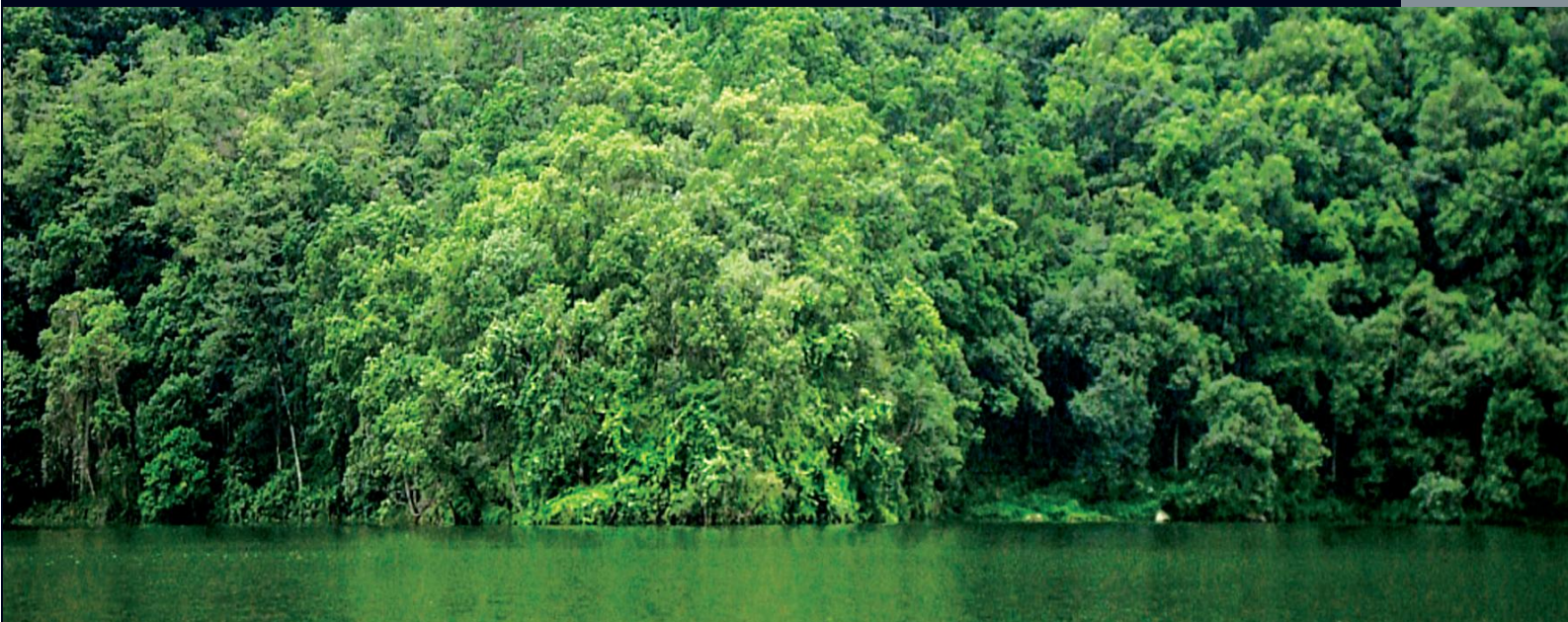


Responding to climate vulnerabilities through CARBON TRADE



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One of the most spectacular aspects of the climate agenda has been the emergence of carbon markets, currently valued at over US\$130 billion. The Clean Development Mechanism (CDM) provides an opportunity for developing countries to participate in carbon markets. Certified emissions reductions (CER) from CDM projects in developing countries can be used to meet reduction commitments in developed countries. Except for India, the benefits from

carbon markets through CDM have largely bypassed the South Asian region. Despite some high-profile projects—Nepal’s biogas programme, for example, went on to be the prototype for programmatic CDM—broad-based capacity to take advantage of carbon market opportunities has failed to emerge. Expansion of CDM to allow for programme-based approaches could facilitate a new wave of opportunities that can help overcome the constraints on project development.

Excluding India, South Asian countries have been shy to invest in promoting CDM believing that their poverty and development needs require them to focus almost entirely on adaptation. This policy brief argues that they are wrong. Promoting CDM and access to carbon markets is not merely about mitigation strategies but also about building alternate gateways to financing and technology that could be leveraged to support South Asia’s broader development objectives.

Climate vulnerabilities and response strategies

The South Asian climate change conference in 2009 in Kathmandu prior to the Copenhagen conference identified climate vulnerabilities based on poverty and population growth; threats to water supply and agriculture; urbanization; and vulnerability to natural disasters.

At the heart of vulnerability are the 600 million people living below the poverty line. Even minor natural disasters could disrupt their livelihoods and reverse the accumulated gains of poverty reduction. Over 70 percent of the population derives its livelihoods from agriculture that is largely dependent on natural precipitation. More frequent and intense variations in rainfall will not only jeopardize livelihoods but also diminish the future prospects of agriculture and economic growth. In many ways, climate change simply deepens existing vulnerabilities that reflect past failures in reducing poverty, diversifying economic activity and building a robust disaster management system.

South Asian countries have placed the need for adapting to climate change impacts at the centre of their response strategy. Adaptation requires a two-pronged approach: first, the ability to predict disasters and respond quickly when they strike; and second, the resilience to return to normalcy quickly after a catastrophe has occurred. But how should investment choices be made?

Greater scientific assessment of the changes being induced by climate change along with an understanding of the region's interdependent ecosystems are urgently needed to better establish climate vulnerabilities. Broad simple observations of the impacts that may arise from increased flooding, droughts, salination of inland waterways and extreme weather events do not provide a sufficient basis to estimate the cost of building adaptive capacity or to facilitate the

investments that will be needed. There is an urgent need to translate the global understanding of climate change into detailed assessments of localized impacts and vulnerabilities that can form the basis for adaptive policy measures.

The need for greater scientific knowledge of the impacts of climate change should be an area extremely amenable to cooperation across the region. In fact, regional collaboration will be necessary because many countries are connected through the same regional ecosystems and most issues will have significant trans-boundary dimensions. India, Bangladesh and Sri Lanka have already announced networks of climate research institutes, but a pan-regional network is yet to emerge. Without a regional institutional framework, studies from such research centres will remain piece-meal at best or, more importantly, could provide an incorrect picture of the longer-term impacts.

While countries in the region recognize the importance of adaptation, its relationship with poverty is less understood and has limited an effective policy response strategy from taking shape. Though they have recognized the nexus between climate risks and poverty, response strategies should not be limited to the standard approach for enhancing livelihoods. Climate events threaten livelihoods but, more importantly, threaten to reverse the gains from poverty reduction. The response strategy should focus around climate resilience—the ability to bring societies and systems back into normal operations quickly after a disaster—so that any climate-led disruption of livelihoods does not erode poverty reduction gains.

Responses to climate risks provide a new opportunity to address a systematic failing of poverty alleviation approaches in South Asia. In the past, vulnerabilities to natural disasters have largely been dealt with prevention and disaster relief, with-

out adequate attention to bringing communities, services and systems back to normal quickly after a natural disaster. As a result, with every disaster, the gains from poverty reduction were erased and the poor remained forever vulnerable. Climate risks, therefore, require a re-orientation of investments towards building the capacity for resilience.

No matter how resilient, infrastructure and service delivery systems will no doubt be disrupted in the course of a disaster. But these systems are able to return to normal quickly after a climate shock. Such climate-resilient systems cannot be built using the same approaches as today. Roads, for instance, need to be better integrated within the terrain so that it is able to withstand a greater frequency of flash floods or landslides. Schools, health care and agriculture delivery systems require more robust, multiple-point supply chains based on a grid or network design with in-built contingencies.





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For South Asian countries, there are two primary reasons why an emphasis on climate resilience will represent a new and meaningful front in the battle against poverty. First, in parts of the region where service delivery and infrastructure connectivity remain weak or are failing, building climate resilience simply means establishing better delivery and infrastructure networks. Such climate-resilient networks implicitly work as a strong safety net for the poor and can, therefore, supplement the broader development strategy.

Second, building climate-resilient systems will require significant investments that are unlikely to be sufficient from public funds alone. Many of these new systems will require financing models that allow the private sector to play a greater role, and more importantly, develop the gateways for services, like crop and weather insurance, to more effectively reach rural communities. Building carbon-resilient societies that also enhance service delivery

is not simply about responding to climate change—it is about making pro-poor climate strategies.

Against this backdrop, it can be argued that South Asia will do well to take actions to make carbon trade work for the region's development, particularly in its efforts to address climate vulnerabilities.

Carbon markets and mitigation strategies

There appears to be overwhelming global consensus that market-based policy instruments are the best option for limiting greenhouse gas (GHG) emissions. Cap-and-trade programmes limiting GHG emissions have already been implemented in the European Union (EU) and have been proposed in almost all developed countries and in some developing countries. It is no surprise that carbon markets have registered spectacular growth over the last decade and now represent a distinct industry segment.

Even as the world faced the most severe recession since the Great Depression, carbon markets increased in 2009 to over US\$135 billion. Though carbon prices, measured by the allowances in the EU Emissions Trading System, lost two thirds of their value and declined to under €10 per tonne in 2009, the overall market value continued to increase on the back of increased traded volumes, rising from approximately 5 billion tonnes in 2008 to over 8 billion tonnes in 2009. The failure of Copenhagen notwithstanding, the value of carbon markets are likely to grow further as prices edge up from the lows of 2009. Should the United States implement GHG regulations, carbon market value could easily exceed US\$0.5 trillion.

In addition to growing rapidly, carbon markets have also matured within a short period. The market is now characterized by a large number of players, many of them with very specialized offerings and differ-

entiated products. Climate exchanges have sprung up across the world to help enhance the liquidity of the carbon currency. Two of the commodity exchanges in India already trade CER products. Perhaps the best illustration of market maturity and depth is the emergence of carbon procurement vehicles—funds that have been established to invest in projects that generate emissions reductions.

More than 90 such carbon funds with secured capital of over €12 billion have already been established. The nature of these funds has changed significantly over the last few years. Initially, most were public funds with a primary interest in securing emissions credits for their sponsors. Over time, private funds with greater flexibility on their investment models and more actively seeking capital gains account for a majority of the procurement vehicles.

Carbon markets are connected to developing countries through CDM. Under the Kyoto Protocol, CDM allows emissions reductions from projects in developing countries to be used by developed countries to meet their reduction obligations. Emissions reductions projects that are voluntarily implemented, that are additional to the baseline, and that result in real, verifiable reductions are able to achieve CER which can then be sold into international carbon markets. Except India, where it has been a success story and Pakistan to a more limited extent, CDM has failed to make significant headway in other parts of South Asia. India has approximately 41 million tonnes in annual certified emissions reductions, representing 12 percent of the 349 million tonnes of total CER expected annually. Other countries in the region account for approximately 0.5 percent of the total annual CER.

The failure to achieve a significant number of projects in countries other than India is not surprising. Carbon markets are tilted in favour of



projects that offer large volume reductions. The transaction costs on smaller projects often do not justify the investments. Credit buyers and investors are unlikely to spend time chasing smaller projects. Excluding India, other countries do not have the capacity to generate enough large-scale projects. Even within India, the average reduction volume continues to dampen project development. An Indian CDM project offers on average 30,000 tonnes of reductions annually, whereas an average project in another part of the world might provide closer to 130,000 tonnes of reductions annually.

Way forward

CDM projects in South Asia, to some extent India included, have failed to achieve scale because each project is individually too small and the projects are too scattered. To develop sufficient scale, projects needed to be bundled together. Though CDM rules allowed for bundling, they provided limited flexibility to overcome transaction costs. All of that has now changed and new project mechanisms under programmatic CDM are designed specifically to address small and scattered project activity.

Programmatic CDM is a new approach that allows project developers to register a project design as the programme. Once registered, the programme remains in effect for 30 years. Individual projects can then be registered as a CDM project under the programme at any time during the 30 years so long as the project satisfies the guidelines and methodology established under the programme. The flexibility of programmatic CDM helps to reduce the transaction cost on the individual project, makes it easier to bundle scattered projects and helps achieve the reductions volume that will be interesting to international buyers and investors. Programmatic approach is already being used to great effect in implementing India's flagship energy efficiency programme seeking to replace incandescent light-bulbs with compact fluorescent lights.

Programmatic CDM provides an opportunity for project development in South Asia for three specific reasons. First, projects can be based around policy initiatives, which not only provide an immediate pipeline of opportunities but can also be selected to suit development needs. In other words, programmatic CDM can be written explicitly into policy design, as has been done for instance

in India's policies promoting the use of off-grid renewable energy generation. Second, programmatic approaches provide a clear role for the public sector to be involved in the development of the project. In most cases, the public sector will need to lead the development of programmatic CDM to help overcome the lack of awareness about CDM among domestic market participants. Third, and perhaps most importantly, programmatic CDM can offer ready gateways for access to technology and financing that can then used to implement the underlying policy objective on which the programme is based.

The flexibility of a programmatic approach within CDM is illustrated here not to argue that it is the final magic bullet that could overcome all existing constraints on project development. Instead, it is being outlined to suggest that governments integrate the benefits of CDM and carbon markets as a way to advance their own objectives for sustainable growth and enhanced livelihood. Mitigation strategies that link international carbon markets for financing and technology and offer the co-benefits of sustainable growth must become an important part of the South Asian climate response. ■

