

ISAS Brief

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Achieving Economic Growth In China And India – At What Environmental Cost?

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The economic growth of China and India turn Asia as the epicenter of the global economy. It is predicted that this growth will continue in the near future as China is set to become the world's second largest economy and India is poised to take the fourth place by 2030, according to the Economist Intelligence Unit. A British Broadcasting Corporation on-line survey in April 2006 predicted that China will overtake the United States' economy by 2026.

Whilst there may be some differences among surveys on the timeline on China becoming the world's largest economy, the Paris-based energy watchdog, the International Energy Agency (IEA), states that China could surpass the United States as the world's biggest emitter of green house gases (GHG) by 2007. India currently ranked fifth amongst carbon dioxide (CO₂) emitters in the world.

The economic development that has lifted millions of Chinese and Indians out of poverty in recent times has not come cheaply. According to the World Bank, 16 out of 20 of the most polluted cities in the world are located in China. India's urban air quality ranks among the world's worst.

Depicting a grim picture of planet earth, the fourth assessment report of the Intergovernmental Panel on Climate Change (IPCC) reveals that Asia may be "hardest" hit if adequate measures are not adopted now to check GHG emissions.

Climate scientists are concerned that anthropogenic warming could wipe out large areas of glaciers in the Himalayas and surrounding highlands, threatening the livelihood in many parts of China and India. The glaciers across the Himalayas and the Qinghai-Tibet Plateau feed such major rivers as the Yangtze in China and the Ganges in India. In the Himalaya-Hindu Kush region, melted water from the glaciers supplies 70 percent of the summer flow in the Ganges and provides water to around 500 million people. In China, 250 million people (23 percent of the population) living in the western region depends principally on water from the glaciers.

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The rapid economic growth which is implicitly based on a positive social discount rate (placing more emphasis on present rather than on future generations) could further exacerbate the current state of the environment of China and India. The per capita energy consumption in these two heavyweight economies might be lower than the United States and the European Union benchmark. However, the scenario is changing rapidly. China is opening almost one coal-fired power station every week. Roughly 70 percent of its energy comes from coal, the highest carbon emitting fuel and a major culprit in global warming.

India is also heavily dependant on coal which meets 51 percent of its energy demand. Its coal consumption is expected to increase from 460 million tons a year now to 1.5 billion tons by 2031 when the country is projected to be the world's third largest GHG emitter. The Asian coal rush is expected to generate 30,000 megawatts coal-fired power over the next 10 years in the region. The IEA has projected that world's CO₂ emissions will reach 40 gigatons by 2030. The emerging economies led by China and India will contribute to more than 70 percent of these emissions.

Recently, China's Ministry of Science and Technology, the China Meteorological Administration, and the Chinese Academy of Science released the country's first-ever National Assessment Report on Climate Change. It sees the average temperature in China rising between 1.3 to 2.1 degrees Celsius by 2020 and 2.3 to 3.3 degrees Celsius by 2050, causing worsening droughts in northern China and extreme weather conditions. It also projects that the production of rice, corn and wheat could fall by 10 percent by 2030. Despite these statistics, the report recommended that China should not risk slowing its economic growth by curbing GHG. On 4 June 2007, China unveiled its first national plan for climate change which offered few new targets on reducing GHG emissions but not at the cost of economic growth.

Both China and India are not subject, under the Kyoto Protocol, to the compulsory GHG emissions reduction until 2012. Can these heavyweight economies afford to grow with the current economic model in the post-Kyoto era? Their booming economies may face a setback due to the rising threat of global warming and other environmental constraints. Further, the growing global consensus to save the ailing mother earth might persuade, if not compel, these economies to adopt more eco-friendly policies even if this means slowing down their economic growth.

Some policy makers both in China and India highlight the lower per capita carbon emissions in their economies vis-à-vis the West to ward off commitments towards cutting down on GHG emissions. They have also diverted the issue by alleging that the Organisation for Economic Co-operation and Development countries should clean up the skies as they have been the key culprits of carbon emission since the Industrial Revolution.

In 2006, the China Daily reported that Beijing had only 11 blue sky days per month over the past five years, which was far short of its 22 days per month expected. It has to be remembered that China is providing "carbon subsidies" to the West and other developed countries by supplying low-cost manufacturing produces to them at its own environmental cost. Like China, India's boom in coal-fired power is that much of the energy is going to export-oriented and energy-intensive industries, leaving devastating consequences on the rural areas of Orissa, Jharkhand and Bihar.

Despite formidable strides in poverty reduction, especially China's landmark achievement of lifting of hundreds of millions of people out of poverty, China and India still host the largest number of poor in the world. According to World Bank calculations, out of a total 2.3 billion people in China and India, roughly 1.5 billion earn less than US\$2 a day. Only rapid economic growth can lift them out of abject poverty.

The key question that remains is how China and India passage to a new growth trajectory can where economic growth and environmental protection can go hand in hand. Historically, the course of economic development followed the "grow first, clean up later" strategy which is nicely depicted by the "Environmental Kuznets Curve", named after noble laureate economist Simon Kuznets. It shows that, in the earlier phase of economic development, no or little attention is paid to environmental concerns. After a threshold, when basic needs are fulfilled, interest in attaining a clean environment rises.

The use of renewable energy resources is one of the ways to cut down the GHGs and transform economies from high to low carbon ones. Renewable energy sources, such as solar power, wind energy and bio-fuels which currently accounts for a small percentage of both China and India's energy baskets are likely to meet no more than 10 percent of China's and 2-3 percent of India's need by 2012. Both nations should increase the share of a cleaner form of energy vis-à-vis fossil fuels steadily for the sake of their long term economic sustainability.

According to the Stern Review on Climate Change, the transition to a low-carbon based global economy will open many new opportunities across a wide range of industries and services. It is projected that markets for low carbon energy products are likely to be worth at least US\$500 billion per year by 2050.

Further, both China and India should adopt the appropriate technology to eliminate their existing energy inefficiencies. India's energy efficiency, for instance, is inferior to both the developed and developing worlds. Carbon emissions per dollar of gross domestic product, a key yardstick of energy efficiency, are three times higher in India than in the United States. Governments around the world spend approximately US\$250 billion a year as distorting energy subsidies. A study in 2006 on China's climate policy showed that, in China, for CO₂ reductions up to 10-20 percent, air pollution and other benefits more than offset the costs of action.

The latest IPCC report has given an optimistic node to the global community about the mitigating cost of climate change. It firmly believes that many affordable technologies and effective policies can tackle climate change, cutting the global emissions by 50 percent by 2050.

The policy dilemmas for the Chinese and Indian governments are understandable. If they fail to respond to climate change and other environmental issues now, their economies will suffer in the medium to long run as global warming is set to take its toll. On the contrary, the cleaner energy options are costly to adopt and could hurt their current economic growth.

With a trillion dollar foreign reserves, China can afford to adopt renewable energy and implement other eco-friendly measures to save its and Asia's deteriorating environment. India can catch up with its neighbour steadily.

Economists are analysing the limits of China and India's growth from different perspectives. The infrastructure bottlenecks in India and the lack of sound capital markets in China are being considered, among others, as the main growth constraints on these economies. However, in the medium to long term, environmental problems may emerge as huge roadblocks to growth if both countries continue to rely on the traditional "growth first, environment later" approach. If their policy makers do not pay enough attention to global warming and environment problems now, there may be serious limitations to clean up their skies later on. It may then even be too late to avoid an ecological catastrophe from the melting of the glaciers. The two emerging giants should act now. Complacencies in adopting or implementing the green growth policies might limit their economies' long term development.

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