

The Evolving Role of Asia in Global Climate Change

Global climate change has moved firmly during the past six months to the forefront of the international agenda.

Last September, Ban Ki-Moon, Secretary-General of the United Nations convened a meeting of heads of state and other world leaders at the United Nations headquarters for a forum entitled “The Future in Our Hands: Addressing the Leadership Challenge of Climate Change.”

“Today I heard a clear call from world leaders for a breakthrough on climate change in (the December 2007 climate change conference in) Bali. And I believe we have a major political commitment to achieving that... Action is possible now and it makes economic sense. The cost of inaction will far outweigh the cost of early action,” the Secretary-General said.

That event was followed by a two-day meeting convened in Washington by President Bush with the participation of the 17 largest emitters of greenhouse gases. The president stressed the development of new technologies and voluntary measures to curb greenhouse gas emissions. In direct contrast, most of the other countries said mandatory controls were necessary to address the challenge posed by global climate change.

In October, the Nobel Committee announced that the 2007 Nobel Peace Prize was to be awarded jointly to former U.S. Vice President Albert Gore, for focusing the attention of the world on the need to address climate change, and to the Intergovernmental Panel on Climate Change, which has been working for more than 15 years on identifying the scientific consensus on the human contribution to global climate change and its likely impacts.



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The year 2007 concluded on a high note with the U.N. Climate Change Conference in Bali where, after lengthy and difficult negotiations, a “Bali Roadmap” was finally worked out. The roadmap lays out a course for a new negotiating process leading to a post-2012 international agreement on climate change. Important decisions were taken for the launching of an Adaptation Fund, on reducing emissions from deforestation and on technology transfer. No decisions were taken regarding the limitation of greenhouse gas emissions from the industrialized or the developing countries, and these will be the focus of detailed negotiations during the next two years. No global agreement can be successful if some of the large emitting countries impose limits on their emissions while others continue to have voluntary emission limits.

The role of the Asian countries in global climate change has changed enormously since the Kyoto Protocol was signed in 1997, and they can be expected to play a much more active role in any new agreement to address this important global issue.

As recently as the early 1990s the perception in Asia was that the region was an “impactee” rather than an “impactor.” That is, the region was likely to be affected by global climate change, but the duty to reduce future greenhouse impacts rested with the industrialized countries.

This was reflected in the Kyoto Protocol, which did not place any limits on emissions from the developing countries, while requiring the industrialized countries to reduce them by an average of five percent from the levels of 1990 by 2012.

All of the industrialized countries agreed to limit their emissions, with the notable exception of the United States and Australia. (The new government in Australia has just signed the Kyoto Protocol.) U.S. delegates argued such limits would have an adverse impact on the American economy. At the same time, they said, there would be no significant global climate change benefits so long as large developing countries such as China, India and Brazil continued to increase their emissions of greenhouse gases.

For a better perspective, let us look at the current status of emissions from the larger Asian countries and compare them with emissions from the leading industrialized countries. Many gases contribute to global climate change, but the largest contributor is carbon dioxide (CO₂). The use of fossil fuels is by far the largest source of man-made CO₂ emissions, and shall be the focus of our discussion here.

Asia’s current contribution to greenhouse gas emissions

During the past two decades, greenhouse gas emissions from Asian countries, particularly carbon dioxide, have been increasing rapidly, due mainly to industrialization and population growth. Four of the ten countries in the world with the highest CO₂ emissions from fossil-fuel use today are located in Asia. China ranks second

today, but may overtake the United States as the largest emitter by next year. India (fourth), Japan (fifth), and South Korea (seventh) also rank among the top eight emitters.

These rankings do not include the carbon dioxide emissions from the burning of firewood and other biomass that are large sources of energy in many Asian countries. Further, ongoing changes in land use, particularly as forests give way to agriculture and urban development, also represent significant contributors to carbon dioxide emissions in many of the larger Asian countries such as Indonesia and the Philippines.

On average, each American emits more than four times as much carbon dioxide from energy use as a Chinese, and as much as 20 Indians. This difference in per-capita CO₂ emissions has important implications for reaching a binding international agreement on global climate change.

Issues of equity in addressing global climate change

Each country takes an approach to limiting greenhouse gases that is beneficial to its own immediate interests.

At climate change meetings, the U.S. delegate might say to his Chinese counterpart: “By next year, your emissions of carbon dioxide will be greater than ours. If we put a cap on greenhouse gases in our country, even more of our manufacturing industries will move to your country or to other developing countries. This will mean more jobs lost within the United States and more hardship for our people. Further, if the industry is simply relocated to a developing country, the global emissions stay the same. Our economic loss will be your economic gain.

“Thus we won’t put any limitations on greenhouse gas emissions unless you do the same,” he concludes.

The delegate from China might reply: “Oh, come on. Each American emits about four times as much carbon dioxide as a Chinese. We want to offer a good life to our citizens, too, and close the gap in the living standards of the people in our respective countries, and we have to use the energy resources that we have, mostly coal. Further, most of the greenhouse gases in the atmosphere today were emitted by the industrialized nations, with the largest contribution coming from the USA.

“It’s your responsibility to reduce emissions first, before asking us to do the same,” he responds.

There are thus important equity issues to be resolved, if all countries of the world are to reach an agreement to limit future emissions of greenhouse gases. The three types of equity issues that are implied in the fictitious discussion between an American and a Chinese are:

EQUITY BETWEEN COUNTRIES

Countries come in different shapes and sizes, and have vastly different populations. One indicator that is frequently used in comparing countries is the average income of people in countries, i.e. the per capita Gross

While it may be unrealistic to expect countries such as China and India to reduce emissions from their present levels, it is clear that the rapid growth of these and other developing countries of Asia require that they play an active part in addressing global climate change concerns.

Domestic Product (GDP) or gross national income (GNI). It is an internationally accepted goal to bridge the gap between the incomes in the industrialized and the developing countries.

There is a fairly good correlation between the average Gross Domestic Product of a country and its per capita energy use and the resulting impact on the environment. The developing countries around the world, including China and India, point to the per capita GDP of their countries, and the need to catch up with the industrialized countries such as the United States, Japan and Germany.

They maintain that this cannot be achieved without increased use of energy and other resources. Thus, they say, their emissions of greenhouse gases will have to increase for many years.

EQUITY WITHIN COUNTRIES

In most of the industrialized countries of the world, there is relatively little disparity in energy use between the urban or rural areas or between different parts of the country. This is generally not the case in much of Asia.

The urban upper middle class has its automobile or two and its use of electricity for lighting and running a TV set, refrigerator, computer and other appliances is comparable to its counterparts in Europe or Japan. By contrast, the rural population may use bicycles or animals for transportation, and consume only a small amount of electricity due to its high cost.

In fact, there are still over 100 million people in Asia with no access to electricity.

Reducing inequities within countries can be achieved either by impoverishing the rich, or improving the lot of the poor. Most people would agree that the latter option is preferable, and this is the approach that Asian developing countries are pursuing.

Such policies require more development and energy use in the rural areas, and thus higher emissions of greenhouse gases for many years.

Despite the relative affluence of Shanghai, New Delhi and Jakarta, there is still quite a way to go before the growing affluence of the middle classes extends to the poorer sectors of society in most of the Asian countries.

EQUITY BETWEEN GENERATIONS

The earth has been getting warmer during recent decades primarily because human beings put greenhouse gases into the atmosphere faster than the ocean and the forests can absorb them.

The levels of carbon dioxide, for example, are about 30 percent higher today than they were in pre-industrial times. Most of this increase has come from the emissions from Europe, the United States and, to a smaller extent, Japan. These countries developed their economies and reached a good level of affluence before the implications for the global environment in general, and climate change in particular, became known.

Past generations of Europeans and Americans did not set out to damage the global environment, but the

results of their actions impact all countries of the world. Future generations — particularly in the developing world — are being asked to sacrifice to make up for the profligacy of our ancestors. Ironically, the small islands of Asia and the Pacific, which have made essentially no contribution to greenhouse gas emissions, are likely to be the first ones to be hit hard by global climate change.

Reaching equity between generations has been a difficult issue in many fields, be it the national debt of the United States, the depletion of mineral and other natural resources, or the accumulation of greenhouse gases in the atmosphere.

A major problem here is that future generations do not vote in current elections. It is a rare politician in any country who will sacrifice his or her re-election for the sake of future generations.

The changing role of Asia's developing countries

The atmosphere does not care whether the greenhouse gases entering it come from the industrialized countries or the developing ones, and that the changes to the global climate will affect all countries, rich and poor.

A rise in sea level would result not only in the gradual submergence of the small island states such as the Maldives, but also create major problems for many of Asia's largest coastal cities, such as Jakarta, Bangkok, Manila and Shanghai. Tens of millions of people in Asia may have to be resettled, and massive expenditures incurred to protect the coastal cities from sea level rise, which under various scenarios developed for the Intergovernmental Panel on Climate Change, may range from about 20 centimeters to about 70 centimeters (about 8 inches to 2 feet) by the end of this century.

Further, the expected greater intensity (but not necessarily the frequency) of hurricanes could have a larger impact than before on countries in Asia that are frequently affected by hurricanes (cyclones), such as Bangladesh, China, India, the Philippines and Japan. Also, parts of many countries in Asia, including Northwestern India and almost all of Pakistan, are already suffering from shortages of water.

A rise in global temperature would, for example, accelerate the melting of glaciers in the Himalayas that feed the rivers in Northern India and throughout Pakistan, leading subsequently to even greater water shortages.

The Intergovernmental Panel on Climate Change reports that the world has until about 2020 to reverse the trend of rising greenhouse gas emissions and avoid the worst effects of climate change. A joint statement issued recently by the national science academies of all G8 nations and Brazil, China, India, Mexico and South Africa drew attention to the IPCC findings and urged a goal of confining global warming to two degrees above pre-industrial levels.

The academies said: "Our present energy course is not sustainable ... The problem is not yet insoluble, but becomes more difficult with each passing day."

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their present levels, it is clear that the rapid growth of these and other developing countries of Asia require that they play an active part in addressing global climate change concerns.

One possible approach may be, for example, for the developing countries to agree not to exceed 2 tons of carbon emissions per capita by 2025. On the other side of the coin, developed countries could make a commitment to reduce their emissions to 2 tons per capita by 2025.

By that time, it's likely that newer technologies such as solar photovoltaic (PV) and fuel cells would have come down in price substantially, enabling their wider use. All countries could then reduce their per capita emission targets together to reach the levels required to stabilize the world's climate. In view of their current high levels of per capita emissions, the United States, Canada and Australia may require a few more years to achieve this level, and a special provision could be made in a new treaty or protocol to permit this, as was the case in the Kyoto Protocol.

The main objective should be on starting action now, and refining targets later, rather than finding reasons for delay.

There was an industrialist who used to say, "Why should we do anything for the future? What has the future ever done for us?" He changed his mind when it was pointed out to him that the "future" is not an abstraction, but the time during which his grandchildren and their children would be living, and how they will live is what we are determining today.

The EWC and global climate change

In 1979, in an era when energy professionals talked mainly to other energy professionals and those working on environmental issues met primarily with others having a similar interest, the Environment and Policy Institute (EAPI) of the East-West Center initiated a cooperative program on "The Environmental Dimensions of Energy Policies."

Probably the first such effort in the Asia Pacific region, the program brought together senior policymakers and professionals from a number of major countries in the region, including Australia, Canada, China, India, Japan, Malaysia, the Philippines, the Republic of Korea and the United States. Participants were asked about the energy-environment issues of greatest concern to them and where the East-West Center could make an important contribution through cooperative work.

During the same planning meeting, senior officials and professionals were asked whether it would be useful to initiate a project dealing with global climate change. Most of them felt that it was way too early and not on the priority list of environmental concerns in the Asia Pacific region.

A full decade was to pass before the East-West Center, in cooperation with the Argonne National Laboratory, hosted a conference on global climate change in Honolulu in 1989. Many of the participants have subsequently played important roles in their countries, and at the international level, in formulating policies to address the challenges of global climate change.

To mention just two, Qu Geping was China's first Administrator of their Environment Protection Agency and is a senior member of the leading group that oversees environment issues in that country. Dr. Rajendra Pachauri is Chairman of the Intergovernmental Panel on Climate Change, the United Nations body that shared the 2007 Nobel Peace Prize with former U.S. Vice President Al Gore.

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