee Act provides the legal basis for their rapid integration there. A highly noteworthy outcome of this process is local farmers' quick adoption of sustainable land management practices introduced by Rwandan refugees. The success story of Kagyera village in Kabale district is a good example.

In Kagyera, more than half of the population are immigrants and refugees. The intensively cultivated steep slopes are vulnerable to severe degradation, including landslides and flooding in valleys, and this limits agricultural productivity and household welfare. However, Kagyera's farmers practise sustainable land management on an outstandingly high level. A wide range of sustainable practices like



"If you want high yields of any crop grown on the steep slopes in Rubaya, sustainable land management is mandatory and the benefits pay immediately."

Mr. Bitalabeho – one of the leading seed potato and climbing bean producers

Lessons learned



Ugandan residents and Rwandan refugees settling in Kagyera equally visit the local information centre on sustainable land management (J. Mugarura)

grass strips on terraces, water channels in valleys, check dams, tree planting, woodlots and agroforestry linked to climbing bean cultivation were promoted by an integrated agricultural research programme implemented by the National Agricultural Research Organization (NARO) in partnership with several international research centres. In addition, farmers in Kagyera have adopted specific sustainable practices that originate from Rwanda, such as growing climbing beans on bench terraces. Rwandan refugees introduced these innovations by applying them on their plots. Other community members saw that these practices increased yields and helped to stabilize the slopes, and spontaneously took them up.

The spread of sustainable land management is currently being supported with other value-adding innovations. A multiscale policy task force is developing by-laws on land management, village information centres on sustainable land management are being installed, and a vibrant network of partners is supporting wide adoption of sustainable land management practices. NGOs are promoting financial lending and saving systems to support crop production, as well as running advocacy programmes, for example to empower women – who are generally the main actors in agriculture.

In Kagyera village, former refugees play an important role in scaling up sustainable land management practices. They act as champion model farmers by demonstrating sustainable practices, work to mobilize resources for agriculture, and participate actively in the village information centre on sustainable land management. Today, Kagyera can rely on a high level of social-ecological resilience and ecosystems' increased capacity to provide important environmental services such as clean water, healthy soils and high land productivity [7, 8].

- Migration has the potential to generate positive impacts on land management and contribute to building social-ecological resilience among communities in vulnerable landscapes – if the government invests in welcoming immigrants while prioritizing the spread of sustainable land management across a range of stakeholders and landscapes.
- A network of partnering actors (immigrants, local farmers, government and NGOs) adds value towards building social-ecological resilience based on sustainable land management.
- Supportive policies provide a critical building block for harnessing migration's benefits for land management.



Sustainable land management practices enable intensive cultivation on Kagyera's steep slopes (A. Issa)

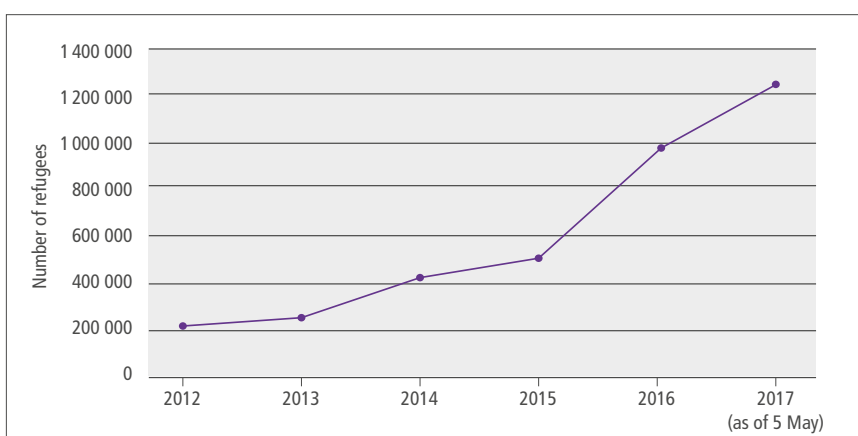


Table 1. Summary of refugee rights in Uganda [4]

Legal instrument	Uganda Refugee Act 2006
Property rights	Article 29 (1) and (2)
Freedom of movement	Article 30
Right to work	Article 29 (1)
Right to use services	Article 29 (1)

Figure 1. Total number of refugees in Uganda
Data source: Geodata; UNHCR, UNCS, UBOS. Statistics provided by the Government of Uganda (OPM) registered in RIMS and UNHCR Field Offices. Data for 2017 provided by the Government of Uganda (OPM)



4

Turning challenges of migration into opportunities





Recommendations for policy-making

Coffee production in Laos
offers income opportunities for young men
from rural areas (S. Bieri)

Migration processes have a profound impact on the social fabric of mountain communities, mountain people's livelihoods and mountain ecosystems. As migration significantly contributes to reducing poverty in mountains, it should be given high priority in development policies and initiatives. But to achieve sustainable mountain development, the needs and challenges of non-migrants must also be addressed.

Migration, with its high economic and social significance and its complex dynamics, strongly affects and shapes development in mountains. Since 2015, several international frameworks have aimed to harness the positive contribution of migration to sustainable development while minimizing the negative. The first international framework to include and recognize migration as a dimension of development was the United Nations 2030 Agenda for Sustainable Development [1]. In the 2030 Agenda, two Sustainable Development Goals (SDGs) contain targets that directly address migration governance: SDG 8 highlights the need to protect migrant workers (Target 8.8), and SDG 10 calls for facilitating "orderly, safe, regular, and responsible migration", implementing "well-managed migration policies" (Target 10.7) and reducing transaction costs for migrant remittances (Target 10.c) [2, 3]. Targets within other SDGs also affect migration, although more indirectly [1, 3].

Other 2015 frameworks that address migration are the Paris Agreement on Climate Change and the Sendai Framework for Disaster Risk Reduction. According to the Paris Agreement, mitigating and adapting to climate change is crucial for reducing the climate change-related causes of migration. The Sendai Framework points out that migration can add to disaster risks but recognizes its role in strengthening the resilience of people and communities.

Most recently, at the end of 2018, the UN endorsed the Global Compact for Safe, Orderly and Regular Migration (GCM). This intergovernmental agreement acknowledges that “migration is a multidimensional reality of major relevance for the sustainable development of countries of origin, transit and destination”. It aims to improve the situation of migrants by leveraging “the potential of migration for the achievement of all SDGs” [4, 1].

Supporting the coherent implementation of these international frameworks in mountain regions thus contributes to the sustainable governance of migration processes, and ultimately to sustainable mountain development. A number of countries already have developed tools, strategies and policies that address and mainstream migration. Nevertheless, mountain regions need to get more attention by policy-making.

Addressing the non-migrants in mountains

In promoting sustainable mountain development, the particular needs of those who stay behind in mountain villages should not be forgotten. Families with absentees face specific challenges that must be considered in local, national and regional development planning. At the same time, the continued functioning of local institutions and authorities needs to be ensured despite the absence of a considerable share of working-age people. To ensure these challenges are identified in the first place, we need evidence-informed policy and development approaches. This means gathering and monitoring reliable, disaggregated and mountain-specific data on the dimension, form and outcomes of migration. Where specific policies for sustainable development in mountains exist, they should explicitly address and mitigate the negative outcomes of migration while facilitating the positive.

Four major fields of action for policy-making

To strengthen the benefits and reduce the drawbacks of migration for rural mountain people and communities, we have identified four fields of action for policy- and decision-making:

1. Foster beneficial links between migrants and mountain communities
2. Address the causes of migration: give people less reason to leave the mountains
3. Empower mountain people to cope with adverse effects of outmigration
4. Enable the integration of returnees or of new migrants to the mountains

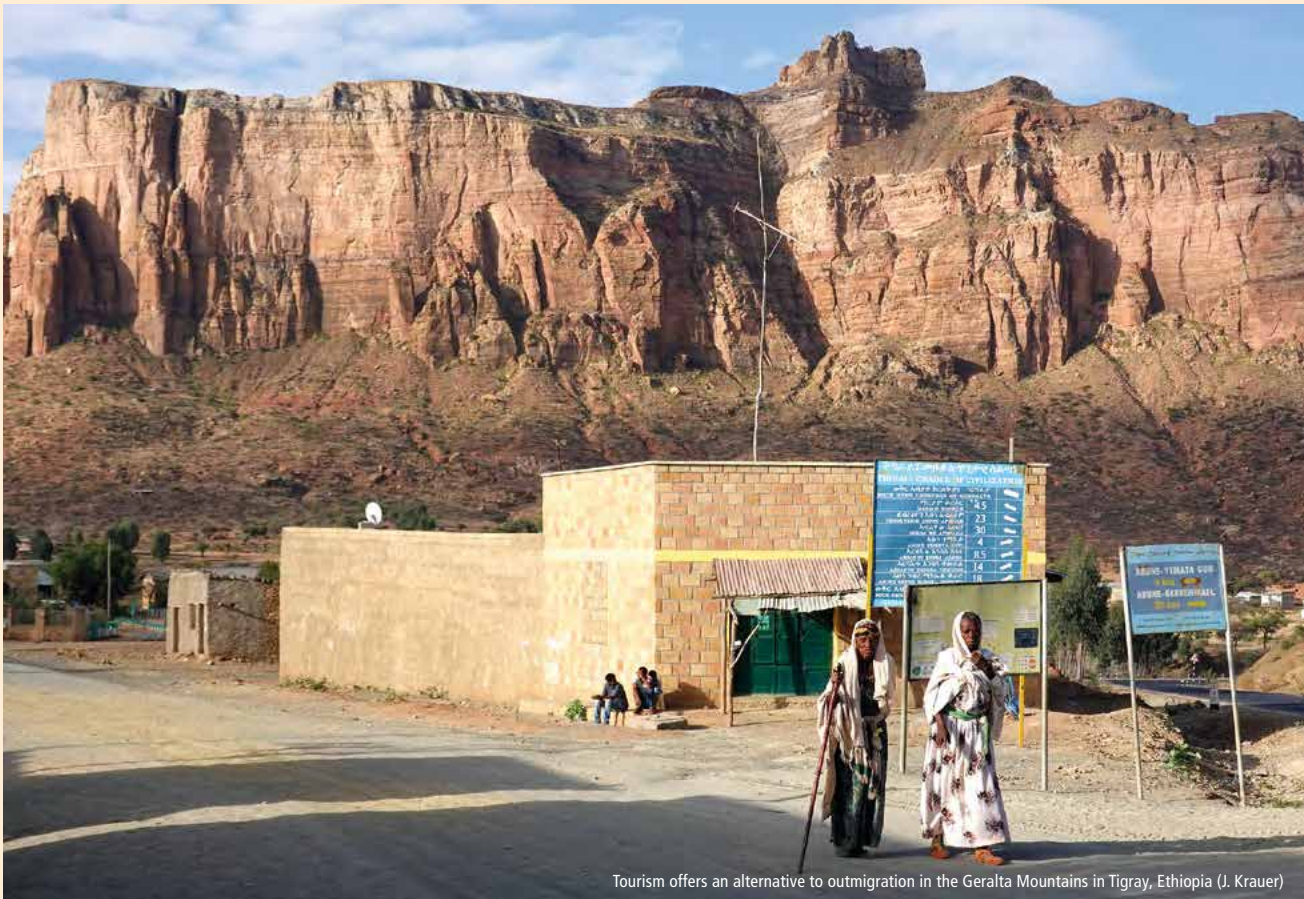
The 2030 Agenda and several of its SDGs are highly relevant, especially to fields of action 2 and 3: ensuring there are fewer reasons to leave the mountains, and improving the situations of those who stay. However, the SDGs can only be met in this context if they duly consider the priorities of mountain people – not only of migrants, but also of households and communities with absentee members [5]. Localizing the SDGs must therefore take place as an inclusive, multi-stakeholder process [6].

1 Foster beneficial links between migrants and mountain communities

- **Provide reliable information to potential migrants**, putting them in a position to take well-informed decisions on migration. Issues to address: How can they keep in touch with their families and support them? How can they best shape their strategies? What do they aim to bring back home apart from money (e.g. new skills, networks)? What do they need to consider when they want to return home? (Links to: GCM; SDGs 1, 4, 5)



Migration is changing the social structure in rural areas of Nepal (F. Bachmann)



Tourism offers an alternative to outmigration in the Geralta Mountains in Tigray, Ethiopia (J. Krauer)

- **Foster a conducive environment for innovations in mountains** by providing legal, administrative and financial support to circular and returning migrants who intend to invest newly acquired skills, knowledge and financial resources in their home communities. (Links to: [SDGs 1, 4, 8, 9, 10, 16](#))
- **Improve the effectiveness of financial remittances** by reducing transaction costs and supporting skill development of migrants and their non-migrant family members, to facilitate entrepreneurship and investments in productive activities. Incentivize the diaspora's investments in the development of their home community by creating fund-matching schemes. (Links to: [GCM](#); [SDGs 1, 4, 8, 9, 10](#))
- **Strengthen the cultural identity of mountain people**, and facilitate the maintenance of social and cultural links between migrants and their home communities by improving transnational and translocal ties (e.g. through radio broadcasts). (Links to: [SDG 10](#))

2 Address the causes of migration: give people less reason to leave the mountains

- **Alleviate poverty by diversifying income-generating opportunities** for women and men within and outside the agricultural sector. Develop infrastructure, improve road and energy access and expand social services. Create a conducive legal and economic environment to strengthen entrepreneurship and business development, to reduce pressure on land and make it more attractive for young people to live in the mountains. Create skill-matching employment for the educated youth in mountain areas. (Links to: [SDGs 1, 3, 5, 8, 9, 10](#))

- **Improve access to, and quality of, education and other basic services in mountains** for girls and boys, women and men. Enhance the provision of higher education and vocational training in rural centres and in professions that can improve living conditions in a rural mountain context. (Links to: SDGs 4, 5, 8, 10)
- **Promote sustainable land management and ecosystem-based adaptation to strengthen mountain people's resilience** and capacity to adapt to climate change through sustainable land management and ecosystem-based solutions. (Links to: Paris Agreement; Sendai Framework for DRR; SDGs 2, 13)

3 Empower mountain people to cope with adverse effects of outmigration

- **In development planning, take into account the specific needs and challenges of families with absent members** [6]. Implement innovative approaches to address the labour shortage and the increased workload and care responsibilities of the people remaining in mountains, specifically women. (Links to: SDGs 1, 5, 10)
- **Secure the legal and customary rights** (e.g. land title, entitlements to common property resources) of the people remaining in mountains, especially women. Improve their access to financial schemes and loans, to maintain and strengthen their ability to decide and act in all important spheres of life. **Ensure a socially agreed and acknowledged handover of responsibilities and tasks** from people leaving for migration to those who remain, to ensure a smooth continuation of services and daily life (e.g. farming). Strengthen the agency of women. (Links to: SDGs 1, 5, 16)
- **Develop innovative solutions to maintain, and possibly improve, the social and technical infrastructure** in mountains (e.g. through paid collective action), and to uphold the functioning of local institutions in the absence of large parts of the population. (Links to: SDGs 1, 3, 9, 16)

4 Enable the integration of returnees or of new migrants to the mountains

- For returning and new migrants to mountain regions, **encourage spatial planning and land use planning to sustainably use the limited space**. This includes reducing pressure on land, mitigating land use conflicts, managing abandoned former agricultural lands (e.g. terraces) and avoiding the establishment of settlements and infrastructure in hazard-prone areas. Facilitate the development of adapted livelihood strategies in close consultation with communities, including migrants and non-migrants. (Links to: Sendai Framework; SDGs 1, 10, 15)
- **Create opportunities for social and cultural exchange between local people and new migrants to mountains or returnees**, to foster impartial and supportive attitudes and peaceful co-existence. Strengthening community networks and learning in this way will eventually lead to win-win-situations. (Links to: GCM)
- **Create a conducive institutional environment to foster innovation and increase income-generating opportunities** that are supported and accelerated by new migrants and returnees, and that benefit the entire local community while promoting sustainable mountain development. (Links to: SDGs 1, 8, 10)



Migrants from the Peruvian Andes maintain cultural ties with their place of origin by returning there for a traditional pilgrimage (S.-L. Mathez-Stiefel)

Glossary

Circular migration: “The fluid movement of people between countries, including temporary or long-term movement which may be beneficial to all involved, if occurring voluntarily and linked to the labour needs of countries of origin and destination.” [1]

Emigration: “The act of departing or exiting from one State with a view to settling in another.” [1]

Financial remittances: “Monies earned or acquired by non-nationals that are transferred back to their country of origin.” [1]

Forced migration: “A migratory movement in which an element of coercion exists, including threats to life and livelihood, whether arising from natural or man-made causes (e.g. movements of refugees and internally displaced persons as well as people displaced by natural or environmental disasters, chemical or nuclear disasters, famine, or development projects).” [1]

Immigration: “A process by which non-nationals move into a country for the purpose of settlement.” [2]

Internal migration: Movement of persons “within the borders of a nation state (e.g. from a province, district or municipality to another), as opposed to international migration where people are moving across borders”. [3]

Internally displaced person (IDP): “Persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized State border.” [1]

International migration: “Movement of persons who leave their country of origin, or the country of habitual residence, to establish themselves either permanently or temporarily in another country. An international frontier is therefore crossed.” [2]

Labour migration: “Movement of persons from one State to another, or within their own country of residence, for the purpose of employment.” [1]

Migrant: “any person who is moving or has moved across an international border or within a State away from his/her habitual place of residence, regardless of (1) the person’s legal status; (2) whether the movement is voluntary or involuntary; (3) what the causes for the movement are; or (4) what the length of the stay is.” [1]

Migration: “The movement of a person or a group of persons, either across an international border, or within a State. It is a population movement, encompassing any kind of movement of people, whatever its length, composition and causes; it includes migration of refugees, displaced persons, economic migrants, and persons moving for other purposes, including family reunification.” [1]

Outmigration: In this publication, we use this term for any form of leaving, temporarily or permanently, one’s place of residence for another place either in the same country or abroad.

Refugee: A person who, “owing to a well-founded fear of persecution for reasons of race, religion, nationality, membership of a particular social group or political opinions, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country.” [1]

Remittances: “Monies earned or acquired by non-nationals that are transferred back to their country of origin.” [1]

Social remittances: “the ideas, practices, identities, and social capital that are transmitted through the migration circuit. Social remittances are carried by migrants and travelers or they are exchanged by letter, video, or phone. They travel through well-marked pathways – be they formal or informal organisational structures or during interpersonal exchanges between individuals.” [4]

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1 The multifaceted realities of migration in mountains

Migration: More than a livelihood strategy for mountain people

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Current population and migration dynamics in mountains

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2 Understanding outcomes of migration

Opportunities and challenges for mountain communities

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Migration, multilocality and the question of return in Kyrgyzstan

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New trends in Trans-Himalayan labour mobility

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Land abandonment in the Alps affects ecosystem services

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3 Good practices for a sustainable future

Addressing the causes of migration – and enhancing its benefits

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Local solutions create opportunities for sustainable livelihoods in Kosovo

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Reducing outmigration through legislation

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Swiss mountain villages work to become more attractive to young people

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Promoting financial literacy to secure the benefits of labour migration

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4 Turning challenges of migration into opportunities

Recommendations for policy-making

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References and further reading

Note: URLs were last checked on 9 April 2019.

1 The multifaceted realities of migration in mountains

Migration: More than a livelihood strategy for mountain people

- [1] UN DESA (United Nations Department of Economic and Social Affairs), Population Division. 2013. *Cross-national comparisons of internal migration: An update on global patterns and trends*. Technical Paper. New York, NY, USA, UN DESA, Population Division. <http://www.un.org/en/development/desa/population/publications/pdf/technical/TP2013-1.pdf>.
- [2] Vidal, E.M. & Tjaden, J.D. 2018. *Global migration indicators 2018: Insights from the global migration data portal*. Berlin, Germany, Global Migration Data Analysis Centre and International Organization for Migration. https://publications.iom.int/system/files/pdf/global_migration_indicators_2018.pdf.
- [3] Tacoli, C. 2011. *Not only climate change: Mobility, vulnerability and socio-economic transformations in environmentally fragile areas of Bolivia, Senegal and Tanzania*. Human Settlements Working Paper Series, No. 28. London, UK, International Institute for Environment and Development. <http://pubs.iied.org/10590IIED/?a=C+Tacoli&p=2>.
- [4] Foresti, M., Hagen-Zanker, J. & Dempster, H. 2018. *Migration and development: How human mobility can help achieve the Sustainable Development Goals*. ODI Briefing Note. London, UK, Overseas Development Institute and Swiss Agency for Development and Cooperation. <https://www.odi.org/sites/odi.org.uk/files/resource-documents/12421.pdf>.
- [5] United Nations. 2015. *Transforming our world: The 2030 agenda for sustainable development*. New York, NY, USA, United Nations. <https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf>.
- [6] IOM (International Organization for Migration). 2018. *Migration and the 2030 Agenda: A guide for practitioners*. Geneva, Switzerland, IOM. <https://publications.iom.int/books/migration-and-2030-agenda-guide-practitioners>.
- [7] UNGA (United Nations General Assembly). 2018. *Global compact for safe, orderly and regular migration*. Resolution adopted by the General Assembly on 19 December 2018. New York, NY, USA, UNGA. http://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/73/195.
- [8] ADA (Austrian Development Agency). 2016. *Focus paper on migration and development*. Vienna, Austria, ADA. https://www.entwicklung.at/fileadmin/user_upload/Dokumente/Publikationen/Fokuspapiere/Englisch/Focus_on_Migration_and_Development_Oct2016.pdf.
- [9] SDC (Swiss Agency for Development and Cooperation). 2018. *Global Programme Migration and Development: Strategic framework 2018–2021*. Bern, Switzerland, SDC. https://www.eda.admin.ch/dam/deza/en/documents/themen/migration/lay_strategie-migration-and-development_2018-2021_EN.pdf.
- [10] FAO (Food and Agriculture Organization of the United Nations). 2015. *Mapping the vulnerability of mountain peoples to food insecurity*. Rome, Italy, FAO. <http://www.fao.org/3/a-i5175e.pdf>.
- [11] IOM (International Organization for Migration). 2015. Key migration terms (web page). <https://www.iom.int/key-migration-terms>.
- [12] SDC (Swiss Agency for Development and Cooperation). 2016. *Climate change and environment: Migration*. Nexus Brief No. 1. Bern, Switzerland, SDC. [https://www.shareweb.ch/site/Climate-Change-and-Environment/Documents/Nexus%20brief%20Nr.1%20\(July%202016\).pdf](https://www.shareweb.ch/site/Climate-Change-and-Environment/Documents/Nexus%20brief%20Nr.1%20(July%202016).pdf).
- [13] Milan, A., Schraven, B., Warner, K. & Cascone, N. 2016. *Migration, risk management and climate change: Evidence and policy responses*. Cham, Switzerland, Springer International Publishing. <https://www.springer.com/gp/book/9783319429205>.
- [14] FAO (Food and Agriculture Organization of the United Nations). 2016. *Migration, agriculture and rural development: Addressing the root causes of migration and harnessing its potential for development*. Rome, Italy, FAO. <http://www.fao.org/3/a-i6064e.pdf>.
- [15] Gautam, Y. 2017. Seasonal migration and livelihood resilience in the face of climate change in Nepal. *Mountain Research and Development*, 37(4): 436–445. <https://doi.org/10.1659/MRD-JOURNAL-D-17-00035.1>.
- [16] Milan, A. & Ho, R. 2014. Livelihood and migration patterns at different altitudes in the Central Highlands of Peru. *Climate and Development*, 6(1): 69–76. <https://doi.org/10.1080/17565529.2013.826127>.
- [17] Bender, O. & Kanitscheider, S. 2012. New immigration into the European Alps: Emerging research issues. *Mountain Research and Development*, 32(2): 235–241. <https://doi.org/10.1659/MRD-JOURNAL-D-12-00030.1>.
- [18] Mayer, H. & Meili, R. 2016. New highlander entrepreneurs in the Swiss Alps. *Mountain Research and Development*, 36(3): 267–275. <https://doi.org/10.1659/MRD-JOURNAL-D-16-00040.1>.

Current population and migration dynamics in mountains

- [1] Pesaresi, M. & Freire, S. 2016. GHS settlement grid following the REGIO model 2014 in application to GHSL Landsat and CIESIN GPW v4-multitemporal (1975-1990-2000-2015) (dataset). European Commission, Joint Research Centre. http://data.europa.eu/89h/jrc-ghsl-ghs_smod_pop_globe_r2016a.
- [2] FAO (Food and Agriculture Organization of the United Nations). 2015. *Mapping the vulnerability of mountain peoples to food insecurity*. Rome, Italy, FAO. <http://www.fao.org/3/a-i5175e.pdf>.
- [3] Kapos, V., Rhind, I., Edwards, M., Price, M.F. & Ravilious, C. 2000. Developing a map of the world's mountain forest. In M.F. Price & N. Butt, eds. *Forests in sustainable mountain development: A state-of-knowledge report for 2000*, pp. 4–9. Wallingford, UK, CAB International.

Nepal: Migration to mountain cities, lowlands and abroad

- [1] Pesaresi, M. & Freire, S. 2016. GHS settlement grid following the REGIO model 2014 in application to GHSL Landsat and CIESIN GPW v4-multitemporal (1975-1990-2000-2015) (dataset). European Commission, Joint Research Centre. http://data.europa.eu/89h/jrc-ghsl-ghs_smod_pop_globe_r2016a.
- [2] Kapos, V., Rhind, I., Edwards, M., Price, M.F. & Ravilious, C. 2000. Developing a map of the world's mountain forest. In M.F. Price & N. Butt, eds. *Forests in sustainable mountain development: A state-of-knowledge report for 2000*, pp. 4–9. Wallingford, UK, CAB International.
- [3] Muzzini, E. & Aparicio, G. 2013. *Urban growth and spatial transition in Nepal: An initial assessment*. Washington, DC, USA, The World Bank. <http://elibrary.worldbank.org/doi/book/10.1596/978-0-8213-9659-9>.
- [4] NPCS (National Planning Commission Secretariat) & CBS (Central Bureau of Statistics). 2014. *Population monograph of Nepal: Population dynamics*. Vol. I. Kathmandu, Nepal, Government of Nepal. <https://nepal.unfpa.org/sites/default/files/pub-pdf/PopulationMonograph2014Volume1.pdf>.
- [5] Sharma, S., Pandey, S., Pathak, D. & Sijapati-Basnet, B. 2014. *State of migration in Nepal*. Research Paper Report No. VI. Kathmandu, Nepal, Centre for the Study of Labour and Mobility. <https://www.ceslam.org/index.php?pageName=publication&pid=30>.
- [6] United Nations Population Division. 2017. World population prospects: The 2017 revision (dataset). <http://data.un.org/Data.aspx?d=PopDiv&f=variableID%3A85>.
- [7] Bakrania, S. 2015. *Urbanisation and urban growth in Nepal*. Helpdesk Research Report. Birmingham, UK, Governance and Social Development Resource Centre. <http://www.gsdrc.org/wp-content/uploads/2015/11/HDQ1294.pdf>.

Rwanda: Rural-to-rural migration prevails

- [1] Pesaresi, M. & Freire, S. 2016. GHS settlement grid following the REGIO model 2014 in application to GHSL Landsat and CIESIN GPW v4-multitemporal (1975-1990-2000-2015) (dataset). European Commission, Joint Research Centre. http://data.europa.eu/89h/jrc-ghsl-ghs_smod_pop_globe_r2016a.
- [2] Kapos, V., Rhind, I., Edwards, M., Price, M.F. & Ravilious, C. 2000. Developing a map of the world's mountain forest. In M.F. Price & N. Butt, eds. *Forests in sustainable mountain development: A state-of-knowledge report for 2000*, pp. 4–9. Wallingford, UK, CAB International.
- [3] World Bank Group. 2017. *Reshaping urbanization in Rwanda: Economic and spatial trends and proposals. Note 2: Internal migration in Rwanda*. Washington, DC, USA, World Bank Group. <http://documents.worldbank.org/curated/en/643901513837660776/pdf/122175-WP-P157637-PUBLIC-Note-2-Rwanda-Urbanization-12-08-17.pdf>.
- [4] World Bank Group. No date. Personal remittances, received (% of GDP), Rwanda (dataset). <https://data.worldbank.org/indicator/BX.TRF.PWKR.DT.GD.ZS?locations=RW>.
- [5] United Nations Population Division. 2017. World population prospects: The 2017 revision (dataset). <http://data.un.org/Data.aspx?d=PopDiv&f=variableID%3A85>.
- [6] NISR (National Institute of Statistics of Rwanda) & MINECOFIN (Ministry of Finance and Economic Planning). 2014. *Fourth population and housing census, Rwanda 2012: Migration and spatial mobility*. Thematic Report. Kigali, Rwanda, NISR and MINECOFIN. <http://www.statistics.gov.rw/publication/rphc4-thematic-report-migration-and-spatial-mobility>.
- [7] World Bank Group. 2017. *Reshaping urbanization in Rwanda: Economic and spatial trends and proposals. Note 3: Urbanization, job creation, and poverty in Rwanda*. Washington, DC, USA, World Bank Group. <http://documents.worldbank.org/curated/en/900251513849803189/pdf/122184-WP-P157637-PUBLIC-Note-3-Rwanda-Urbanization-12-07-17-rev.pdf>.

Georgia: Outmigration from mountains and lowlands

- [1] Pesaresi, M. & Freire, S. 2016. GHS settlement grid following the REGIO model 2014 in application to GHSL Landsat and CIESIN GPW v4-multitemporal (1975-1990-2000-2015) (dataset). European Commission, Joint Research Centre. http://data.europa.eu/89h/jrc-ghsl-ghs_smod_pop_globe_r2016a.
- [2] Kapos, V., Rhind, I., Edwards, M., Price, M.F. & Ravilious, C. 2000. Developing a map of the world's mountain forest. In M.F. Price & N. Butt, eds. *Forests in sustainable mountain development: A state-of-knowledge report for 2000*, pp. 4–9. Wallingford, UK, CAB International.
- [3] Kohler, T., Elizbarashvili, N., Meladze, G., Svanadze, D. & Meessen, H. 2017. The demogeographic crisis in Racha, Georgia: Depopulation in the Central Caucasus mountains. *Mountain Research and Development*, 37(4): 415–424. <https://doi.org/10.1659/MRD-JOURNAL-D-17-00064.1>.
- [4] State Commission on Migration Issues. 2017. *2017 migration profile of Georgia*. Tbilisi, Georgia, State Commission on Migration Issues. http://migration.commission.ge/files/migration_profile_2017_eng_final.pdf.
- [5] Badurashvili, I. & Nadareishvili, M. 2012. *Social impact of emigration and rural-urban migration in Central and Eastern Europe: Final country report, Georgia*. No place, European Commission, Directorate-General Employment, Social Affairs and Inclusion and Gesellschaft für Versicherungswissenschaft und -gestaltung e.V. <https://ec.europa.eu/social/main.jsp?langId=en&catId=89&newsId=1778&furtherNews=yes> (click "Country Reports, Synthesis Report incl. Executive Summary and Policy Brief" and search for "Georgia").
- [6] United Nations Population Division. 2017. World population prospects: The 2017 revision (dataset). <http://data.un.org/Data.aspx?d=PopDiv&f=variableID%3A85>.
- [7] Dolder, F. 2018. *Emigration from the Republic of Georgia: Spatial evidence on municipality level* (unpublished bachelor's thesis). Bern, Switzerland, University of Bern, Institute of Geography.
- [8] Hakkert, R. 2017. *Population dynamics in Georgia: An overview based on the 2014 general population census data*. Tbilisi, Georgia, National Statistics Office of Georgia and United Nations Population Fund (UNFPA) Office in Georgia. https://georgia.unfpa.org/sites/default/files/pub-pdf/3.%20Population%20Dynamics_ENGL%20_print_F.pdf.

Bolivia: Growth of mountain population and migration to cities

- [1] Pesaresi, M. & Freire, S. 2016. GHS settlement grid following the REGIO model 2014 in application to GHSL Landsat and CIESIN GPW v4-multitemporal (1975-1990-2000-2015) (dataset). European Commission, Joint Research Centre. http://data.europa.eu/89h/jrc-ghsl-ghs_smod_pop_globe_r2016a.
- [2] Kapos, V., Rhind I., Edwards, M., Price, M.F. & Ravilious, C. 2000. Developing a map of the world's mountain forest. In M.F. Price & N. Butt, eds. *Forests in sustainable mountain development: A state-of-knowledge report for 2000*, pp. 4–9. Wallingford, UK, CAB International.
- [3] Balderrama Mariscal, C., Tass, N., Rubena Miranda, A., Aramayo Canedo, L. & Cazorla, I. 2011. *Rural migration in Bolivia: The impact of climate change, economic crisis and state policy*. Human Settlements Working Paper Series, Rural–Urban Interactions and Livelihood Strategies No. 31. London, UK, International Institute for Environment and Development. <https://pubs.iied.org/pdfs/10568IIED.pdf>.
- [4] Gray Molina, G. & Yañez, E. 2009. *The moving middle: Migration, place premiums and human development in Bolivia*. Human and Development Reports Research Papers 2009/46. La Paz, Bolivia, United Nations Development Programme. http://hdr.undp.org/sites/default/files/hdrp_2009_46.pdf.
- [5] Andersen, L.E. & Jemio, L.C. 2016. *Decentralization and poverty reduction in Bolivia: Challenges and opportunities*. Development Research Working Paper Series No. 1/2016. La Paz, Bolivia, Institute for Advanced Development Studies. <https://www.econstor.eu/bitstream/10419/177353/1/wp2016-01.pdf>.
- [6] Trohanis, Z.E., Zangerling, B.M. & Sanchez-Reaza, J. 2015. *Urbanization trends in Bolivia: Opportunities and challenges*. Directions in Urban Development, May 2015. Washington, DC, USA, The World Bank, Global Programs Unit. <http://documents.worldbank.org/curated/en/997641468187732081/pdf/97834-REVISED-BRI-PUBLIC-ADD-AUTHORS-Box393179B.pdf>.
- [7] Nijenhuis, G. 2010. Embedding international migration: The response of Bolivian local governments and NGOs to international migration. *Environment and Urbanization*, 22(1): 67–79. <https://doi.org/10.1177/0956247809356182>.
- [8] Pereira Morató, R. 2011. *Perfil migratorio de Bolivia*. La Paz, Bolivia, Organización Internacional para las Migraciones (OIM). <https://www.iom.int/jahia/webdav/shared/shared/mainsite/media/docs/reports/Perfil-Migratorio-de-Bolivia.pdf>.
- [9] United Nations Population Division. 2017. World population prospects: The 2017 revision (dataset). <http://data.un.org/Data.aspx?d=PopDiv&f=variableID%3A85>.

2 Understanding outcomes of migration

Opportunities and challenges for mountain communities

- [1] Benz, A. 2016. Framing modernization interventions: Reassessing the role of migration and translocality in sustainable mountain development in Gilgit-Baltistan, Pakistan. *Mountain Research and Development*, 36(2): 141–152. <https://doi.org/10.1659/MRD-JOURNAL-D-15-00055.1>.
- [2] Sakdapolrak, P. 2014. *Building resilience through translocality: Climate change, migration and social resilience of rural communities in Thailand*. TransRe Working Paper No. 1. Bonn, Germany, Department of Geography, University of Bonn. https://www.weadapt.org/sites/weadapt.org/files/2017/july/transre_working_paper_no1_sakdapolrak_0_0.pdf.
- [3] Ratha, D. 2013. *The impact of remittances on economic growth and poverty reduction*. Washington, DC, USA, Migration Policy Institute. <https://www.migrationpolicy.org/research/impact-remittances-economic-growth-and-poverty-reduction>.
- [4] The World Bank. No date. Personal remittances, received (% of GDP), World (dataset). <https://data.worldbank.org/indicator/BX.TRF.PWKR.DT.GD.ZS>.
- [5] Adams, R.H. Jr. & Page, J. 2005. Do international migration and remittances reduce poverty in developing countries? *World Development*, 33(10): 1645–1669. <https://doi.org/10.1016/j.worlddev.2005.05.004>.
- [6] Acosta, P., Calderón, C., Fajnzylber, P. & López, H. 2008. What is the impact of international remittances on poverty and inequality in Latin America? *World Development*, 36(1): 89–114. <https://doi.org/10.1016/j.worlddev.2007.02.016>.
- [7] Lokshin, M., Bontch-Osmolovski, M. & Glinskaya, E. 2010. Work-related migration and poverty reduction in Nepal. *Review of Development Economics*, 14(2): 323–332. <https://doi.org/10.1111/j.1467-9361.2010.00555.x>.
- [8] Le Dé, L., Gaillard, J.C. & Friesen, W. 2013. Remittances and disaster: A review. *International Journal of Disaster Risk Reduction*, 4: 34–43. <https://doi.org/10.1016/j.ijdr.2013.03.007>.
- [9] Gautam, Y. 2017. Seasonal migration and livelihood resilience in the face of climate change in Nepal. *Mountain Research and Development*, 37(4): 436–445. <https://doi.org/10.1659/MRD-JOURNAL-D-17-00035.1>.
- [10] Benz, A. 2016. The power of translocal networks and remittances. In S. Wymann von Dach, F. Bachmann, A. Borsdorf, T. Kohler, M. Jurek & E. Sharma, eds. *Investing in sustainable mountain development: Opportunities, resources and benefits*, pp. 36–37. Bern, Switzerland, Centre for Development and Environment, University of Bern, with Bern Open Publishing. <https://boris.unibe.ch/74058/>.
- [11] Maharjan, A., Bauer, S. & Knerr, B. 2013. International migration, remittances and subsistence farming: Evidence from Nepal. *International Migration*, 51(s1): e249–e263. <https://doi.org/10.1111/j.1468-2435.2012.00767.x>.
- [12] Strunk, C. 2013. Circulating practices: Migration and translocal development in Washington D.C. and Cochabamba, Bolivia. *Sustainability*, 5(10): 4106–4123. <https://doi.org/10.3390/su5104106>.

- [13] Warner, K. & Afifi, T. 2014. Where the rain falls: Evidence from 8 countries on how vulnerable households use migration to manage the risk of rainfall variability and food insecurity. *Climate and Development*, 6(1): 1–17. <https://doi.org/10.1080/17565529.2013.835707>.
- [14] Porst, L. & Sakdapolrak, P. 2018. Advancing adaptation or producing precarity? The role of rural-urban migration and translocal embeddedness in navigating household resilience in Thailand. *Geoforum*, 97: 35–45. <https://doi.org/10.1016/j.geoforum.2018.10.011>.
- [15] Schoch, N., Steimann, B. & Thieme, S. 2010. Migration and animal husbandry: Competing or complementary livelihood strategies? Evidence from Kyrgyzstan. *Natural Resources Forum*, 34(3): 211–221. <https://doi.org/10.1111/j.1477-8947.2010.01306.x>.
- [16] Levitt, P. & Lamba-Nieves, D. 2011. Social remittances revisited. *Journal of Ethnic and Migration Studies*, 37(1): 1–22. <https://doi.org/10.1080/1369183X.2011.521361>.
- [17] Amuedo-Dorantes, C. & Pozo, S. 2010. Accounting for remittance and migration effects on children's schooling. *World Development*, 38(12): 1747–1759. <https://doi.org/10.1016/j.worlddev.2010.05.008>.
- [18] Maharjan, A., Bauer, S. & Knerr, B. 2012. Do rural women who stay behind benefit from male out-migration? A case study in the hills of Nepal. *Gender, Technology and Development*, 19(1): 95–123. <https://doi.org/10.1177/097185241101600105>.
- [19] De Paoli, A.S. & Mendola, M. 2017. International migration and child labour in developing countries. *The World Economy*, 40(4): 678–702. <https://doi.org/10.1111/twec.12375>.
- [20] Gioli G., Maharjan, A. & Gurung, C. 2017. *Neither heroines nor victims: Women migrant workers and changing family and community relations in Nepal*. UN Women Discussion Paper No. 18. New York, NY, USA, UN Women. <http://www.unwomen.org/en/digital-library/publications/2017/10/women-migrant-workers-and-changing-family-and-community-relations-in-nepal>.
- [21] Fleury, A. 2016. *Understanding women and migration: A literature review*. KNOMAD Working Paper No. 8. Washington, DC, USA, Global Knowledge Partnership on Migration and Development (KNOMAD). <http://www.atina.org.rs/sites/default/files/KNOMAD%20Understaning%20Women%20and%20Migration.pdf>.
- [22] Gämperli Krauer, U., Wymann von Dach, S. & Bieri, S. 2017. *Mountain women's future*. Issue Brief on Sustainable Mountain Development. Bern, Switzerland, Centre for Development and Environment. <https://boris.unibe.ch/99292/>.
- [23] Kelkar, G. 2009. The feminization of agriculture in Asia: Implications for women's agency and productivity (web page). Taipei, Taiwan, Food and Fertilizer Technology Centre (FFTC). <http://www.ffc.agnet.org/library.php?func=view&id=20110725164020>.
- [24] Gartaula, H.N., Niehof, A. & Visser, L. 2010. Feminisation of agriculture as an effect of male out-migration: Unexpected outcomes from Jhapa District, Eastern Nepal. *The International Journal of Interdisciplinary Social Science*, 5(2): 565–577. https://www.researchgate.net/publication/46383452_Feminisation_of_agriculture_as_an_effect_of_male_out-migration_Unexpected_outcomes_from_Jhapa_district_eastern_Nepal.
- [25] Lama, A.S., Kharel, S. & Ghale, T. 2017. When the men are away: Migration and women's participation in Nepal's community forestry. *Mountain Research and Development*, 37(3): 263–271. <https://doi.org/10.1659/MRD-JOURNAL-D-16-00092.1>.
- [26] Speck, S. 2017. "They moved to city areas, abroad": Views of the elderly on the implications of outmigration for the Middle Hills of Western Nepal. *Mountain Research and Development*, 37(4): 425–435. <https://doi.org/10.1659/MRD-JOURNAL-D-17-00034.1>.
- [27] Jaquet, S., Shrestha, G., Kohler, T. & Schwilch, G. 2016. The effects of migration on livelihoods, land management, and vulnerability to natural disasters in the Harpan watershed in Western Nepal. *Mountain Research and Development*, 36(4): 494–505. <https://doi.org/10.1659/MRD-JOURNAL-D-16-00034.1>.
- [28] MacDonald, D., Crabtree, J., Wiesinger, G., Dax, T., Stamou, N., Fleury, P., Gutierrez Lazpita, J. & Gibon, A. 2000. Agricultural abandonment in mountain areas of Europe: Environmental consequences and policy response. *Journal of Environmental Management*, 59: 47–69. <https://doi.org/10.1006/jema.1999.0335>.
- [29] Greiner, C. & Sakdapolrak, P. 2013. Rural–urban migration, agrarian change, and the environment in Kenya: A critical review of the literature. *Population and Environment*, 34(4): 524–553. <https://doi.org/10.1007/s11111-012-0178-0>.
- [30] Lanari, N., Schuler, R., Kohler, T. & Liniger, H. 2018. The impact of commercial horticulture on river water resources in the Upper Ewaso Ng'iro River Basin, Kenya. *Mountain Research and Development*, 38(2): 114–124. <https://doi.org/10.1659/MRD-JOURNAL-D-16-00135>.

Migration, multilocality and the question of return in Kyrgyzstan

- [1] World Bank Group. 2016. *Migration and remittances factbook 2016*. Third edition. Washington, DC, USA, The World Bank. <https://openknowledge.worldbank.org/handle/10986/23743>.
- [2] Thieme, S. 2014. Coming home? Patterns and characteristics of return migration in Kyrgyzstan. *International Migration*, 52(5): 127–143. <https://doi.org/10.1111/j.1468-2435.2011.00724.x>.
- [3] Chandonnet, A., Mamadalieva, Z., Orolbaeva, L., Sagynbekova, L., Turunaliev, D. & Umetbaeva, D. 2016. *Environment, climate change and migration in the Kyrgyz Republic*. Bishkek, Kyrgyzstan, International Organization for Migration. <https://environmentalmigration.iom.int/fr/node/1081>.

Murzakulova, A. 2017. *Contextual factors of conflicts in border communities in Batken province, Kyrgyzstan*. Research report. Bishkek, Kyrgyzstan, Mountain Societies Research Institute, University of Central Asia. <https://www.ucentralasia.org/Resources/Item/1494/EN>.

Reeves, M. 2012. Black work, green money: Remittances, ritual, and domestic economies in southern Kyrgyzstan. *Slavic Review*, 71(1): 108–134. <https://doi.org/10.5612/slavicreview.71.1.0108>.

Schoch, N., Steimann, B. & Thieme, S. 2010. Migration and animal husbandry: Competing or complementary livelihood strategies? Evidence from Kyrgyzstan. *Natural Resources Forum*, 34(3): 211–221. <https://doi.org/10.1111/j.1477-8947.2010.01306.x>.

New trends in Trans-Himalayan labour mobility

- [1] Shneiderman, S. 2013. Himalayan border citizens: Sovereignty and mobility in the Nepal–Tibetan Autonomous Region (TAR) of China border zone. *Political Geography*, 35: 25–36. <https://doi.org/10.1016/j.polgeo.2013.04.001>.
- [2] DADO (District Agriculture Development Office) Humla. 2015. *Annual agriculture development programme and statistics – a glimpse 2014/15*. Humla, Nepal, DADO Humla, Regional Agricultural Secretariat, Ministry of Agriculture.
- [3] Gautam, Y. 2017. Seasonal migration and livelihood resilience in the face of climate change in Nepal. *Mountain Research and Development*, 37(4): 436–445. <https://doi.org/10.1659/MRD-JOURNAL-D-17-00035.1>.

Louaillier, S. 2016. *A road to somewhere: Changing trade and the adaptation to survive in Humla*. Independent Study Project Collection, No. 2497. Washington, DC, USA, School for International Training (SIT) Digital Collections. https://digitalcollections.sit.edu/isp_collection/2497/.

Remigration as an opportunity

- [1] Gracheva, R., Kohler, T., Stadelbauer, J. & Meessen, H. 2012. Population dynamics, changes in land management, and the future of mountain areas in northern Caucasus: The example of North Ossetia. *Erdkunde*, 66(3): 197–219. <https://doi.org/10.3112/erdkunde.2012.03.02>.
- [2] Iragimova, Z.Kh. 2006. *Chechency v zerkale tsarskoi statistiki (1860–1900)* [Chechens in the mirror of tsarist statistics (1860–1900)] (in Russian). Moscow, Russia, Probel-2000.
- [3] Federal State Statistics Service, Russian Federation. No date. Chislennost' naseleniya Rossiiskoi Federacii po municipal'nym obrazovaniyam [The population of the Russian Federation by municipality] (web page, in Russian, offers access to statistics in Russian). http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/publications/catalog/afc8ea004d56a39ab251f2bafc3a6fce.

Ilyasov, L. 2009. *The diversity of the Chechen culture: From historical roots to the present*. Moscow, Russia, Ziya Bazhayev Charity Foundation and UNESCO Office in Moscow. <https://unesdoc.unesco.org/ark:/48223/pf0000186004>.

Villeneuve, A., Castelein, A. & Mekouar, M.A. 2002. Russian Federation – Republic of North Ossetia-Alania. In A. Villeneuve, A. Castelein & M.A. Mekouar. *Mountains and the law: Emerging trends*. FAO Legislative Study 75, pp. 73–78. Rome, Italy, Food and Agriculture Organization of the United Nations. <http://www.fao.org/tempref/docrep/fao/005/y4181E/Y4181E00.pdf>.

Wikipedia contributors. No date. Chechnya (web page). *Wikipedia, The Free Encyclopedia*. Wikimedia Foundation, Inc. <https://en.wikipedia.org/wiki/Chechnya>.

Wikipedia contributors. No date. North Ossetia-Alania (web page). *Wikipedia, The Free Encyclopedia*. Wikimedia Foundation, Inc. https://en.wikipedia.org/wiki/North_Ossetia-Alania.

In- and outmigration in the context of the quinoa boom

- [1] Vassas Toral, A. 2011. *Ruralité et agriculture au prisme des mobilités spatiales: l'altiplano sud de la Bolivie à l'heure du boom de la quinoa* (PhD dissertation). Montpellier, France, Université Paul Valéry Montpellier 3. <http://tel.archives-ouvertes.fr/tel-00668162>.
- [2] Vieira Pak, M. 2012. *Le boom de la quinoa dans l'altiplano sud de la Bolivie: bouleversement du système agraire, discours et tensions socio-environnementales* (PhD dissertation). Paris, France, AgroParisTech. <http://www.documentation.ird.fr/hor/fdi:010063047>.
- [3] Winkel, T., Bommel, P., Chevarría-Lazo, M., Cortes, G., Del Castillo, C., Gasselin, P., Léger, F., Nina-Laura, J-P., Rambal, S., Tichit, M., Tourrand, J-F., Vacher, J-J., Vassas-Toral, A., Vieira-Pak, M. & Joffre, R. 2016. Panarchy of an indigenous agroecosystem in the globalized market: The quinoa production in the Bolivian altiplano. *Global Environmental Change*, 39: 195–204. <https://doi.org/10.1016/j.gloenvcha.2016.05.007>.
- [4] Orsag, V., León, L., Pacosaca, O. & Castro, E. 2013. Evaluación de la fertilidad de los suelos para la producción sostenible de quinua. *Tinkazos*, 16(33): 89–112. http://www.scielo.org.bo/scielo.php?script=sci_arttext&pid=S1990-74512013000100006.
- [5] Tschopp, M., Bieri, S. & Rist, S. 2018. Quinoa and production rules: How are cooperatives shaping the governance of natural resources? *International Journal of the Commons*, 12(1): 402–427. <http://doi.org/10.18352/ijc.826>.
- [6] Argandoña Espinoza, J. 2016. *Normas comunales y sustentabilidad de la producción de quinua: Estudio de caso Municipio de Llica, Provincia Daniel Campos del Departamento de Potosí* (unpublished master's thesis). La Paz, Bolivia, Universidad Mayor de San Andrés, Postgrado en Ciencias Del Desarrollo.
- [7] Kerssen, T.M. 2015. Food sovereignty and the quinoa boom: Challenges to sustainable re-peasantisation in the southern altiplano of Bolivia. *Third World Quarterly*, 36(3): 489–507. <https://doi.org/10.1080/01436597.2015.1002992>.
- [8] Binggeli, B.A. 2017. *Impact of the quinoa boom on the labour division within households in the southern altiplano of Bolivia* (unpublished master's thesis). Lucerne, Switzerland, University of Lucerne.

Gender dimensions of rural–urban migration in Bhutan

- [1] Verma, R. 2017. Gross National Happiness: Meaning, measure and degrowth in a living development alternative. *Journal of Political Ecology*, 24(1): 476–490. <http://dx.doi.org/10.2458/v24i1.20885>.
- [2] Ministry of Works and Human Settlements. 2008. *Bhutan national urbanization strategy*. Thimphu, Bhutan, Royal Government of Bhutan. http://www.mowhs.gov.bt/wp-content/uploads/2010/11/Bhutan_National_Urbanization_Strategy_2008.pdf.
- [3] Office of the Census Commissioner. 2005. *Results of population & housing census of Bhutan 2005*. Thimphu, Bhutan, Royal Government of Bhutan. <http://www.nsb.gov.bt/publication/download.php?id=227>.
- [4] ADB (Asian Development Bank). 2014. *Bhutan: Gender equality diagnostic of selected sectors*. Mandaluyong City, Philippines, ADB. <https://www.adb.org/documents/bhutan-gender-equality-diagnostic-selected-sectors>.
- [5] Verma, R., Wangdi, C.P., Peldon, S., Ghalley, P., Tshering, G. & Dorji, D. 2018. *Equitable and meaningful participation in climate change adaptation and water governance in rural Bhutan*. Thimphu, Bhutan, Tarayana Centre for Social Research and Development, Tarayana Foundation.

Land abandonment in the Alps affects ecosystem services

- [1] Price, M.F., Borowski, D., Macleod, C., Rudaz, G. & Debarbieux, B. 2011. *The Alps. From Rio 1992 to 2012 and beyond: 20 years of Sustainable Mountain Development. What have we learnt and where should we go?* Report commissioned by the Swiss Federal Office for Spatial Development (ARE) in the context of the Swiss Presidency of the Alpine Convention. Ittigen, Switzerland, Swiss Federal Office for Spatial Development ARE. <http://www.alpconv.org/en/organization/presidency/Documents/20120228%20RIO%20AlpsreportforSwitzerlandfinal.pdf>.
- [2] MacDonald, D., Crabtree, J., Wiesinger, G., Dax, T., Stamou, N., Fleury, P., Gutierrez Lazpita, J. & Gibon, A. 2000. Agricultural abandonment in mountain areas of Europe: Environmental consequences and policy response. *Journal of Environmental Management* 59: 47–69. <https://doi.org/10.1006/jema.1999.0335>.
- [3] Schirpke, U., Tasser, E. & Tappeiner, U. 2013. Predicting scenic beauty of mountain regions. *Landscape and Urban Planning*, 111: 1–12. <https://doi.org/10.1016/j.landurbplan.2012.11.010>.
- [4] Braunisch, V., Patthey, P. & Arlettaz, R. 2016. Where to combat shrub encroachment in Alpine timberline ecosystems: Combining remotely-sensed vegetation information with species habitat modelling. *PLoS ONE*, 11(10): e0164318. <https://doi.org/10.1371/journal.pone.0164318>.
- [5] Bolliger, J., Hagedorn, F., Leifeld, J., Böhl, J., Zimmermann, S., Soliva, R. & Kienast, F. 2008. Effects of land-use change on carbon stocks in Switzerland. *Ecosystems*, 11(6): 895–907. <https://doi.org/10.1007/s10021-008-9168-6>.
- [6] Inauen, N., Körner, C. & Hiltbrunner, E. 2013. Hydrological consequences of declining land use and elevated CO₂ in alpine grassland. *Journal of Ecology*, 101(1): 86–96. <https://doi.org/10.1111/1365-2745.12029>.
- [7] Adane, Z.A., Nasta, P., Zlotnik, V. & Wedin, D. 2018. Impact of grassland conversion to forest on groundwater recharge in the Nebraska Sand Hills. *Journal of Hydrology: Regional Studies*, 15: 171–183. <https://doi.org/10.1016/j.ejrh.2018.01.001>.
- [8] Tattoni, C., Ianni, E., Geneletti, D., Zatelli, P. & Ciolli, M. 2017. Landscape changes, traditional ecological knowledge and future scenarios in the Alps: A holistic ecological approach. *Science of The Total Environment*, 579: 27–36. <https://doi.org/10.1016/j.scitotenv.2016.11.075>.
- [9] Hunziker, M. & Kienast, F. 1999. Potential impacts of changing agricultural activities on scenic beauty – a prototypical technique for automated rapid assessment. *Landscape Ecology*, 14(2): 161–176. <https://doi.org/10.1023/A:1008079715913>.

3 Good practices for a sustainable future

Addressing the causes of migration – and enhancing its benefits

- [1] UNDP (United Nations Development Programme). 2017. *Uganda's contribution to refugee protection and management: Summary of study*. Kampala, Uganda, United Nations Development Programme. [http://www.ug.undp.org/content/dam/uganda/docs/UNDPUG17-Uganda%20Contribution%20to%20Refugee%20Hosting-Study%20Summary%20\(2\).pdf](http://www.ug.undp.org/content/dam/uganda/docs/UNDPUG17-Uganda%20Contribution%20to%20Refugee%20Hosting-Study%20Summary%20(2).pdf).

Local solutions create opportunities for sustainable livelihoods in Kosovo

UNDP (United Nations Development Programme) Kosovo. No date. Local-level response for employment generation and integrated territorial development – completed: Project summary (web page). http://www.ks.undp.org/content/kosovo/en/home/operations/projects/poverty_reduction/Interdev.html.

UNDP (United Nations Development Programme) Kosovo. No date. Integrated territorial development 2 (InTerDev 2): Project summary (web page). http://www.ks.undp.org/content/kosovo/en/home/operations/projects/poverty_reduction/integrated-territorial-development-2--interdev-2-.html.

Municipalities of Dragash/Dragaš and Shtërpçë/Štrpce, Kosovo. 2014 and 2017. Territorial employment pacts. Dragash/Dragaš and Shtërpçë/Štrpce, Kosovo, Municipalities of Dragash/Dragaš and Shtërpçë/Štrpce.

Kosovo Agency of Statistics. 2018. *Labour Force Survey 2017*. Series 5: Social Statistics. Pristina, Kosovo, Kosovo Agency of Statistics. <http://ask.rks-gov.net/media/3989/labour-force-survey-2017.pdf>.

Reducing outmigration through legislation

- [1] Parliament of Georgia. 1999. *Law of Georgia on the socio-economic and cultural development of high mountain regions*, # 2054. Tbilisi, Georgia, Parliament of Georgia. <https://matsne.gov.ge/en/document/view/19210>.
- [2] Mountain Development Centre. 2017. [Study of interim results of the enforcement of the Law of Georgia on the Development of High Mountain Regions] (in Georgian). Tbilisi, Georgia, Mountain Development Centre.
- [3] Parliament of Georgia. 2015. *Law of Georgia on the development of high mountain regions*, # 4036. Tbilisi, Georgia, Parliament of Georgia. <https://matsne.gov.ge/en/document/view/2924386>.
- [4] UNDP (United Nations Development Programme) Georgia. No date. Fostering regional and local development in Georgia: Assistance to the Government of Georgia in the implementation of a systemic reform of regional and local governance (web page). <http://www.ge.undp.org/content/georgia/en/home/projects/fostering-regional-and-local-development-in-georgia.html>.
- [5] World Bank Group. No date. GDP (current US\$), Georgia (dataset). <https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=GE>.

BBC (British Broadcasting Corporation). 2013. *World's most dangerous roads: Georgia* (television documentary). <http://www.bbc.co.uk/programmes/b01kwgsp/episodes/guide>.

UNDP (United Nations Development Programme) Georgia. 2013. *Economic and social vulnerability in Georgia: 2012*. Tbilisi, Georgia, UNDP Georgia. <http://www.ge.undp.org/content/georgia/en/home/library/poverty/economic-and-social-vulnerability-in-georgia--2012.html>.

UNDP (United Nations Development Programme) Georgia. 2015. *Citizens' satisfaction with public services in Georgia*. Tbilisi, Georgia, UNDP Georgia. http://www.ge.undp.org/content/georgia/en/home/library/democratic_governance/citizen-satisfaction-with-public-services-in-georgia--2015.html.

Swiss mountain villages work to become more attractive to young people

Jugend im Berggebiet. 2018. *Jugendfreundliche Bergdörfer* (website). Bern, Switzerland, Jugend im Berggebiet. <http://www.jugend-im-berggebiet.ch/>.

SAB (Schweizerische Arbeitsgemeinschaft für die Berggebiete). 2017. *Montagna* 10/2017. Bern, Switzerland, SAB. <http://www.sab.ch/montagna/archiv.html>.

Spieß, U. 2015. Jugendliche in den Berggebieten: Bleiben oder gehen? – Der Jugend eine Zukunft in den Bergen geben! Bern, Switzerland, Schweizerische Arbeitsgemeinschaft für Berggebiete. http://www.jugend-im-berggebiet.ch/wp-content/uploads/2015/09/Bericht_Gesamtprojekt_JidBG.pdf.

Promoting financial literacy to secure the benefits of labour migration

- [1] UNFPA (United Nations Population Fund) Nepal. 2017. *Population situation analysis of Nepal*. Kathmandu, Nepal, UNFPA Nepal. <https://nepal.unfpa.org/en/publications/population-situation-analysis-nepal>.
- [2] Government of Nepal. 2016. *Labour migration for employment: A status report for Nepal: 2014/2015*. Kathmandu, Nepal, Ministry of Labour and Employment. https://www.ilo.org/kathmandu/whatwedo/publications/WCMS_500311/lang--en/index.htm.
- [3] Sridhar, T. & Sanjaya, A. 2017. Remittances and household expenditure in Nepal: Evidence from cross-section data. *Economies*, 5(2): 16. <https://doi.org/10.3390/economies5020016>.

SaMi (Safer Migration Project). No date. *Safer Migration Project* (website, offers access to publications). <http://www.sami.org.np/>.

Helvetas. No date. *Helvetas* (website). <https://www.helvetas.org/>.

Helvetas. No date. Governance, peace & migration (web page). <https://www.helvetas.org/en/nepal/what-we-do/our-topics/governance-peace-migration>.

Immigrants catalyse the adoption of sustainable land management

- [1] Ramdhani, L., Todd, J. & Walsh, P.P. 2011. *Patterns of conflict in the Great Lakes region*. UCD Geary Institute Discussion Paper Series. Geary Working Paper 2011/18. Dublin, Ireland, University College Dublin, Geary Institute for Public Policy. <https://ideas.repec.org/p/ucd/wpaper/201118.html>.
- [2] Uganda Bureau of Statistics. 2017. *Kabale District*. The National Population and Housing Census 2014, Area Specific Profile Series. Kampala, Uganda, Uganda Bureau of Statistics. <https://www.ubos.org/wp-content/uploads/publications/2014CensusProfiles/KABALE.pdf>.
- [3] Mulumba, D. 2014. *Humanitarian assistance and its implication on the integration of refugees in Uganda: Some observations*. Research Article. Kampala, Uganda, Makerere University. <http://makir.mak.ac.ug/handle/10570/4077>.
- [4] Newbury, C. 1992. Rwanda: Recent debates over governance and rural development. In G. Hyden & M. Bratton, eds. 1992. *Governance and politics in Africa*. Boulder, CO, USA, Lynne Rienner.
- [5] Government of Uganda. 2006. *Acts Supplement No. 8, 4th August, 2006: Acts Supplement to The Uganda Gazette No. 47, Volume XCVIX, dated 4th August, 2006*. Entebbe, Uganda, Government of Uganda.
- [6] Vemuru, V., Araya, Y.Y., Gossa, E.T., Kalumiya, C.K., Nkunda, D.R., Buyinza, F., Okumu, J. & Klose, K.H. 2016. *An assessment of Uganda's progressive approach to refugee management*. Washington, DC, USA, World Bank Group. <http://documents.worldbank.org/curated/en/259711469593058429/An-assessment-of-Ugandas-progressive-approach-to-refugee-management>.

- [7] Bolwig, S. 2002. *Land use change and soil degradation in the southwestern highlands of Uganda*. Washington, DC, USA, International Food Policy Research Institute. <http://ussp.ifpri.info/files/2011/09/pnacy469.pdf>.
- [8] Tukahirwa, J.M. 1995. *Measurement, prediction and social ecology of soil erosion in Kabale district, southwest Uganda* (PhD dissertation). Kampala, Uganda, Makerere University.

4 Turning challenges of migration into opportunities

Recommendations for policy-making

- [1] Foresti, M., Hagen-Zanker, J. & Dempster, H. 2018. *Migration and development: How human mobility can help achieve the Sustainable Development Goals*. ODI Briefing Note. London, UK, Overseas Development Institute and Swiss Agency for Development and Cooperation. <https://www.odi.org/sites/odi.org.uk/files/resource-documents/12421.pdf>.
- [2] United Nations. 2015. *Transforming our world: The 2030 agenda for sustainable development*. New York, NY, USA, United Nations. <https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf>.
- [3] Tasneem, S., Bhagat, R.B., Banerjee, S., Liu, C., Sijapati, B., Memon, R., Thinley, P., Ito, M., Nemat, O. & Arif, G.M. 2019. Migration in the Hindu Kush Himalayan region: Drivers, consequences, and governance. In P. Wester, A. Mishra, A. Mukherji & A.B. Shrestha, eds. *The Hindu Kush Himalaya assessment: Mountains, climate change, sustainability and people*. Cham, Switzerland, Springer Nature Switzerland.
- [4] UNGA (United Nations General Assembly). 2018. *Global compact for safe, orderly and regular migration*. Resolution adopted by the General Assembly on 19 December 2018. New York, NY, USA, UNGA. http://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/73/195.
- [5] ADA (Austrian Development Agency). 2016. *Steps for implementing migration aspects in ADA programs and projects*. Vienna, Austria, ADA. https://www.entwicklung.at/fileadmin/user_upload/Dokumente/Migration/Steps_for_implementing_migration_aspects_in_ADA_programs_and_projects.pdf.
- [6] Wymann von Dach, S., Bracher, C., Peralvo, M., Perez, K., Adler, C. & a group of contributing authors. 2018. *Leaving no one in mountains behind: Localizing the SDGs for resilience of mountain people and ecosystems*. Issue Brief on Sustainable Mountain Development. Bern, Switzerland, Centre for Development and Environment and Mountain Research Initiative. <https://boris.unibe.ch/120130/>.

Glossary

- [1] IOM (International Organization for Migration). 2015. Key migration terms (web page). <https://www.iom.int/key-migration-terms>.
- [2] IOM (International Organization for Migration). 2004. *Glossary on migration: International migration law*. Geneva, Switzerland, IOM. http://publications.iom.int/system/files/pdf/iml_1_en.pdf.
- [3] ADA (Austrian Development Agency). 2016. *Focus paper on migration and development*. Vienna, Austria, ADA. https://www.entwicklung.at/fileadmin/user_upload/Dokumente/Publikationen/Fokuspapiere/Englisch/Focus_on_Migration_and_Development_Oct2016.pdf.
- [4] SDC (Swiss Agency for Development and Cooperation). 2018. *Global Programme Migration and Development: Strategic framework 2018–2021*. Bern, Switzerland, SDC. https://www.eda.admin.ch/dam/deza/en/documents/themen/migration/lay_strategie-migration-and-development_2018-2021_EN.pdf.



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