

Migration and Sustainable Mountain Development

Turning Challenges into Opportunities



Sustainable Mountain Development Series

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Editors: Felicitas Bachmann (CDE), Amina Maharjan (ICIMOD), Susan Thieme (GIUB), Renate Fleiner (CDE), Susanne Wymann von Dach (CDE)

Authors and advisory expert: see list on pp. 63–64

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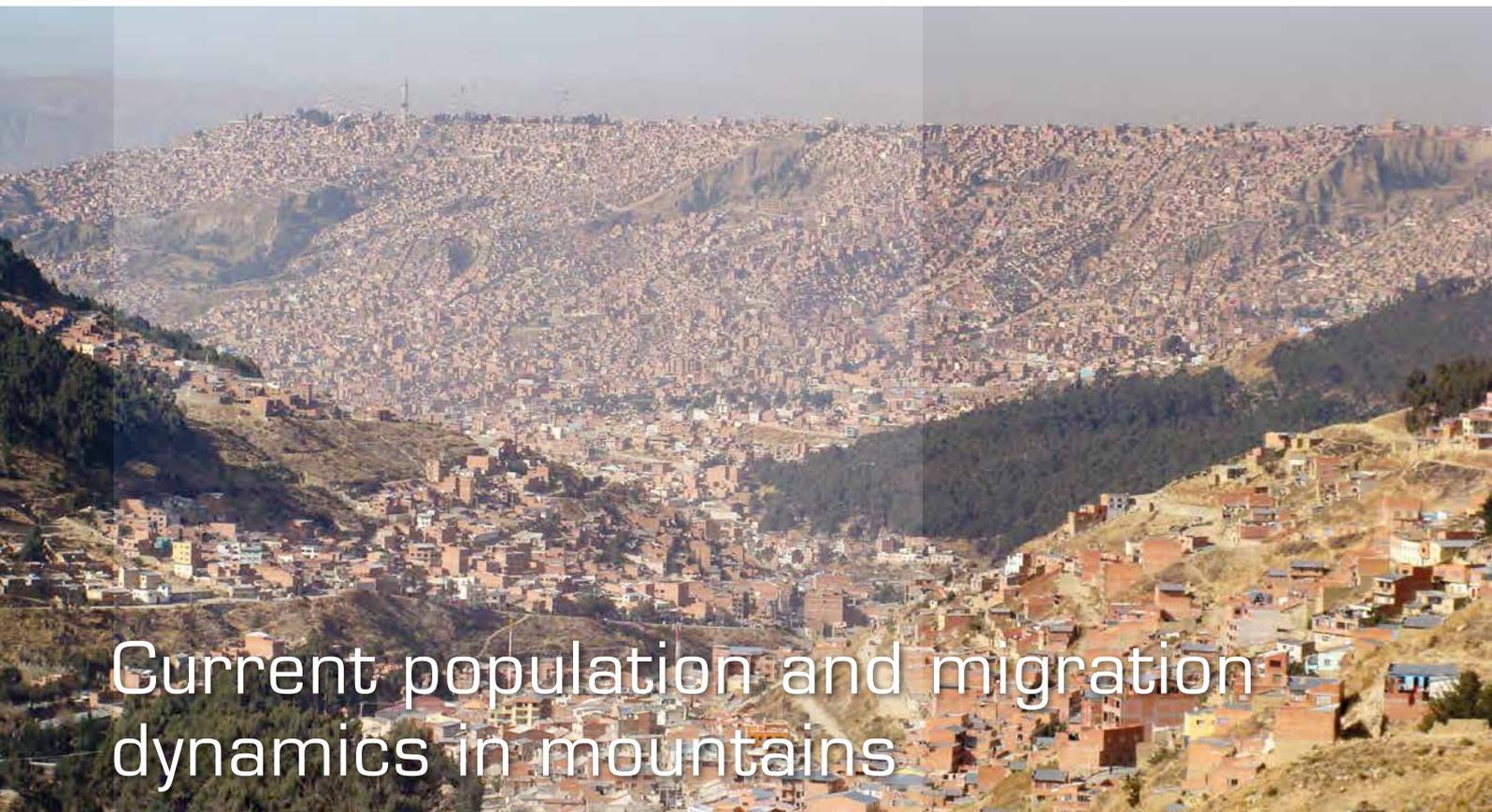
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Cover photo: Providing quality education in mountain areas can help to reduce one factor causing young people to leave their homes in mountains; and should they later decide to migrate, they will be more firmly rooted in their place of origin and better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

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Current population and migration dynamics in mountains

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

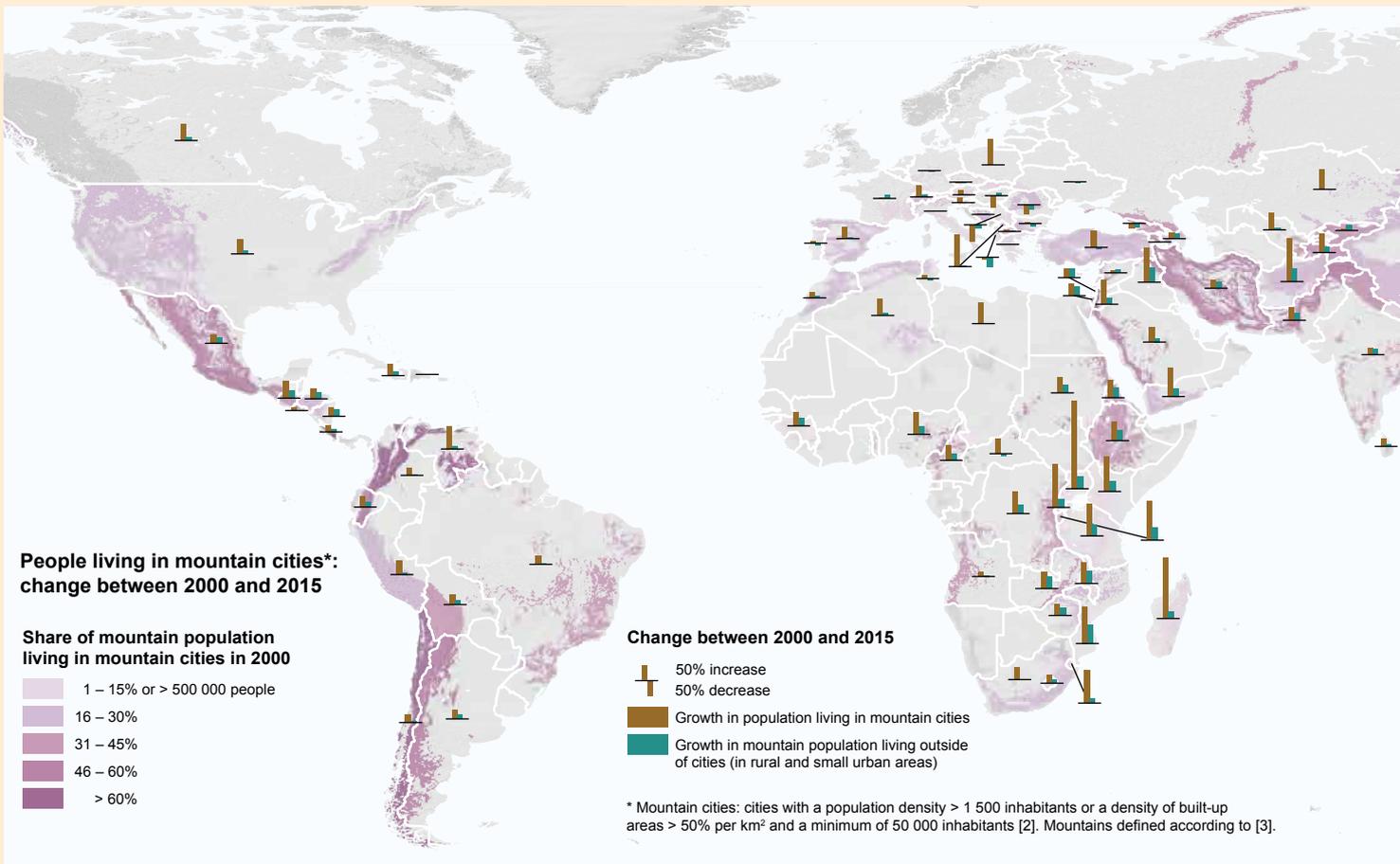
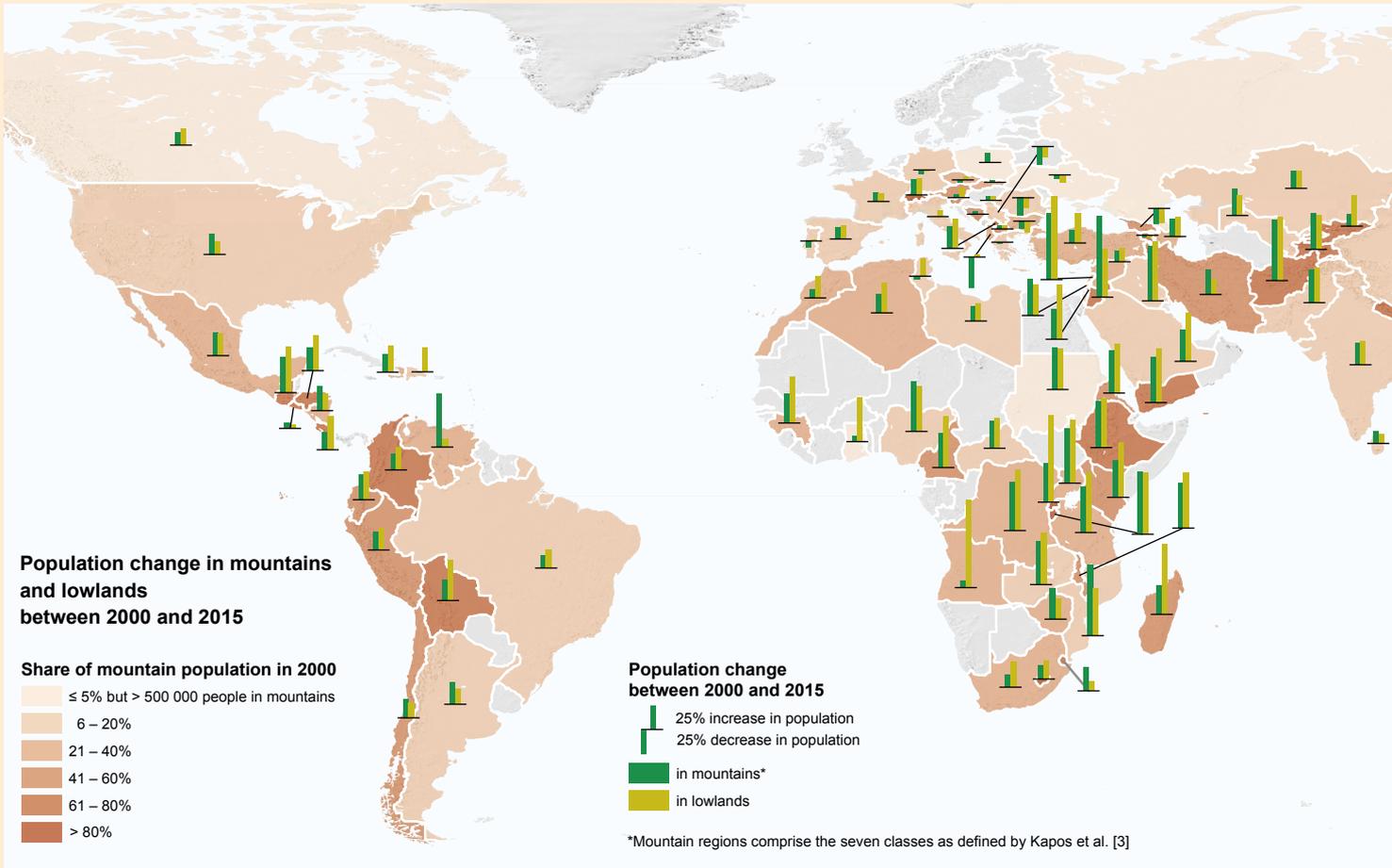
Rural-to-urban migration is contributing to poverty reduction in Bolivia, but it also poses new challenges. La Paz, Bolivia (C. Devenish)

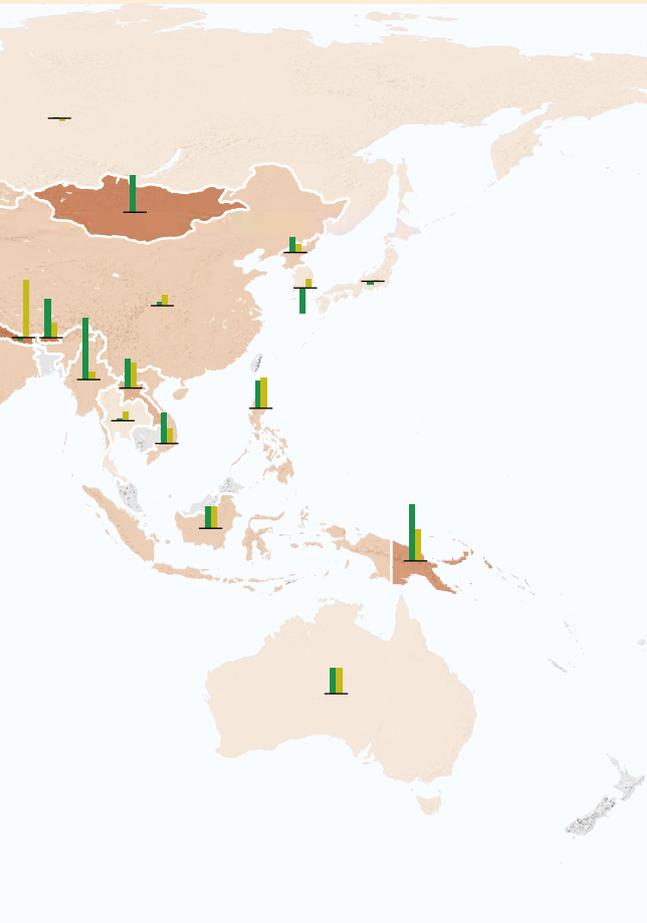
in mountains with the changes in lowland areas of a given country, while Figure 3 compares the population changes in cities and outside cities in mountains (for definition of cities, see Box on p. 15). Despite the differences, we can observe a few trends between 2000 and 2015:

- **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]

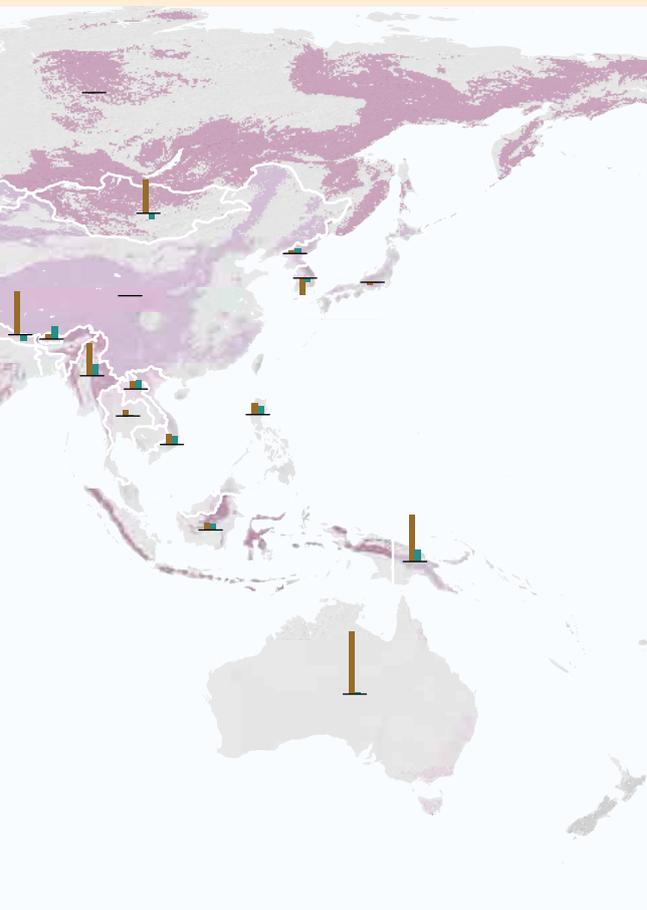


Figure 3. People living in mountain cities: change between 2000 and 2015. Map by Jürg Krauer, Susanne Wymann von Dach and Manuel Abebe. Data source: [2]

Nepal: Migration to mountain cities, lowlands and abroad



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.

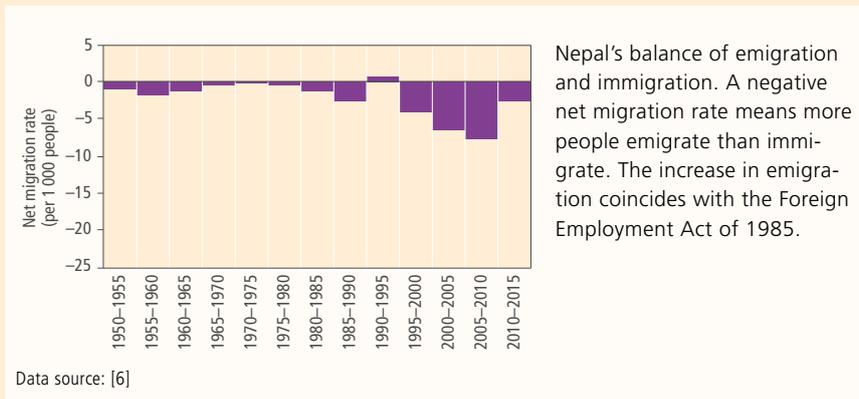
Context

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.

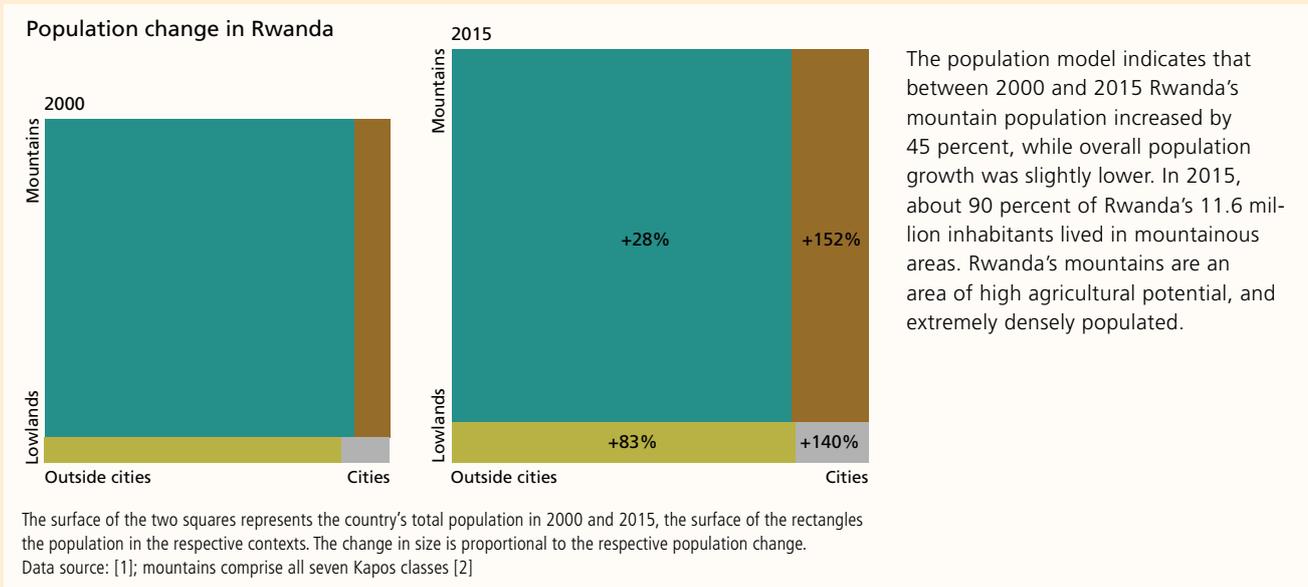
- **Young men represent the largest group of international migrants.** Close to 88 percent of the international migrants are men, mostly between 15 and 29 years old. Members of wealthier families are considerably more likely to migrate than members of poor households. However, the poorer the household, 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



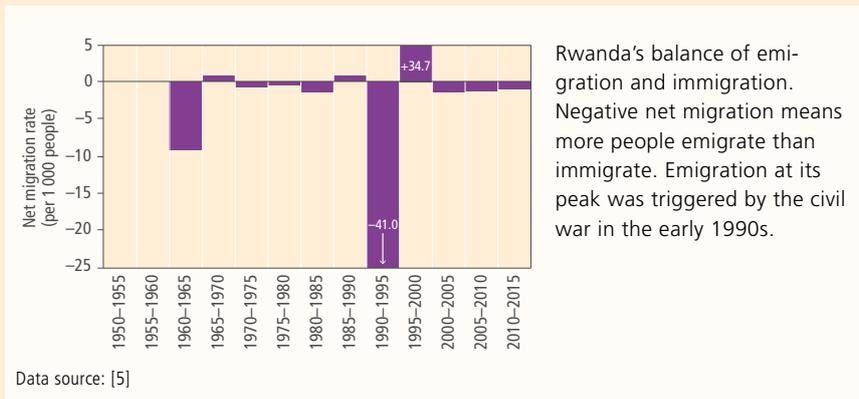
The population model indicates that between 2000 and 2015 Rwanda's mountain population increased by 45 percent, while overall population growth was slightly lower. In 2015, about 90 percent of Rwanda's 11.6 million inhabitants lived in mountainous areas. Rwanda's mountains are an area of high agricultural potential, and extremely densely populated.

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.



Rwanda's balance of emigration and immigration. Negative net migration means more people emigrate than immigrate. Emigration at its peak was triggered by the civil war in the early 1990s.

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

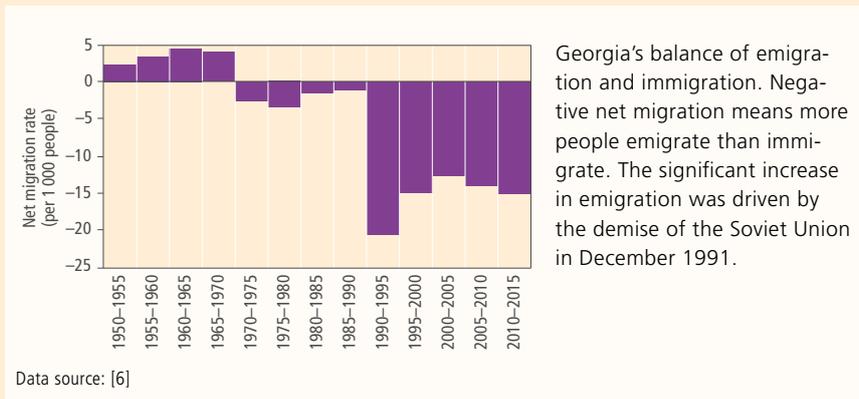


Context

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].



- **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.

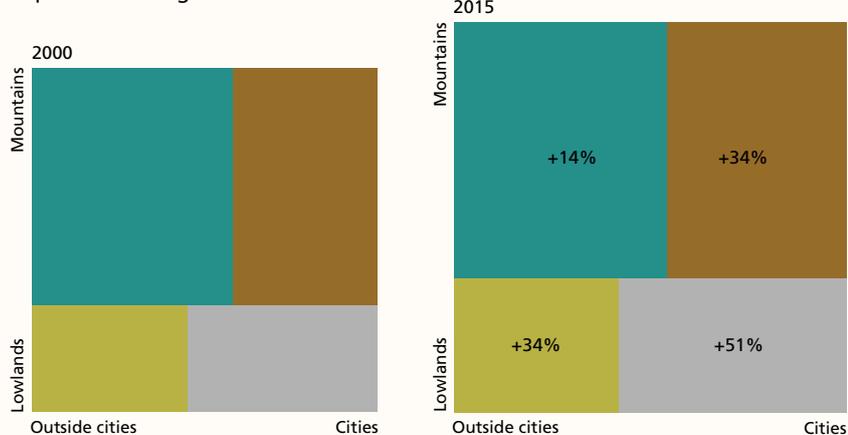
Migration within Georgia

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

Population change in Bolivia



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]

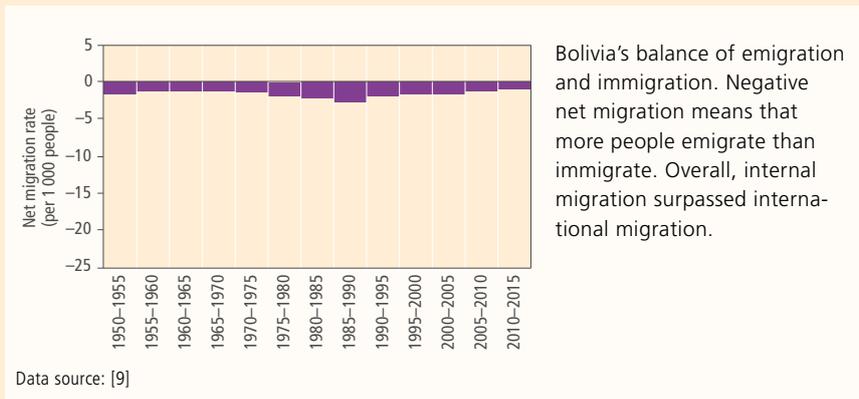
The population model indicates that between 2000 and 2015 Bolivia's mountain population increased by 22 percent – slightly less than overall population growth. In 2015, 66 percent of the country's 10.7 million residents lived in the mountains. There is a general trend of migrating towards cities in lowland areas to the east of the Andes.

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.

Authors and advisory expert

1 The multifaceted realities of migration in mountains

Migration: More than a livelihood strategy for mountain people

Felicitas Bachmann
Centre for Development and Environment (CDE),
University of Bern, Switzerland
felicitas.bachmann@cde.unibe.ch

Amina Maharjan
International Centre for Integrated Mountain Development
(ICIMOD)
Kathmandu, Nepal
amina.maharjan@icimod.org

Susan Thieme
Institute of Geography, University of Bern, Switzerland
susan.thieme@giub.unibe.ch

Susanne Wymann von Dach
Centre for Development and Environment (CDE),
University of Bern, Switzerland
susanne.wymann@cde.unibe.ch

Current population and migration dynamics in mountains

Susanne Wymann von Dach, Felicitas Bachmann, Christoph Bracher, Amina Maharjan, Susan Thieme*

Christoph Bracher
ch.bracher@gmx.ch

2 Understanding outcomes of migration

Opportunities and challenges for mountain communities

Felicitas Bachmann, Amina Maharjan, Susan Thieme*

Migration, multilocality and the question of return in Kyrgyzstan

Susan Thieme*

Asel Murzakulova
Mountain Societies Research Institute (MSRI), University of
Central Asia (UCA), Bishkek, Kyrgyz Republic
asel.murzakulova@ucentralasia.org

New trends in Trans-Himalayan labour mobility

Amina Maharjan*

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Remigration as an opportunity

Raisa Gracheva
Institute of Geography, Russian Academy of Sciences,
Moscow, Russia
gracheva@igras.ru

Thomas Kohler
Centre for Development and Environment (CDE),
University of Bern, Switzerland
thomas.kohler@cde.unibe.ch

Rustam Gakaev
Chechen State University, Grozny, Chechen Republic, Russia
rustam.geofak@yandex.ru

Konstantin Popov
North Ossetia State Nature Reserve, Alagir, Republic of
North Ossetia-Alania, Russia
kostjapopovalagir@mail.ru

In- and outmigration in the context of the quinoa boom

Maurice Tschopp, Sabin Bieri
Centre for Development and Environment (CDE),
University of Bern, Switzerland
maurice.tschopp@cde.unibe.ch, sabin.bieri@cde.unibe.ch

Bianca Binggeli
Helvetas, Switzerland
bianca.binggeli@gmail.com

Elizabeth Jimenez
Postgrado en Ciencias del Desarrollo de la Universidad
Mayor de San Andrés (CIDES-UMSA), La Paz, Bolivia
ejimenez@cides.edu.bo

Gender dimensions of rural–urban migration in Bhutan

Ritu Verma
Tarayana Centre for Social Research and Development and
College of Language and Culture Studies, Royal University
of Bhutan, Thimphu and Trongsa, Bhutan
rvermapuri@yahoo.ca

Land abandonment in the Alps affects ecosystem services

Luis Muheim
Environmental Sciences MSc Programme, Department
of Environmental Systems Science (D-USYS), ETH Zurich,
Switzerland
luis.muheim@gmail.com

3 Good practices for a sustainable future

Addressing the causes of migration – and enhancing its benefits

Felicitas Bachmann, Amina Maharjan, Susan Thieme*

Local solutions create opportunities for sustainable livelihoods in Kosovo

David Svab
UNDP Kosovo
david.svab@undp.org

* These authors' addresses are listed on their first occurrence, under Part 1.

Reducing outmigration through legislation

Nina Shatberashvili
NGO "The Caucasus Network for Sustainable Development
of Mountain Regions" (Sustainable Caucasus), Tbilisi, Georgia
nshatberashvili@sd-caucasus.com

Joseph Salukvadze
Ivane Javakishvili Tbilisi State University, Tbilisi, Georgia
joseph.salukvadze@tsu.ge

Swiss mountain villages work to become more attractive to young people

Peter Herrmann, Deborah Jutzi
Schweizerische Arbeitsgemeinschaft für die Berggebiete
(SAB)
info@sab.ch

Promoting financial literacy to secure the benefits of labour migration

Pascal Fendrich
Helvetas, Switzerland
pascal.fendrich@helvetas.org

Sanat Sapkota
Helvetas, Nepal
sanat.sapkota@helvetas.org

Immigrants catalyse the adoption of sustainable land management

Joy M.B. Tukahirwa
Uganda Landcare Network
j.tukahirwa@infocom.co.ug

Rick Kamugisha
Uganda Landcare Network
rkamu2012@yahoo.com

4 Turning challenges of migration into opportunities

Recommendations for policy-making

Felicitas Bachmann, Amina Maharjan, Susan Thieme,
Susanne Wymann von Dach*

Advisory expert

Thomas Kohler
Centre for Development and Environment (CDE),
University of Bern, Switzerland
thomas.kohler@cde.unibe.ch

* These authors' addresses are listed on their first occurrence, under Part 1.

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/Fokuspaepere/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>.



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