

Albania's path to climate resilience

The National Adaptation Plan

The NAP aims to reduce climate risks across Albania by strengthening infrastructure and institutional and technical capacities for the long-term integration of Climate Change Adaptation into national planning. Covering the period 2026–2036, it focuses on five priority sectors highly vulnerable to climate change — agriculture and forestry, tourism, energy, transport, and urban development.

PRIORITY SECTORS HIGHLY VULNERABLE TO CLIMATE CHANGE



Albania NAP prioritizes a total of 66 adaptation measures, with an estimated implementation cost of USD 9.8 billion for the whole period (= EUR 8.4 billion). The cost of inaction, however, would be far greater: without adaptation, Albania could face climate-related losses exceeding USD 17 billion.

These include:

SOFT MEASURES	Soft measures, such as capacity building, planning tools, and financial incentives, which strengthen governance and adaptive capacity
GREEN MEASURES	Green measures, which use ecosystem restoration and nature-based solutions to reduce risks
GREY MEASURES	Grey measures, referring to engineered or technological solutions that protect critical infrastructure.

These interventions will enhance resilience, support sustainable growth, and align national priorities with global adaptation goals.

Transport in Albania

Opportunities and challenges

Road transport is Albania's dominant mode, carrying most passengers and freight, with a growing number of vehicles per 1,000 inhabitants between 2010 and 2022. Recent investments have modernized main state roads, linking major cities with new or improved carriageways, though many rural roads remain in poor condition.

Rail transport has sharply declined, now accounting for less than 1% of passenger traffic. In 2021, only 224 km of railway were operational, with low speeds and irregular service. Despite this, new projects such as the Tirana–Durrës line with airport connection and proposed links to Kosovo and Greece aim to revitalize the network and support low-carbon mobility.

Maritime transport is vital for trade: in 2022, 68% of exports and 52% of imports moved by sea. The Port of Durrës handles 92% of freight, with a capacity of 4 million tons annually. Other key ports include Vlorë, Shëngjin, and Sarandë.

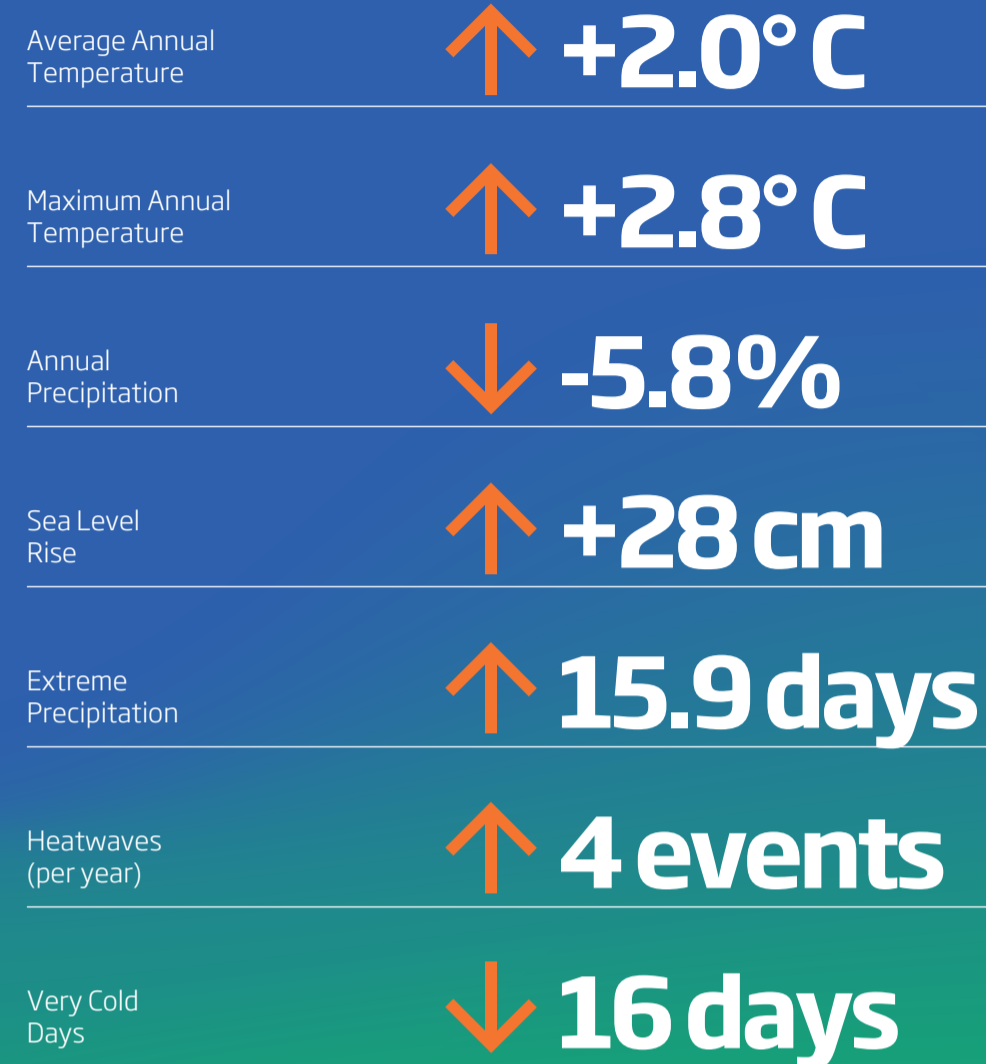
Moreover, **air transport has grown significantly**, with “Mother Teresa” International Airport serving as the only functional international gateway, handling about 1 million passengers per year. The airport has a strategic position right in the centre of Albania, closely located to Tirana and the Durrës port.

While **connectivity and infrastructure** have improved, significant gaps remain to ensure the transport sector's **efficiency, sustainability, and resilience:**

- **Improving infrastructure quality and maintenance**, particularly in rural and secondary roads.
- **Revitalizing the railway network** to enhance regional and low-carbon connectivity.
- **Modernizing ports and logistics systems** to boost maritime efficiency and sustainability.
- **Expanding air transport capacity** while managing environmental and safety standards.
- **Strengthening multimodal integration** and governance to build a modern, resilient transport system.

National climate projections

Climate projections for Albania by 2050 reveal a clear pattern of rising temperatures, declining precipitation, and increasing frequency of extreme events across all emission scenarios.



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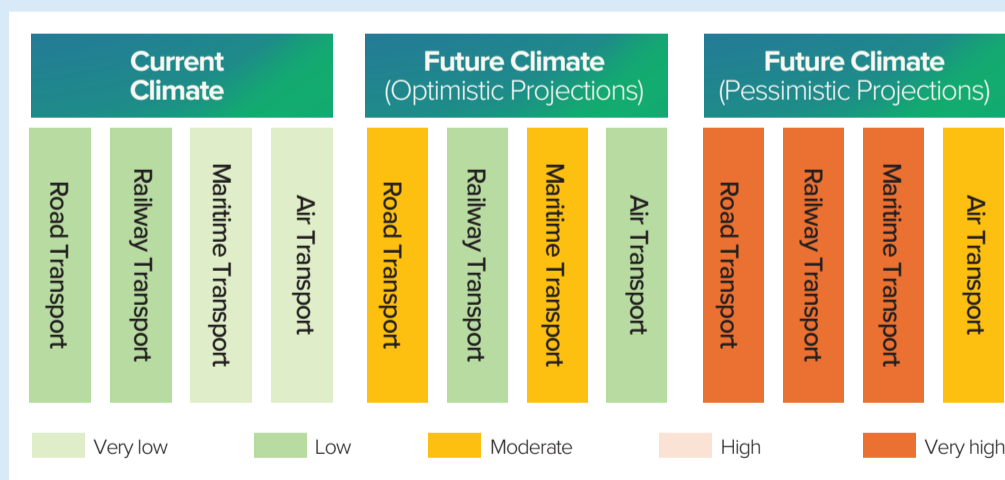
Transport in Albania's National Adaptation Plan

Building a sustainable and climate resilient sector in Albania



How does climate change affect the Albanian Transport sector? Risks and vulnerabilities

The risk and vulnerability assessment of the transport sector considers four subsectors, **(i) road transport, (ii) railway transport, (iii) maritime transport, and (iv) air transport.**



Climate change is putting Albania's transport system under growing pressure. **Roads and railways**, which carry most passengers and goods, **are highly exposed to floods, landslides, and erosion from increasingly intense rainfall.** In pessimistic projections, risks rise to very high levels, threatening the country's most vital connections.

Railways and maritime transport are also vulnerable to **heatwaves**, which strain outdated infrastructure and equipment, while **sea level rise** poses a serious **threat to ports and coastal facilities.** Air transport, though less directly affected, remains important for tourism and the wider economy.

The sector's resilience depends on how quickly strategies and investments are put into action. Upgrading infrastructure, especially expanding and modernizing the railway network, would significantly boost Albania's adaptive capacity and help secure a safer, more reliable transport system for the future.

Transport sector Adaptation Measures & budget overview

In the transport sector, there are **7 priority measures, most of which are strategic and planning-oriented**, reflecting the sector's need to systematically integrate climate resilience into transport planning and infrastructure development. These interventions aim to strengthen Albania's transport network against climate risks, enhance safety and reliability, and promote the adoption of sustainable and nature-based solutions to ensure long-term connectivity and resilience.

Each measure under the NAP is supported by a comprehensive implementation framework that includes:

- A defined **budget and funding sources**
- **Institutional roles and responsibilities**
- **Detailed sub-activities** for implementation
- **Monitoring indicators** to track progress and impact

Within this framework, the transport sector's priority actions consist of:

- Strategic and planning measures**
Focus on regular vulnerability and risk assessments for road infrastructure to identify and prioritize resilience needs.
- Sustainable road management**
Apply bio-engineering and geological studies to prevent erosion, flooding, and landslides in high-risk zones.
- Urban mobility planning**
Promote sustainable and climate-resilient urban transport systems through updated mobility plans.
- Nature-based and green solutions**
Integrate ecosystem-based approaches into infrastructure design and maintenance to enhance resilience.

Policy and financing innovation

Update design standards, maintenance regimes, and funding mechanisms to embed climate adaptation and attract investment in resilient transport projects.

Together, these interventions represent a strategic effort to build a modern, safe and climate-resilient transport system in Albania, one that enhances connectivity, protects critical infrastructure, and supports sustainable economic growth, with a total estimated cost of USD 2.0 billion (= 21% of the NAP's total budget).

SOFT MEASURES	1	Regular Vulnerability and Risk Analysis and Definition of Resilience-Building Measures for Road Infrastructure
	2	Geological Studies for Sustainable Roads: Bio-Engineering Solutions to reduce Erosion and Flood risks
	3	Adapting to air and sea level rise Resilient Urban Mobility: Developing and Reviewing Urban Mobility Plans
	4	Adapting Critical Transport Infrastructure: Advanced Risk Assessment and Resilient Design Solutions
	5	Climate Resilience Transport Policies: Embedding Climate Adaptation in Regulatory Frameworks
	6	Innovative Partnerships for Sustainable Transport: Funding Climate-Resilient Transport Infrastructure
GREEN MEASURES	7	Integrating Nature-Based Solutions and environmental based adaptation for Transport sector resilience: Enhancing Infrastructure with Nature-Based and Ecosystem-Based Adaptation