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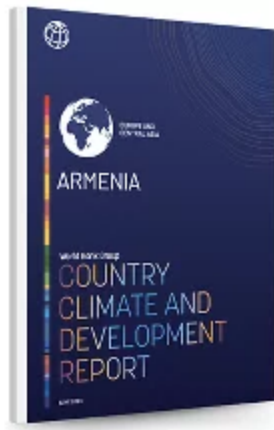
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# The Country Climate and Development Report for Armenia



The Country Climate and Development Report (CCDR) for Armenia explores intertwined climate and development

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a cleaner environment, energy security, and a resilient economy.

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## Background

Armenia's power, heating, and transport sectors rely heavily on imported natural gas, accounting for two-thirds of the country's greenhouse gas (GHG) emissions. Armenia is also highly vulnerable to the adverse impacts of climate change, particularly floods, droughts, heat stress, hail, and landslides. The impact of climate change on the water and agriculture sectors alone could shrink the country's economy by up to 3% by 2060 and increase poverty by as much as 2.7 percentage points by 2030. The Armenia Country Climate and Development Report (CCDR) outlines a path to a resilient, low-carbon future, highlighting the shift from gas to solar as a key step toward energy security and improvements in food and water security as central to resilient economic growth. Achieving a resilient, low-carbon pathway will require an estimated \$8 billion investment between 2025 and 2060, with the benefits expected to outweigh the costs. Key policy recommendations to unlock these investments include fiscal and institutional reforms, alongside reforms in critical sectors such as energy, transport, water, agriculture, and disaster risk management.

## Key Findings

Climate mitigation and adaptation are essential for Armenia's long-term economic resilience, energy security, and environmental sustainability. Strategic investments in these areas will foster green growth, increase energy independence, and drive innovation across sectors, ensuring a cleaner, more productive, and sustainable future.

- **Energy security and decarbonization.** Armenia's heavy reliance on imported natural gas, which accounts for 63% of its energy supply, makes the country particularly vulnerable to price volatility and supply disruptions. Strategic investments in renewable energy sources, particularly solar power, will reduce energy costs, improve energy security, and

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lower greenhouse gas emissions, positioning Armenia to meet its climate targets while safeguarding its economy against future gas price fluctuations.

- **Adaptation and resilience building.** Armenia's existing water stress and vulnerability to climate impacts like reduced crop yields and increased floods highlight the urgent need for adaptation investments. By 2050, climate change could cut crop, and livestock yields by up to 37%, resulting in over \$363 million in lost agricultural productivity. By strengthening water management, enhancing agricultural resilience, and tackling land degradation, Armenia can avoid significant losses and reduce poverty, particularly in rural areas.
- **Economic growth through climate action.** Decarbonizing Armenia's economy will initially require investment but will ultimately boost GDP, driven by cleaner air, reduced health costs, and increased productivity. Reduced air pollution and climate adaptation could add 1.5% to GDP annually by 2060, supporting sustainable, resilient growth. Furthermore, climate-smart agriculture, renewable energy development, and enhanced water management systems will create jobs and improve food security, contributing to economic growth.
- **Opportunities in green growth and innovation.** With targeted investments in green technologies and sustainable practices, Armenia can increase export diversification and enhance its competitiveness, reduce emissions, and capitalize on emerging global markets focused on sustainability and low-carbon solutions.

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## Recommendations

### ***Green Growth and Economic Transition.***

- Promote green growth through structural reforms: explore export potential of green products and services. Expand market energy audits and implement labor mobility reforms for the green economy.
- Mobilize private capital for climate projects: strengthen public-private partnership frameworks to manage liabilities and ease implementation. Adopt a green taxonomy and environmental, social and governance disclosure frameworks to align with EU regulations. Establish concessional credit lines for private investment in adaptation.
- Introduce carbon pricing, for example through upstream carbon taxes using revenues to compensate vulnerable households.

### ***Renewable Energy and Energy Transition***

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Scale up renewable energy generation and storage; modernize the national power grid; and increase the share of renewable energy by 2030 (1 GW) and 2040 (4 GW). Scale up battery storage solutions to reach 1.8 GW by 2030.

- Transition to competitive energy markets: gradually liberalize the electricity market and raise natural gas prices to international benchmarks. Implement targeted social protection measures for vulnerable consumers.
- Invest in energy efficiency in key sectors: launch a national program to promote building energy efficiency with both public and private investments.

### ***Water Management and Efficiency***

- Increase water storage & efficiency: modernize water infrastructure to serve 50,000 hectares of irrigated land and develop a masterplan for new storage investments.
- Improve water resource management: increase funding for climate, hydrological, and meteorological monitoring. Strengthen institutional capacities for efficient water management.

### ***Agriculture and Food Security***

- Boost agricultural productivity and resilience: incentivize the use of climate-smart agricultural practices like drip irrigation. Develop an early warning system for agriculture.
- Enhance food system resilience: establish a food security monitoring system to respond to climate and economic shocks.

### ***Infrastructure and Resilience***

- Strengthen infrastructure resilience: identify critical infrastructure at risk from natural hazards and develop strategies to mitigate damage.
- Implement land restoration programs: develop a national framework for landscape restoration and reallocate harmful agricultural subsidies to support these initiatives. Integrate forestry and landscape restoration into the green taxonomy.

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