



Marshalling Asia to Act

By Christine Loh and Simon Tay

Time is running out to address global warming. Yet many Asian countries, including those likely to be hardest hit, are only just beginning to discuss strategies.

Christine Loh and Simon Tay outline the key issues from an Asian perspective and point to a menu of options that should be explored to combat climate change in this region.

GLOBAL ATTITUDES TO CLIMATE change shifted in 2007. The most visible symbol of this, of course, was the awarding of the Nobel Peace Prize jointly to Al Gore, who helped publicize the issue with his movie, “An Inconvenient Truth,” and the Intergovernmental Panel on Climate Change (IPCC), which has generated a consensus on the science of the issue.

Asian attitudes to climate change also shifted in 2007. The Asia Pacific Economic Cooperation (APEC) forum announced it would target an increase in energy efficiency of some 25 percent for its members. The Association of Southeast Asian Nations (ASEAN) and the East Asian Summit both issued declarations on the environment, climate change and energy. Some developing countries, including China, announced their own national plans that set out approaches to minimize the impact on climate change through such measures as energy efficiency and greater emphasis on clean energy. While avoiding binding targets to cut total emissions, these plans are a major step forward.

This could not have come at a better time. As this issue of *Global Asia* went to press, negotiations over the successor to the current international climate change framework — the 1997 Kyoto Protocol — were underway at the annual United Nations Framework Convention on Climate Change conference in Bali, Indonesia in December. The executive secretary of that body, Yvo de Boer, sees Bali as a turning point where the “road map” will be produced to chart a course for the negotiations on Kyoto’s successor — to be completed by the end of 2009.¹

¹ Yvo de Boer, "Welcome to the United Nations Climate Change Conference in Bali", UNFCCC, 2007. http://unfccc.int/meetings/cop_13/items/4094.php Accessed 15 November 2007.

² Although each country's reduction target is different, together, they are required to reduce greenhouse gas emissions by an average of 5.2 percent below 1990 levels. For example, targets range from a reduction of 8 percent relative to emission levels in 1990 (in the case of the EU) to an increase of 10 percent (in the case of Iceland).

THE CURRENT DISCUSSION

The current negotiations are focused on the Kyoto Protocol's "second commitment period" — which will begin in 2012. The Kyoto agreement includes two categories of countries with undertaken different levels of commitment: the first, the so-called Annex I countries, have agreed to legally-binding emissions caps to be achieved during the "first commitment period" between 2008 and 2012²; the second are those that have no emission limits, the Annex II countries. In terms of obligations, both are required to communicate information on emissions as well as national "adaptation" and "mitigation" programs aimed at dealing with the adverse effects of climate change and limiting the behavior that contributes to it. They may also host emissions-reduction projects under Kyoto's Clean Development Mechanism (CDM), which allows developing countries to undertake projects that generate Certified Emissions Reduction (CER) credits that developed countries can purchase to help meet their commitments.

Despite the shift in attitudes, a clear post-2012 plan has yet to emerge from a recent flood of proposals. Negotiations have reached an impasse — with the West calling for tough, mandatory targets for all, and a treaty with the teeth to enforce them. Developing countries counter that they will not enforce regulations that slow their own development in order clean up a mess that is largely the responsibility of developed countries.

Time is running out to resolve the debate. The Intergovernmental Panel on Climate Change's latest report on the scientific consensus behind glo-

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bal warming reinforces previous findings about the certainty of impacts. Other recent reports, meanwhile, have argued that the potential for catastrophe is greater than previously thought.

However, many countries in Asia and elsewhere — including developing ones that are most at risk — have only just begun to assess the threat and develop potential adaptation and mitigation strategies. As such, it is hard to imag-

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ine a post-2012 framework without an appropriate “menu” of options for countries to achieve their different commitments.

Based on this possible “menu,” this article explores the key issues for the Kyoto Protocol’s “second commitment period” from an Asian perspective. There are fundamental questions in this discussion: What is to be expected from Asia as the global community calls for stronger action on climate change? How should Asian countries respond, both now and beyond 2012? What are the best approaches, given the many growth-focused developing countries in the region with large — and still poor — populations?

ASIA: THE KEY REGION

For a variety of reasons, many scholars and policy-makers around the world point to Asia as the region likely to determine the success or failure of negotiations for the second commitment period. The region includes rapidly developing and emitting countries such as China and India, vulnerable and mostly unprepared countries like Indonesia, the Philippines and Bangladesh, leading energy-efficient countries like Japan and those caught in-between such as South Korea and Singapore and Hong Kong, which are financially important and also vulnerable.

Despite this diversity, Asia has begun to transfer technology through the Asia-Pacific Partnership on Clean Development and Climate, set regional goals through APEC, and generate large numbers of CDM emission credits to sell to the world. Furthermore, these diverse countries share several key issues and concerns that must be addressed when negotiating the post-2012 framework. Analyzing these issues will help lead to the most effective “menu” of options for Asian countries to tap their national capacities and prepare to address climate change seriously on a national, regional, and global scale.

ISSUE 1: A GLOBAL GOAL

Many recent discussions have focused on how to set a global climate goal that will achieve the UN’s original objective of avoiding dangerous human impact on the climate system. This global vision could be expressed in a variety of ways: a target for limiting the rise of global average temperatures, an atmospheric CO₂ concentration target, or an emissions reduction target. However, even if an overall target could be agreed upon, translating this into specific commitments at a national level will face problems of compliance and varying degrees of capacity.

³ The term “sustainable development policies and measures” (SD-PAMS) was first used by Winkler H., R Spalding-Fecher, S. Mwakasonda, and O. Davidson in “Policies and Measures for Sustainable Development.” In Baumert et al. (eds.). *Building on the Kyoto Protocol: Options for Protecting the Climate* (World Resources Institute, Washington DC). A Sustainable Development Policy and Measure (SD-PAM) would be a commitment to implement a policy or measure that makes the development path of a country more sustainable, with the co-benefit of lowering greenhouse gas emissions. A register of declared SD-PAMS could be created, registering progress made by developing countries in meeting the objective of the policy or measure. Funding to assist such progress could come from climate and non-climate sources and from public as well as private investment.

So far Asian countries have largely steered clear of long-term targets. Japan, however, has proposed that nations cut emissions by 50 per cent by 2050 in its “Cool Earth 50” plan. Also, leaders at the recent East Asia Summit echoed the Kyoto Protocol’s overall goal of stabilizing greenhouse gas emissions. Although these are good first steps, it will take many years before they can be translated into action plans with specific targets.

ISSUE 2: TARGET SETTING

Many developed countries are convinced that setting mandatory targets now for all major greenhouse gas emitters — especially China and India — is the only way to ensure a reduction in emissions from these countries, and ultimately achieve climate stabilization. The reluctance of developing countries to accept targets is regarded as selfish and unfair by some, but given their lack of capacity, right to develop and smaller responsibility for the current problem, it is certainly understandable. If misunderstandings on this point are not dispelled, climate change negotiations could become more acrimonious, and most of Asia would be expected to take the side of the developing countries.

Developing countries also have a right to be wary of accepting targets because their rapid and unpredictable growth patterns make it difficult to set meaningful ones. Arguably, basing targets on projections that turn out to be wrong is unhelpful and may even be harmful. In the case of China, there has been a large under-estimation of energy consumption and carbon emission because of the rapid growth of heavy industry.

A target in the form of a voluntary pledge and a review mechanism makes more sense because these can drive efforts to reduce greenhouse gas emissions. In addition, soft voluntary goals, mostly in the form of industrial targets, are be-

ing taken seriously in Japan, South Korea and Taiwan, where a large proportion of industries are energy-intensive. Some of these are expected to serve as a transition to a mandatory system.

ISSUE 3: SUSTAINABLE DEVELOPMENT

Climate change is not an issue that developed countries can solve on their own, even if they take on a greater share of the burden. Adopting a sustainable development approach, built on voluntary targets, would allow developing countries to accept greater responsibility without negatively impacting growth. The idea is for countries to accept specific policy commitments that not both promote sustainable development and would have a beneficial effect on greenhouse gas emissions. This has been referred to as the Sustainable Development Policies and Measures approach.³

This approach is designed for developing countries where climate policy is typically not a high political priority. Policies and measures that build on development objectives can appeal to policymakers, government and industry in such countries, and could be used to achieve more than might otherwise have been done.

It needs to be made clear that this approach is not a substitute for mitigation by developed countries — i.e., policies that limit behavior that contributes to climate change. However, there can be opportunities to link these approaches to the Kyoto mechanisms. Sustainable development policies and measures also serve as a platform to support the Kyoto Protocol’s Clean Development Mechanism, which could in turn expand into a project that embraces national objectives or programs. A broader project would be beneficial for many developing Asian countries, bringing sustainable development objectives in line with policies to reduce greenhouse gas emissions.

4 According to the Stern Review, nearly 20 percent of total global greenhouse gas emissions are from deforestation. Based on a study they commissioned, eliminating deforestation in 8 countries responsible for 70 percent of emissions from land use could cost around \$5-\$10 billion annually at first, although the marginal costs are expected to rise over time. The IPCC's recent climate change report includes several updated studies on the cost of mitigation through avoided deforestation as well as afforestation and reforestation. These studies also show a relatively low cost and high potential for these mitigation measures, particularly in Asia (see the IPCC's Fourth Assessment Report, p. 552, Fig 9.5).

5 There are four major ways to reduce carbon emissions from forests: avoided deforestation, afforestation (planting new trees), reforestation (replanting old forests), and improving forest management practices.

6 The Stern Review highlights benefits such as preservation of biodiversity, research and development, sustainability, tourism, and reduced vulnerability to extreme weather events as co-benefits of reducing deforestation in developing countries (Stern, p. 314).

7 The United Nations Development Programme's (UNDP) Global Environment Facility (GEF) currently has four funds dedicated to climate change adaptation: the Strategic Priority on Adaptation (SPA), Least Developed Countries Fund (LDCF), Special Climate Change Fund (SCCF), and Adaptation Fund (AF, not active until after 2010). The LDCF is the most substantial, with \$90 million since 2001 and \$150 million projected for the period 2007-10, although funding is "highly uncertain." It is targeted to help the Least Developed Countries (LDCs) under Kyoto formulate National Adaptation Programmes of Action (NAPAs) and implement projects to address their most urgent climate change needs. While the first three funds are donor-financed, the AF will be financed by an "adaptation levy" of 2 percent on the Clean Development Mechanism (CDM). The UNDP also provides support for the National Communications of non-Annex I parties, including China and India, which are required to include an adaptation section.

ISSUE 4: DEFORESTATION

Forestry should be one of the first sectors targeted in pursuing sustainable development in developing countries because it is an effective way to achieve significant emissions reductions on a global scale at a relatively low cost.⁴ Moreover, in contrast to many other mitigation strategies, developing countries have the potential to be global leaders in reducing emissions in the forestry sector.⁵ Reducing the rate of deforestation will also generate additional benefits that will help lower adaptation costs and promote sustainable development.⁶ However, the current Kyoto mechanisms do not allow developing countries to generate certified emissions reductions (CERs) when they take actions to avoid deforestation.

This is an issue of particular interest and benefit in Asia. Indonesia, for example, has some of the highest forestry-related emissions in the world, while both China and Australia have taken the lead in addressing this issue through national and global initiatives. Future initiatives should build on their success by integrating forestry and sustainable development policy, working with international organizations like the World Trade Organization to make sure the appropriate trade framework is in place, and changing the post-2012 Clean Development Mechanism to include deforestation credits.

ISSUE 5: ADAPTATION

Although the current Kyoto framework includes several mechanisms to address adaptation and vulnerability,⁷ these aspects of the treaty have been largely neglected. This is mainly because

large developing countries are more focused on energy security and mitigation. Similar to deforestation, the way forward would be to shift this focus by integrating into the mainstream of the Kyoto framework adaptation and sustainable development policies and measures. Both Asia's developed and developing countries are particularly vulnerable to the impacts of climate change, with effects ranging from flooding and natural disasters in Bangladesh to food and water security in China, India, and Australia. However, most Asian countries are still in the beginning stages of understanding their climate vulnerabilities and comprehensive strategies are virtually non-existent.

Future Kyoto mechanisms must address the fact that mitigation and adaptation are bound together. Using the sustainable development policies and measures approach would provide an incentive for developed and developing countries to co-operate on adaptation measures, allowing the generation and selling of emission reduction credits from adaptation programs. However, this funding and co-operation must move beyond the project-based nature of the current Clean Development Mechanism and focus on building the capacity for developing countries to address these issues themselves. Other necessary steps include integrating adaptation into the full range of development aid provided by international organizations and developed countries, and using "climate insurance" from a stable international body.

ISSUE 6: MITIGATION

The Kyoto Protocol restricts the emission of

⁸ In August 2007, a total 2,425 projects were listed in the CDM pipeline representing 2.26 billion tons of CO₂ emission reductions by the end of 2012.

six greenhouse gases by the so-called Annex I countries during the first commitment period. It also introduced three “flexible mechanisms” to help establish a market value for these emissions — International Emissions Trading (IET), the Clean Development Mechanism and Joint Implementation (JI). The aim of creating market value for these emissions is, fundamentally, to enable countries to meet emission targets in a cost-effective manner and to create incentives for those countries that can emit even less than their maximum caps.

International Emissions Trading is the mechanism that Annex I countries may use towards meeting their targets. The EU designed its Emissions Trading Scheme in response to the Kyoto Protocol; numerous new regional schemes in the US, Australia and Japan are under development and are expected to grow. Although large developing countries, such as China and India, are not expected to participate in the second commitment period, they are observing closely and working to develop their own systems.

In the meantime, the Climate Development Mechanism should be reformed to provide more opportunities for immediate cost-effective emission reductions; assist development and deployment of breakthrough technologies to achieve deeper reductions in the future and strengthen adaptation to the adverse effects of a changing climate. The attraction of reforming the CDM is that it does not require the Kyoto Protocol to be amended.

The CDM market has seen steady growth since its inception,⁸ with China by far the largest supplier in Asia and around the world. China has also recently developed a CDM Fund that will re-invest money generated from projects into other domestic climate change initiatives. The fund has been designed to move away from

the current global transfer of emissions under CDM to an overall global reduction.

These continually expanding markets help to establish a price for carbon, providing a powerful stimulus to private investment in research, development and deployment of low-carbon technologies in the long-term. Taxing carbon emissions is another option favored by some developing countries in Asia, and the long-term solution will most likely include both taxation and trading. The goal of the post-2012 framework should be to build on the existing flexible mechanisms to create a global carbon market that includes broader participation and the involvement of more sectors such as forestry.

The most effective way to encourage Asian countries to reach this goal is not through enforcing emissions targets that will cap economic growth, but through a diverse “Asian stir fry” of options.

ISSUE 7: TECHNOLOGY

Advanced technology will be a critical component of a successful post-2012 strategy to reduce greenhouse gases because it works towards the goal of de-coupling economic development from carbon emissions. Low- or zero-emissions technology can enable developed countries to maintain their standard of living while still allowing developing countries to reach similar levels.

The current framework relies primarily on the Clean Development Mechanism to transfer technology from developed to developing countries. Although this has achieved some gains, the question is how the post-2012 framework

9 James Brooke, "Japan Squeezes to Get the Most out of Costly Fuel," *New York Times*, 4 June 2005. <http://www.nytimes.com/2005/06/04/business/worldbusiness/04energy.html> Accessed 25 September 2007.

10 "China's Renewable Energy Law", 28 February 2005. http://www.renewableenergyaccess.com/assets/download/China_RE_Law_05.doc Accessed 15 October 2007.

11 "IEA World Energy Outlook 2007: China and India Insights," November 2007: 42-3, 51.

can be reformed to most effectively drive the research, development, diffusion and deployment of technology that is essential for combating climate change.

Among developed countries in Asia, Japan has a unique global position in technology transfer leadership, boasting perhaps the most energy efficient economy in the world.⁹ Among developing countries, China has set specific renewable energy targets and implemented strategies to achieve the targets; it has also passed the Renewable Energy Law and it is expected to invest US\$10 billion in renewable energy in 2007, second in the world only to Germany.¹⁰ Many countries are members of bilateral, regional, and global technology exchange partnerships, including APEC and the Asia-Pacific Partnership on Clean Development and Climate, which have already set significant targets.

This is not all about climate change, of course. Much of the political will and desire to use better technology stems from energy security worries. Because of these concerns, coal is predicted to remain the primary fuel source for China and India in the near future, making carbon capture and sequestration (CCS) technology uniquely important in slowing the growth of Asia's greenhouse gas emissions.¹¹ However, developments are still at an early stage. Beyond any specific technology, energy efficiency is by far the best way to improve energy security, reduce greenhouse gas emissions and increase competitiveness. That is why many Asian countries are targeting energy efficiency.

Clearly there are a variety of options for technology. However, at present, the evaluation is often patchy or, worse, influenced by the potential providers of that technology. A more rational, impartial and authoritative clearinghouse for evaluating technologies is needed, in much same way as the Intergovernmental Panel on

Climate Change has helped forge a consensus on the science of climate change.

FROM ISSUES TO RECOMMENDATIONS

There will come a time, likely in the foreseeable future, when the true risks of dangerous climate change will be more fully grasped and mitigation measures better tested. This will likely propel nations to take much more stringent action to stabilize greenhouse gas emissions. However, it is necessary to ensure that negotiations for the "second commitment period" will still lead to meaningful results, since developing countries in Asia are not yet ready to agree to a specific greenhouse gas stabilization goal or binding national targets. Taking this short-term view, emissions reductions leading to stabilization can best be achieved by aligning Asia's crucial interest in energy security and sustainable development by pursuing energy efficiency and a low-carbon future more aggressively. This can be achieved through the transfer of funds and technology from the developed world via a reformed Clean Development Mechanism that has a wide "menu" of options.

The menu of interrelated options is based on linking the CDM to sustainable development policies and measures. This menu will include the integration of deforestation and adaptation measures into the CDM framework, focusing on building capacity and infrastructure in developing countries for effective national planning, implementation, monitoring and enforcement of climate change policy.

This increase in responsibility in developing countries must be matched and exceeded by developed countries. They should take the lead by reducing emissions more aggressively. Developed countries must increase collaboration on science, research and technology, encourage investment in alternative energy and

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continue to refine and expand carbon markets that generate genuine emissions reductions. Furthermore, an international “Technology Clearing House” can help decision makers in developing countries choose the most effective options for their national mitigation efforts.

Countries across Asia are currently doing the homework to understand the science and risks of climate change, investigate mitigation strategies and build government institutions to address this global problem. By the time international negotiators have decided on a long-term global target to avoid catastrophic climate change, which will most likely take a number of years, they need to be ready to step up and contribute their share to the mitigation effort. At this stage, the most effective way to encourage Asian countries to reach this goal is not through enforcing emissions targets that will cap economic growth, but through a diverse “Asian stir fry” of options that allows them to adapt to a warmer world and sets them on a low carbon development pathway.

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