**Challenge of growing threats of climate change**

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The non-traditional security threats of the 21st century call for collective responses. No nation can safeguard its non-traditional security solely through its individual effort. Robert Boggs, Professor of South Asia Studies, Near East South Asia Center for Strategic Studies, rightly said: prosperity and non-traditional security grow from mutually beneficial cooperation with one’s neighbours and other nations around the world. All of South Asia is now facing a challenge of climate change that is potentially catastrophic. This climate change threatens to slow the region’s economic growth, depress standards of living, increase the threat of devastation and death, and possibly even aggravate intraregional conflict. Some military analysts call climate change a “threat multiplier” or a “catalyst for conflict.”

Every country on earth faces these threats but South Asia is particularly vulnerable because of the prevailing low standards of living, the continuing importance of agriculture for employment and the peculiar weather system created by the Himalayas and the warm, moist waters of the Indian Ocean.

It is estimated that the total climate change cost in South Asia will increase over time and will be excessively high in the long term. Resultantly, South Asia could lose an equivalent 1.8 per cent of its annual gross domestic product (GDP) by 2050, which will progressively increase to 8.8 per cent by 2100. Moreover, if nothing is done to slow or reverse climate change, the global economy could lose 2.6 per cent per year by 2100.

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Higher temperatures eventually reduce yields of desirable crops while encouraging weed and pest proliferation. Changes in precipitation pattern (timing and amount) increase the likelihood of short-run crop failures and long-run production declines, posing a serious threat to food security. Climate change can affect energy generation too – especially hydropower and thermal – and demand. Cyclones and floods damage infrastructure. The coastal fisheries, forests, salt, minerals, export processing, harbours and airports on the coastal zones are also at risk. Climate change will increase the costs of production of such essentials as water, electricity and land for all domestic goods or exports like garments, so no industry or sector will be immune. But one also has to remember the impact on the people: Livelihoods will become more precarious especially in coastal areas and industries like farming. Water, energy, and food supplies will become more uncertain – and possibly more costly. Changing weather patterns may affect health. Deaths from dengue and malaria and other water-borne diseases are likely to rise particularly during the monsoon months and extreme weather may force migration as people move to safer, more secure areas of their country.

South Asia, like other regions, suffers from greenhouse emissions into the atmosphere from everywhere around the planet. But the huge increase in air pollution across the subcontinent over the last 60 years has created a huge brown cloud of particulate matter over the region. India is already the world’s third largest producer of greenhouse gases, and its carbon emissions are expected to more than triple within the next twenty years. Scientific research has found a causal link between South Asia’s brown cloud and the increased intensity of cyclones in the northern Indian Ocean region. Warmer seas will generate more and larger storms. These storms, combined with higher sea levels and shallow marine topography, will increase the destructiveness of storm surges. Countries like Maldives, Sri Lanka and Bangladesh are likely to be the most seriously affected, but India and Pakistan too have high population concentrations in low-lying coastal areas.

The fifth report by the UN’s Intergovernmental Panel on Climate Change concludes that continued emission of greenhouse gases will cause further warming and long-lasting changes in all components of the climate system, increasing the likelihood of severe, pervasive and irreversible impacts.

Economic diversification is not the key response required. What is needed is for all sectors of the economy to be prepared to withstand climate change. In agriculture, for example, new technologies such as rice cultivation systems with more efficient water and nutrient use should be promoted. Altering planting times, using resistant varieties, and diversifying crops can help. But it is not only industries themselves, countries need to look at better management of resources and services. Better coastal zone management, efforts to protect riverbanks from erosion and building climate-proofed roads, bridges and other infrastructure is needed. In the water sector, groundwater should be protected. Better water management and use of recycled water can also help. And in health, better living conditions, better emergency responses, and better surveillance and monitoring of diseases is the key.

Climate change does not respect borders; countries must work together to share resources and knowledge to better withstand the impact of climate change. The region’s adaptation response need not be confined to symptomatic treatment of threats to traditional patterns of economic activity. More efficient regional economic diversification can create entirely new patterns and supporting infrastructure to take their place. In other words, policy makers need to take early action to adapt to climate risks, and this action needs to be informed by rigorous and timely evidence. Building resilience to the impacts of climate change requires identifying the risks and vulnerabilities of the different sector and area development projects and programs, followed by developing the options for adaptation and mitigation measures that are socially, environmentally, and economically sound.

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