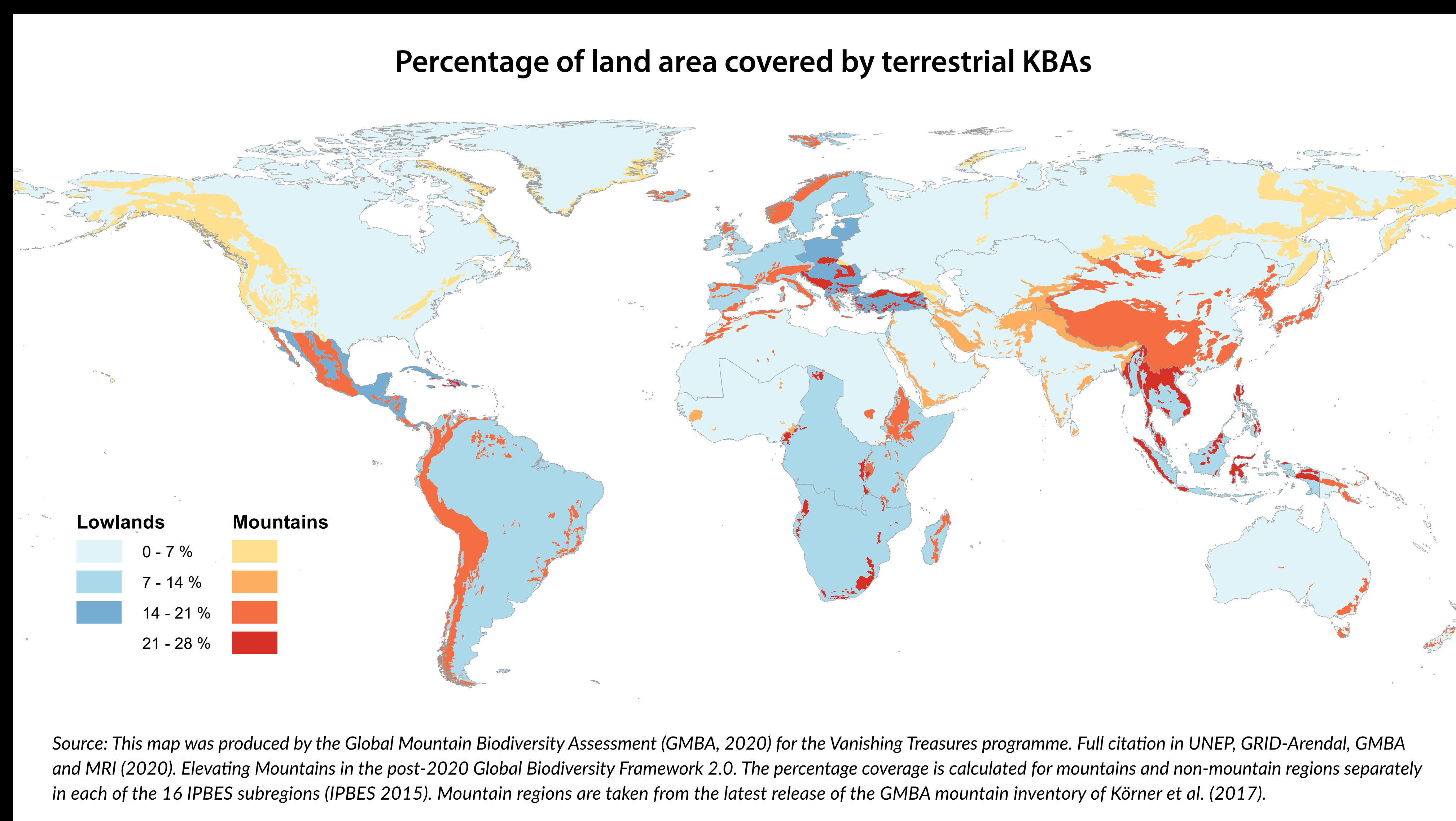


THE IMPORTANCE OF MOUNTAINS FOR GLOBAL BIODIVERSITY

IMPLICATIONS FOR THE POST-2020 GLOBAL BIODIVERSITY FRAMEWORK OF THE CONVENTION ON BIOLOGICAL DIVERSITY



Mountains, their biodiversity, and the vital ecosystem services they provide are essential for the well-being of people worldwide. Occupying a considerable part of the world's land surface, mountains contribute greatly to the terrestrial biodiversity on Earth. They host a diverse range of species, including many endemic, rare, and threatened ones, and can act as refugia. Mountains support and directly deliver many ecosystem services, including supplying water, regulating climate and air quality, providing food and medicinal resources, and safeguarding against risks associated with natural hazards, in addition to providing sociocultural benefits.



Key Biodiversity Areas (KBA) are "sites contributing significantly to the global persistence of biodiversity". Approximately 30 per cent of the total land area identified as terrestrial Key Biodiversity Areas (KBAs) is located entirely or partly within mountain areas, which are highlighted in orange-red colours. Blue colours indicate the percentage of land covered by KBAs in non-mountain regions.

THREATS TO MOUNTAIN BIODIVERSITY

Mountains are exposed to multiple stressors and processes of global change that threaten biodiversity and damage ecosystems. Climate change – through rapid changes in temperature and in the amount and frequency of precipitation – is a leading driver of drastic changes observed at high elevations, including glacier retreat, snow cover changes, and permafrost thawing. Below the treeline, large-scale land-use change and other drivers such as the spread of invasive species, overexploitation of resources, and deforestation are causing cascading effects on mountains' social-ecological systems. When these factors interact, they can irreversibly affect mountain ecosystems and biodiversity, from changing the dynamics of ecosystems by altering species distributions and population sizes to causing species to go extinct. All of these changes compromise the capacity of mountains to sustain key ecosystem services and exacerbate disaster risks.

POLICY RECOMMENDATIONS TO ADDRESS THE PROBLEM

Ambitious objectives need to be set for the protection of mountain ecosystems within the Convention on Biological Diversity's Post-2020 Global Biodiversity Framework, recognizing the importance of these ecosystems for global biodiversity and the provision of important ecosystem services and as reservoirs of genetic resources. Mountains in general and Key Biodiversity Areas within mountain regions in particular need protection to remain strongholds of biodiversity and offer long-term refugia for species along elevation gradients. Understanding and addressing the manifold human-induced pressures, most of all land-use shifts and climate change, on mountain ecosystems and their biodiversity is vital to ensure their long-term integrity, as well as their capacity to support the lives of millions of people. This requires coordinated mitigation and conservation measures to be implemented by relevant actors, from mountain communities and civil societies to local and regional authorities.

Mountains offer numerous opportunities for ecosystem-based adaptation (EbA) and sustainable responses to climate change, greatly benefiting from local and traditional knowledge. Effective solutions require policy coherence and complementarity with efforts to reduce greenhouse gas emissions and limit warming. Solutions that hold great potential include expanding protected areas so they connect with each other and cover elevation gradients, enabling species to migrate to higher altitudes. The adoption of locally relevant conservation, restoration, and management measures is also important.