

# Mountains Towers of Life

REGIONAL PERSPECTIVES OF MOUNTAIN SERVICES IN A RIO+20 WORLD

## **AFRICA:** Mountain services as pillars of development

**A**frican mountains are exceptional. Owing to their often volcanic origin – and in contrast to other regions – they harbour the continent’s most fertile soils. Allowing high-yield and high-quality agriculture to thrive, they contribute significantly to food security in the region. Globally consumed cash crops like coffee and tea are also distinct representatives of African mountains and highlands. With 33 million farmers employed in coffee production, mountains are key for the social dimension of development in Africa. Consequently, population density in and around mountains in Sub-Saharan Africa is high – and on the rise.

**M**ountains in Africa often rise as insular towers over the adjacent lowlands. As temperate islands in a harsh landscape, mountains are a site for towns and ongoing urbanization. The water they provide to a continent dominated by arid and semi-arid lands also creates an ecological niche, making mountainous landscapes home to unique biodiversity. This important environmental heritage is increasingly threatened by human encroachment and climate change alike, with little room for escape or adaptation.



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## MIDDLE EAST & NORTH AFRICA: Where water matters

Living in possibly the most arid region of the world, people and ecosystems in the Middle-East and North Africa depend on the water provided by mountains more than others. Not only does water from the mountains supply growing urban centers and agricultural production in the adjacent lowlands, but production of food and timber for construction and energy often only occurs at higher altitudes. Likewise, mountains in the region are hotspots of biodiversity, that together with cultural heritage attract an increasing number of tourists travelling to the mountains for adventure and leisure. Mountains also provide shelter from the heat during summer months, and transhumance in mountains is a commonly observed approach to livestock management in the region.

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## ASIA-PACIFIC: The Third Pole

**D**ue to the gigantic masses of ice and snow accumulated at high altitude in the region, mountains in Asia Pacific are also referred to as “the Third Pole”. The Hindu Kush Himalaya alone is the source of 10 major rivers, with 1.3 billion people depending downstream on its freshwater supply and 3 billion in the river basins. Climate change poses significant risks to people in the region: diminishing or unreliable future water supplies meet rapidly growing populations. This trend is likely to lead to increasing competition for water. At the same time, the emission of greenhouse gases and other climate phenomena such as black carbon in the adjacent lowlands further accelerate the impacts of climate change on snow and ice. In the Himalaya, nearly 50 lakes are already at risk of bursting their banks, threatening tens of thousands of people with the risk of severe flooding. Managing water is the key challenge in the region, because it is needed to meet growing demands for food, renewable energy and people.



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## CENTRAL ASIA: Mountains and people along the Silk Road

Central Asia’s mountain landscapes are influenced by human activities and human diversity. A majority of the mountain communities of Central Asia practice agriculture, principally cultivating cereals and vegetables, gardening, collecting forest products and extensively grazing livestock on a wide range of pastures. Tourism, mining and trade form important economic sectors which have been gathering momentum in the region over the past 20 years. Infrastructure development has likewise been a growing endeavour. All of these activities contribute to the revival of the ancient Silk Road in the modern age of globalization.

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Despite its economic prosperity and cultural diversity, the region is also known for its vulnerability to natural influences. Current climate variability and its impact on natural disasters exacerbate sustainable development challenges in poverty and food security, infrastructure, energy and agriculture. Downstream states with extensive irrigated agriculture and high dependence on external water supplies may suffer the most from a water deficit originating in the mountains.



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Photo (c) 106 travelling

## LATIN AMERICA: Mountains as the backbone of a continent

No other continent is dominated by mountains as much as Latin America. All countries in the region are mountain countries. Not only do all the major rivers like the Amazon originate in the foothills of the Andes, but this gigantic mountain range also shapes landscapes – deserts and rainforests alike. The alpine tundra ecosystem, the Páramo, is one of the most important reservoirs of water, and it also harbours highly endangered flora and fauna. Each year, a growing number of people visit Latin America’s mountains bringing much needed income to remote areas. While water is also one of the key management challenges in the region, other aspects are equally relevant, not least migration from the mountains to urban centers. In Peru and Bolivia alone, an estimated 14 million people are considered indigenous – many of whom live in the highlands. With climate change, climate variability may change beyond the limits of past experience.

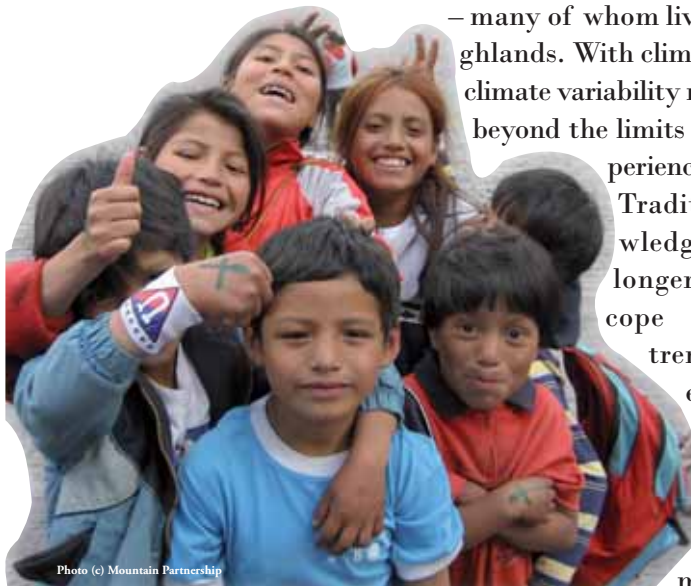


Photo (c) Mountain Partnership

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Photo © Mountain Partnership

## EUROPE & NORTH AMERICA: Mountains between Refuge and Playground

**W**ith rising economic development, people increasingly go to the mountains in search of recreation and leisure. Within this paradigm shift, mountain people struggle to maintain their cultural identity and independence. In Europe and North America, the economic importance of mountain-based tourism continues to increase with winter and summer activities rivalling in importance. In addition, mountains often provide freshwater for distant urban and economic centres and are increasingly looked at as sources of large-scale renewable energy in the form of hydropower. With economic opportunities and diversity being limited, younger generations leaving their valleys in search of higher education and employment often migrate away from the places they came from – sometimes, permanently.

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