

Jobs in a Changing Climate

Insights from World Bank Group Country Climate and Development Reports covering 93 economies

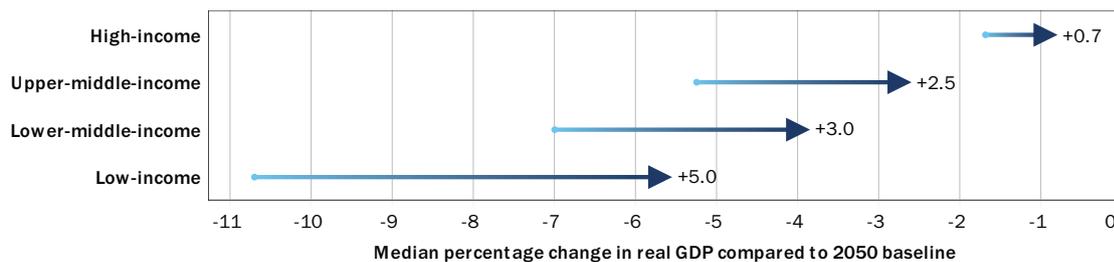
The World Bank’s Country Climate and Development Reports (CCDRs) provide a crosscutting look at how countries’ development prospects—and the job opportunities they offer to their people—can be threatened by climate impacts and supported by climate policies. Each CCDR starts from the country’s development priorities, opportunities, and challenges, and is developed in close consultation with governments, businesses, and civil society, ensuring the recommendations reflect national priorities.

Published CCDRs cover 93 economies, representing 64 percent of the population and 77 percent of the gross domestic product (GDP) of low- and middle-income countries (LICs and MICs). CCDRs have been downloaded more than 836,000 times, and discussed in more than 12,500 media articles, including 56 percent explicitly referencing the findings related to jobs. This fourth summary report updates and expands the analyses presented in earlier CCDR summaries and provides a deep dive into the findings related to jobs. Its key findings are the following.

Smart, resilient development can reduce risks and unlock short-term economic benefits

Investment in adaptation and resilience is an opportunity to accelerate development and poverty reduction. Under current policies, climate change poses a macrocritical threat, with rising and uneven costs: by 2050, countries could face potential GDP losses ranging from 1 to 20 percent, with lower-income and hotter countries experiencing the greatest impacts. While proactive adaptation cannot offset all risks, it delivers high returns, reducing projected GDP losses by an average of 4 percentage points and, in some cases, more than halving climate impacts.

Benefits from adaptation interventions recommended in the CCDRs, by 2050



The benefits from low-emission development extend beyond long-term avoided climate change impacts to include tangible short-term economic benefits. By encouraging investments in cleaner and more efficient technologies, low-emission development has neutral or positive impacts on GDP in most, but not all, countries. Nature is a foundational economic asset: global forest loss costs global agricultural GDP \$379 billion a year, while nature-based solutions like mangrove restoration yield benefit-cost ratios of 4–5.

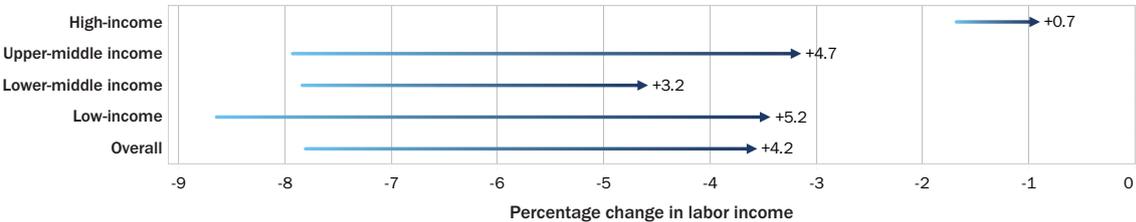
Resilient low-emission development requires increased investments, from the public and the private sectors. In 80 percent of CCDR countries, annual investments need to increase by between 0.7 and 7.1 percent of GDP, around half of which is expected to come from the private sector. This requires significant policy changes, domestic resource mobilization, public-private partnerships, and new financial instruments—such as guarantees and integrated disaster risk finance and insurance strategies.

Climate and development goals need the same thing: A workforce and jobs that can adjust and adapt to change

Climate change impacts and adaptation are expected to have widespread impacts on jobs and livelihoods. Using the proposed World Bank Group scorecard indicator for jobs, CCDRs estimate future climate change impacts equivalent to the loss of 43 million “more and better-paid jobs” in 49 countries by 2050. Adaptation interventions identified in CCDRs are robustly found to reduce these losses, creating or protecting the equivalent of 25 million jobs in the same 49 countries by 2050.

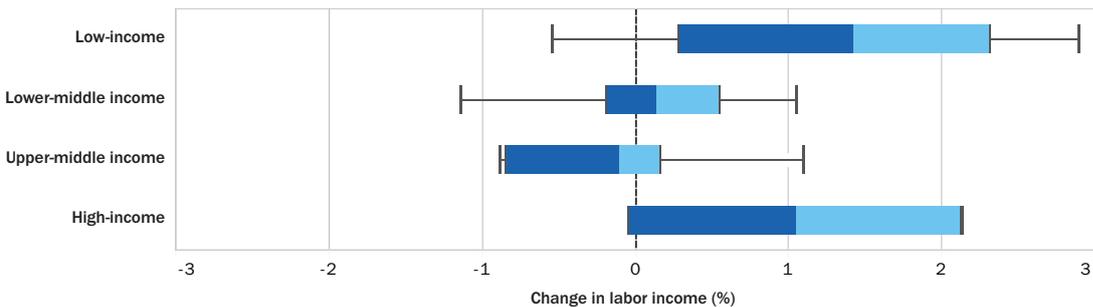
Simple extrapolation to other countries suggests that climate impacts captured in CCDRs could result in the loss of the equivalent of 260 million jobs by 2050 across all LICs and MICs, with the potential to create or protect the equivalent of 149 million jobs through adaptation action.

Average impact of a pessimistic climate scenario on labor income by 2050, with and without adaptation interventions recommended in CCDRs



Modeled low-emission development pathways show modest aggregate effects on labor outcomes, with changes of less than ±2 percent in most countries by 2030. However, these aggregate figures are uncertain, mask much larger positive and negative effects at subnational and sectoral levels, and depend on the country context and policy design, including complementary policies.

Estimated impacts of a low-emission development pathway on labor income by 2030, in the absence of complementary policies



Complementary policies can enhance job outcomes by facilitating private sector job creation, enabling worker reallocation (for example, through reskilling or reduced mobility costs) and protecting the most vulnerable. These policies also deliver benefits by facilitating concurrent technological, economic, or demographic transitions, demonstrating strong alignment between climate and development objectives.

This CCDR summary report demonstrates that integrating climate and development strategies is essential, not just for managing the risks posed by climate change, but also for unlocking new opportunities for job creation, poverty reduction, and development.

