ADB

Climate Action SOUTH ASIA

Steering Economies Toward Low-Carbon and Climate-Resilient Development

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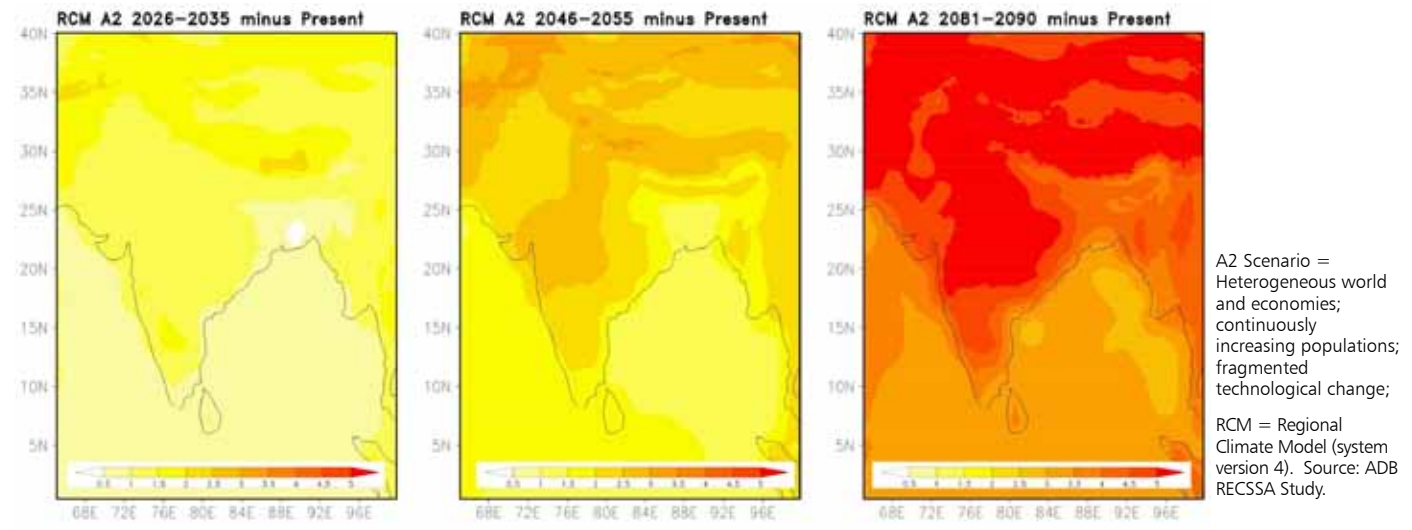
To steer South Asian economies toward green, low-carbon, and climate-resilient development and for these to take hold in South Asia, the countries need (i) better understanding and greater public awareness of the implications of climate change, (ii) climate risks screening and decision-support tools for identifying actions and managing results, (iii) improved governance and institutional capacities to take necessary actions to manage climate change impacts, (iv) funding sources for such actions, and (v) projects and programs demonstrating positive results that can be scaled up.

Development in an Era of Accentuated Climate Risks

Impacts of climate change pose a serious economic threat to South Asia developing member countries (DMCs) at a time when rapid economic growth remains necessary for the region to reduce poverty and achieve other Millennium Development Goals. It is projected that the region will experience extreme weather conditions and natural disasters as a result of climate change, which will compromise the prosperity and stability of DMCs by affecting food production; land, water, and other natural resources; rural and urban settlements; infrastructure; and human health—to name a few.

The existing resource- and energy-intensive paths of economic development, responsible for increased greenhouse gas (GHG) emissions and global warming, are not sustainable in an era of accentuated climate risks. Across South Asia DMCs, per capita emission of energy-related GHG, carbon dioxide (CO_2), could increase by a factor of 2 to 6 between 2005 and 2030, although this figure is still lower than neighboring Southeast Asia or developed countries as a whole. Emissions per unit of gross domestic product (GDP) would hardly change, however, except in India.The benefits of adoption of cost-effective clean and energy-efficient technologies are beginning to emerge in the emissions projections for the region (Figure 1).

Projected Change in Mean Annual Surface Air Temperatures Over Parts of South Asia (°C)



A2 Scenario = Heterogeneous world and economies; continuously increasing populations; fragmented technological change;

RCM = Regional Climate Model (system version 4). Source: ADB RECSSA Study.





Vulnerable South Asia

Impacts and Costs

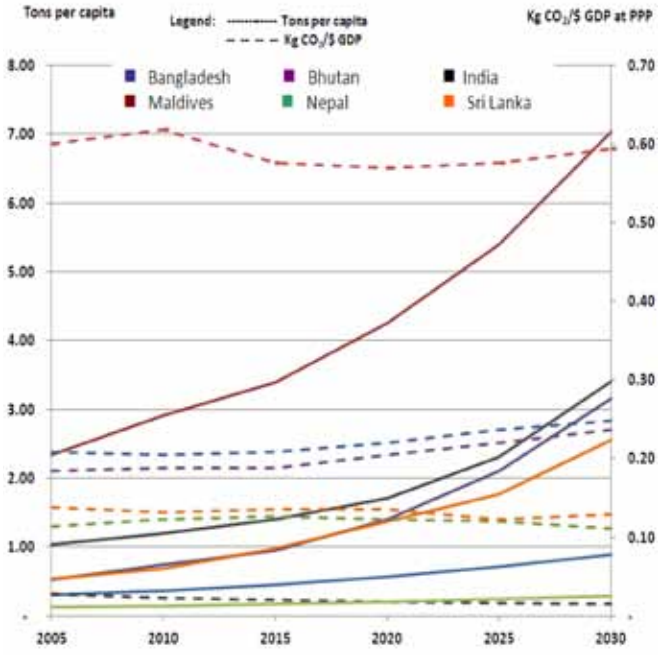
With average temperature rising above the global average, and threats of sea level rise, South Asia DMCs have high susceptibility to the negative impacts of climate change. Progressive warming is projected in the coming decades, with more rapid warming expected over a wider geographic area of the region. Winter months are projected to become drier and the summer monsoon to become more intense, with increased rainfall intensity and cyclone strength. Sea level rise will put settlements and vital infrastructure in coastal and island states at risk, and will cause saltwater intrusion into agricultural areas, affecting crop productivity.

Many parts of South Asia DMCs, particularly Bhutan, northern India, and Nepal, are already exposed to serious erosion, landslides, flooding from glacial lake outbursts, and debris flows. Warming will destabilize high-altitude glaciers in the Himalayas, endangering life and property on a massive scale, particularly in floodplains and monsoon-swollen river areas.

The high incidence of poverty, poor governance, weak institutions, and lack of necessary infrastructure worsen the vulnerability of the region. The poor—as well as women, children, and the elderly—are the most vulnerable, having less capacity and fewer resources to cope with the adverse impacts of climate change.

Economic losses in key sectors, such as agriculture, energy, transport, health, water, coastal and marine resources, and tourism, are expected to be huge, affecting growth targets. Considerable financial resources will be required to protect investments against the adverse effects of climate change, which many governments are unable to afford given limited public resources and the disproportionately large upfront investment required.

Figure 1. Projected CO_2 Emission Intensity in South Asia DMCs



CO_2 = carbon dioxide
DMC = developing member countries
GDP = gross domestic product
kg = kilogram
PPP = purchasing power parity.
Source: ADB RECCSA Study Team and The Energy Research Institute—Ministry of Environment and Forests simulations

Protecting Investments through Climate Proofing and Integrating Cost-Effective Disaster Risk Management



Climate Action South Asia

Low-Carbon and Climate-Resilient Development

South Asia DMCs need strategies and actions to build climate resilience and achieve growth and poverty reduction with low or no emissions. DMCs also need to know how much these would cost, what the benefits would be, and where investment resources would come from.

Many economically viable green, low-carbon, and resilience-building technologies have been put into practice in recent years by South Asia DMCs to provide energy security and efficiency, water and natural resources management, and climate-resilient green industries and infrastructure. Investments in climate change adaptation (e.g., climate proofing, and disaster risk reduction and management) are likely to have higher pay-offs in the future, as benefits in terms of avoided damages are likely to exceed costs.

Protecting Investment through Climate Proofing

Climate proofing will increase resilience and reduce risks to investments through long-lasting, environmentally sound, economically viable, and socially acceptable changes in project planning, design, and implementation. Urban infrastructure and services such as sanitation, water supply, drainage, transport, and buildings—including those in coastal settlements—will need to be protected from the adverse impacts of climate change. Adding further climate-proofing investments will allow project benefit streams to be fully or partially secured.

Integrating Cost-Effective Disaster Risk Management

Linking disasters to climate change adaptation and promoting preventive action will reduce the risks and threats to human lives and assets, and their productivity. Combined with effective early warning systems for hydrometeorological disasters and better planning and zoning, investment in shoreline protection, flood control, and water security management will reduce exposure to hazards and build more resilient local systems and economies.

Win–Win, Clean, and Energy-Efficient Technologies

Pursuing "no-regret" (i.e., with zero or negative abatement costs) energy technology options will yield large economic benefits, while generating GHG emissions reductions of nearly 10% in South Asia DMCs by 2020. An ADB study of the Regional Economics of Climate Change in South Asia (RECCSA) has found that, with policy support such as carbon credits, a further 10%–12% reduction in GHG emissions can be achieved. Investment in clean and energy-efficient technologies in residential, power, transport, and industry sectors can reduce emissions of GHG and other locally damaging pollutants.

At a Glance: Climate Action in South Asia Department to Date

In 2009, the South Asia Department developed a climate change implementation plan that sets out the operational strategy and investment priorities in South Asia developing member countries. It supports adaptation and mitigation efforts in the transport, energy, urban, water supply and sanitation, and agriculture and natural resources sectors.

In 2011, approvals of loans and grants for climate change adaptation and mitigation measures reached $1.039 billion, of a total project investment of $2.300 billion. Coinvestment by developing member country governments amounted to $2.09 billion, and that of development partners amounted to $4.39 million.

Green growth is a pattern of development that decouples economic growth from greenhouse gas emissions, pollution, and unsustainable resource use by promoting low-carbon and climate-resilient development. Its main elements are energy security and efficiency, promotion of renewable energy, water and natural resources management, and climate-resilient green industries and infrastructure. It conserves existing carbon sinks and uses natural resources in a sustainable manner.

Win–Win, Clean, and Energy-Efficient Technologies

Four Pillars of Climate Action in South Asia

The following four pillars form the core of Climate Action South Asia (CASA) to support the six South Asia DMCs—Bangladesh, Bhutan, India, the Maldives, Nepal, and Sri Lanka—in mainstreaming green, low-carbon growth and climate resilience.

Climate change risks screening for adaptation and mitigation

Screening will entail assessment of vulnerability that will determine whether programs and/or projects might be affected by climate change. This will provide an initial basis for identifying and selecting adaptation options and measures. The screening process will involve an understanding of (i) projected impacts of climate change for a given country, region and/or locale; (ii) exposure and sensitivity to climate change related risks, i.e., vulnerability; and, (iii) resilience and adaptive capacity of social systems. Screening will also involve identification of opportunities for low-carbon technologies and solutions at the project and/or program level.

Knowledge Exchange and Capacity-Building Activities

Strengthening country partnerships and programming

This will involve coordination with stakeholders to enhance current processes and mechanisms that will scale up investment in climate resilience and green growth. Experiences from projects that demonstrate successful approaches on green growth and climate resilience will provide entry points for scaling-up investment resulting to innovative and high-impact climate change projects. Resources and facilities to leverage finance for projects by DMCs for low-carbon and climate-resilient development will be augmented by mediating finance and channeling it to development projects. Effective public–private partnerships will be needed to support North–South and South–South transfer of technologies, and ways to lower the cost of private capital in adopting clean technologies and climate-resilience measures.

Establishing a transformation-driven capacity building program

To undertake climate actions successfully, South Asia DMCs will need a highly selective and transformation-driven capacity building program. Both governance and institutional capacity will require strengthening. With better capacities, decision-support tools, and guidelines, actions such as climate proofing, carbon intensity reduction, and natural and engineering adaptation measures can be integrated into project designs and implementation plans of DMCs. Emphasis will be given to strengthening networking among governments, development partners, and regional and national centers of excellence to allow better assessment of capacity needs and facilitate implementation of activities. On a larger scale, improved capacities will raise public awareness toward public action and stakeholder engagement in DMCs.

Knowledge development and knowledge sharing

This will entail supporting knowledge founded on the science and economics of climate change. A climate change information base, high-quality knowledge products and decision-support tools, and guidelines for assessing climate risks and vulnerability will be developed. The economic analysis will show the economic consequences of different sets of climate policies as well as those of clean technology and adaptation options. Peer reviewing and developing a platform for information sharing on climate change issues including e-knowledge development will be given priority. Development of tracking and monitoring tools and results frameworks, as well as a dissemination platform, will allow for project quality assurance and the uptake of lessons and experiences.

> "The countries in South Asia need to work more and better on climate-resilient low-carbon development. This is necessary to ensure sustainability over the long haul. ADB will do its utmost to support them in this endeavor."
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> *— Juan Miranda, Director General, South Asia Department, ADB*

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