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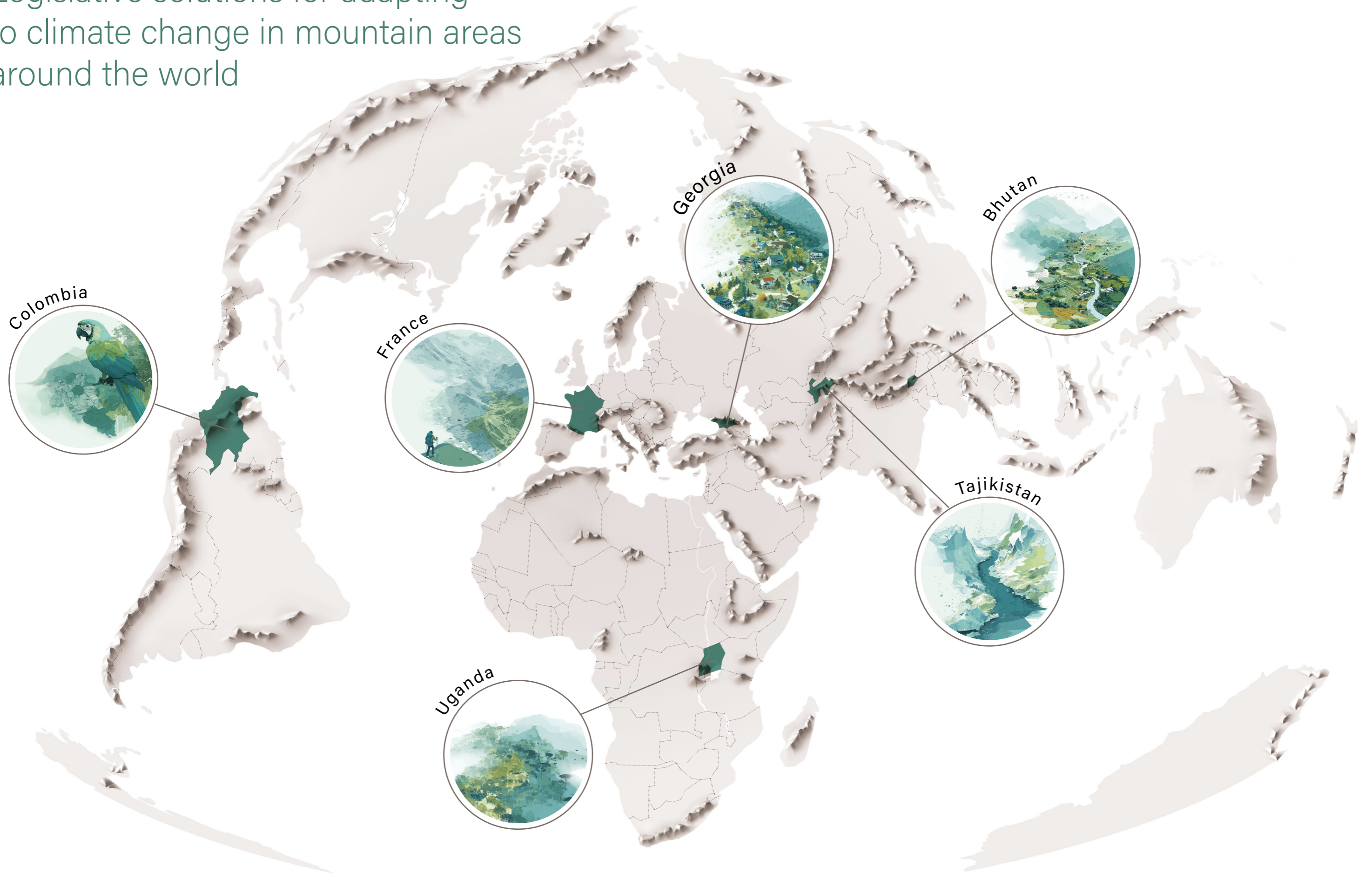
Adapting to climate change in the mountains

Legislative solutions from around the world

Mountain areas are home to 1.2 billion people, host 30% of the world's key biodiversity areas and provide freshwater for half of the global population. They are also under threat from climate change, which causes melting glaciers, increased natural hazards and changing precipitation patterns that affect food supply and overall health and safety. As these challenges intensify, working to protect the natural environment and the people living there will become all the more vital. Parliamentarians can take action through different functions, including by introducing legislation that responds to the pressing needs of mountain areas in the wake of climate change. Legal instruments provide more leverage in responding to climate change compared to technical fixes, highlighting the importance of parliamentary action. This brief explores different laws from around the world, which may serve as inspiration for new, effective climate-responsive policies.



Legislative solutions for adapting to climate change in mountain areas around the world



Case studies

Bhutan

Water Act of Bhutan, 2011

Summary

The Water Act established a legal framework to conserve and manage water resources throughout the country in an economically viable, socially equitable and environmentally sustainable way.

Who might be interested in this law: Members of Parliament (MPs) looking to manage the changing availability of water resources in an equitable and sustainable way.

Key provisions

It created requirements for water use (for drinking and irrigation, and in forests and wetlands), as well as stipulating that payments for watershed conservation must be shared by both upstream inhabitants and downstream users. The Water Act also created an independent authority to implement it and river basin committees to assist with oversight, planning and regulation. It further paved the way for the National Integrated Water Resources Management Plan, which helped respond to concerns about local water shortages, river basin management plans, stakeholder workshops to harmonize water tariffs, and a global environment facility-funded project on advancing climate resilience in the water sector.

Legislative process and implementation

The Water Act was originally introduced in 2010 and formally passed by parliament in 2011. The legislation faced strict scrutiny from parliament, and required 57 amendments and referral to a joint committee to reconcile House differences. There were also local stakeholder concerns raised about the Act, namely on preserving the right to water for all citizens. However, it ultimately passed due to cross-party support on the notion of water governance and conservation, expert input from different ministries and stakeholders, and institutional backing, which welcomed clarity in the regulation of water resources.

Challenge:

Reduced **water** availability from mountain rivers

68% of irrigated agricultural areas in lowlands depend on essential runoff contributions from the mountains.

Mountains also provide freshwater for more than half of the global population.



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Colombia

Law No. 1930 on páramos, 2018

Summary

Páramo, a unique tropical Andean wetland ecosystem, is vital for biodiversity, water provision and agriculture in Colombia. Law No. 1930 was introduced to establish guidelines for their preservation, restoration and sustainable use, and as tools for knowledge generation.

Who might be interested in this law: MPs from countries with natural ecosystems that are not currently protected areas, or that come into conflict with other economic activities.

Key provisions

The law came as a follow-up to a 2011 ban on mining activities in páramos, and responded to conflicts with the existing policy by providing a long-term legal and financial framework for ecosystem management. The law continues the ban on all mining activities and introduces sustainable agricultural guidelines.

Legislative process and implementation

The enactment of the law marked an important step towards protecting Colombia's páramo ecosystems, reflecting growing recognition of their ecological value. Although the process faced challenges, particularly due to the economic importance of mining as a source of revenue, jobs and national development, the legislation ultimately passed thanks to strong public support and the efforts of environmental organizations to stop the expansion of mining. In practice, the law has provided an effective legal framework for reducing mining contracts in páramo areas.

Challenge:

Ecosystem preservation

Mountains host 25 of the world's 34 biodiversity hotspots, which are threatened by resource extraction, mining and unsustainable agricultural practices.



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Tajikistan

Law No. 2026 on the protection of glaciers, 2024

Summary

The law on the protection of glaciers defines a state policy for protecting glaciers, as well as acknowledging their importance from a legal, economic and organizational perspective.

Who might be interested in this law: MPs from countries with glaciers and interested in protecting them in a comprehensive manner.

Key provisions

In the law, glaciers are defined as the property of the State, and it is thus a state duty to protect them. It further maps out how it will preserve them, such as by enhancing monitoring, creating a state-level policy, developing standards and technical regulations, limiting activities in glacier zones, and other specific interventions. This includes empowering scientific institutions to carry out research on glaciers that factors in the impact of climate change. By clearly articulating responsible bodies for this work, it allows scientific institutions to organize and systematize their work with a clear mandate from the government. As a result of this law, the Glacier Protection Fund was also established to pursue the aforementioned work.

Legislative process and implementation

As the first law introduced on glacier protection, it was initially not evident why there was a need to introduce such a law in Tajikistan. However, parliamentarians recognized the complementarity of this law with the country's priorities on water and energy production, helping to showcase it as a unique opportunity to set precedents.

Challenge:

Glacier preservation in the wake of climate change

The **large majority** of tropical and low-lying **glaciers** are **expected to disappear** by **2100** due to global warming, putting the world's water supply and many ecosystems at risk.



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Georgia

Law of Georgia on Development of High Mountainous Regions (No. 4036-RS), 2015

Summary

This law works to improve the socio-economic problems of inhabitants of mountains by providing financial benefits to improve well-being, raise living standards, promote employment and, indirectly, prevent out-migration.

Who might be interested in this law: MPs from countries with populations living in mountain areas who may face economic challenges and impacts from climate change.

Key provisions

Recognizing that the socio-economic barriers to people living in mountain areas was causing out-migration and increased financial burden on residents, the law aims to directly address these issues with supplementary income. Permanent residents of mountain areas receive supplements and 50% of the cost of electricity is reimbursed. There are additional supplements provided to medical personnel, teachers and sports coaches, as well as families with children and those who reach retirement age (a 20% supplement to the state pension).

Legislative process and implementation

This law aligned with an overarching strategy and action plan for the development of highland settlements, which aimed to improve living and working conditions and promote socio-economic development. The law is the tool to implement these goals for socially and economically vulnerable communities and enhance the development of mountain areas and the country overall. The law has been followed up by other specific measures, such as ordinances for promoting entrepreneurial activities and tourism or Georgia's Forest Code, which target other specific challenges and complement the legislation.

Challenge:

Lack of economic opportunities, infrastructure and sustainable development challenges in mountain communities

346 million rural mountain people are **vulnerable to food insecurity**.



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Uganda

National Environment Act, 2019

Summary

This National Environment Act, 2019, provides a legal framework for environmental issues, including climate change. It designates an authority to determine the mountain areas that are at risk of environmental degradation and thus identifies a lead agency responsible for restoration or reforestation. It stipulates further guidelines on sustainable land use practices in hilly areas.

Who might be interested in this law: MPs looking to incorporate mountain-specific management plans in broader environmental policies.

Key provisions

Although the Act covers broad environmental management in Uganda, it includes three sections that have specific regulations for the sustainable management of mountain areas. This includes the identification of at-risk areas, the requirement for a lead agency to manage restoration, reforestation and afforestation, and the need for guidelines for sustainable land use practices.

Legislative process and implementation

The Act provides specific provisions for operationalizing the mountain sections of the law, but does not thoroughly integrate measures to tackle the impacts of climate change.

Challenge:

Environmental degradation in mountain forests



Mountains deliver **essential ecosystem services**, including water regulation, carbon storage and habitats for unique **biodiversity** and **agrobiodiversity**. Disturbances to these systems threaten ecosystem health and the well-being of millions of people who rely on mountains for **water, food, energy** and **cultural** identity.



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France

Law No. 85-30 on the development and protection of mountains and Law No. 2016-1888 on the modernization, development and protection of mountain territories, 2016

Summary

This law designates mountains as areas of national interest and focuses on curbing construction in mountain areas, preserving agricultural land, protecting water bodies, and balancing tourism development with local interests and the vulnerability of the area to climate change.

Who might be interested in this law: MPs from countries with mountain tourism activities who want to balance economic development with preservation.

Key provisions

Law No. 85-30 was the first territorial law on mountains in France, and it provided the right to regulatory adaptation and paved the way for specific policies for mountain ranges. As such, it is responsible for many legislative and regulatory measures that extend to urban planning, tourism, agriculture, risk prevention, public services, taxation and the status of seasonal workers.

Legislative process and implementation

Enacting this law required a balance between ensuring that different French territories were treated equally while allowing for legitimate differentiation between the issues faced. Further, embedding mountain-specific needs into policies across different sectors was a challenge that had to be addressed. The law is mainly implemented through mountain policies with participatory governance from parliamentarians, local representatives and non-governmental organizations within the designated committee for spatial planning, development and protection of each massif, who are represented in the national council for mountains. There are specific spatial planning and development schemes and climate adaptation plans for each massif, with specific funding programmes that combine funding from the national and regional levels. The law also designates state services such as a regional prefect for coordination and massif commissions.

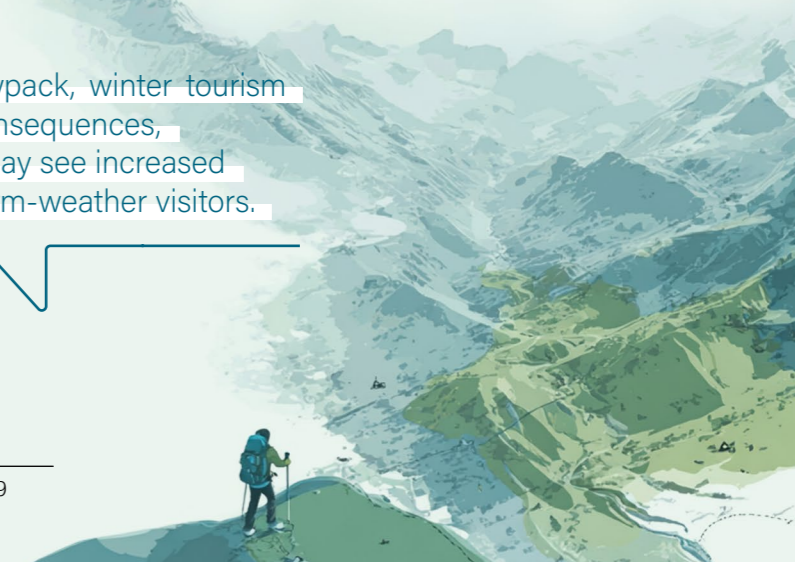
Challenge:

Balancing **economic development** with preservation in the mountains

With declining snowpack, winter tourism will face negative consequences, but the mountains may see increased opportunities for warm-weather visitors.



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These laws provide a brief snapshot of legislative action taken to support mountain ecosystems and communities in the wake of climate change. Targeting different sectors, these examples aim to provide inspiration and resources to continue parliamentary action in all countries with mountain areas to protect mountain ecosystems and support constituents living there. For further resources on climate change in mountain areas and actions for parliamentarians, you can consult the Inter-Parliamentary Union (IPU) Issue Brief “[Responding to climate change in the mountains: Opportunities for parliamentarians to act](#)”.

This brief was developed in collaboration with the Adaptation at Altitude programme of the Swiss Agency for Development and Cooperation and the IPU. Adaptation at Altitude provides guidance to policymakers on the risks that mountain communities face and collaborates with the IPU to ensure that parliamentarians have access to resources to support adaptation in their countries.

The case studies were developed in collaboration with contributors from the countries referenced (Kayumov Abdulhamid, Mariam Devidze, Nicolas Gouvernel, Carlos Sarmiento). We would also like to acknowledge the contributions of parliaments that provided valuable inputs to this brief.

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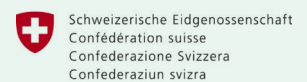
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Graphic design: Carlyne Daniel (Zoï Environment Network)



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With financial contribution of



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