

## | CHAPTER 10 |

# CONCLUSIONS AND RECOMMENDATIONS





## Chapter 10

### Conclusions and Recommendations

Climate policy alone will not solve the climate change problem. Climate outcomes will be influenced not only by climate-specific policies but also by the development path chosen. Asia, which is already experiencing the adverse impacts of climate change, cannot afford to “wait and see” or follow the historic, unsustainable, carbon-intensive development paths of industrialised countries. Developing countries in Asia have an outstanding backlog of sustainable development and poverty reduction priorities, into which climate change mitigation and adaptation policies must now be integrated. Since much of Asia’s energy and material infrastructure will be built over the next few decades, regional policymakers and investment agencies should pursue a low carbon, climate resilient developmental path and ensure that climate change concerns are fully considered in all infrastructure investments.

The Bali Action Plan calls for consideration of nationally appropriate actions (for mitigation and adaptation) by developing countries in the context of sustainable development, enabled and supported by technology, financing and capacity building. Accordingly, the recommendations of Parts I and II of the White Paper are organised around these elements. In general, the Institute for Global Environmental Strategies (IGES) recommends that Asian countries should work together to formulate a post-2012 regime that (i) is characterised by a multi-stage, multi-track framework with differentiation of countries based on national circumstances, responsibility, capacity, mitigation potential, and adaptation needs, and (ii) includes progressively increasing emission reduction and adaptation commitments or actions, and differentiated financial and technological incentives and compliance provisions.

#### Mitigation

Asia offers many low-cost, effective mitigation opportunities. With increased incentives, streamlined clean development mechanism (CDM) processes, effective transfer of new technologies, a broader range of market mechanisms and carefully nuanced enabling policies, Asia can be expected to make a significant contribution to global climate change objectives. Specific recommendations include:

- (i) Ensure that the future climate regime effectively capitalises on the strengths, and overcomes the weaknesses, of the Kyoto Protocol and that any other approaches and actions outside that regime are complementary.
- (ii) Develop and quickly implement a multi-pronged approach to addressing the climate change impacts in developing countries of Asia, as the costs of inaction or delayed action will be several times higher than the costs of action.

- (iii) Identify and exploit widely available low-cost mitigation opportunities by initially enhancing energy efficiency (EE) and promoting renewable energy (RE), and then phasing in more advanced low carbon technologies.
- (iv) Ensure that all energy intensive industries in Asia prepare and implement a vigorous EE strategy, as this could enable greater GHG emission reductions than any other short term climate change option.
- (v) Strengthen the CDM through (a) simplified methodologies, inclusion of additional sectors, programmatic and sectoral approaches, and national policy-based approaches; (b) provision of a credible signal that the CDM will continue to ensure value for certified emissions reduction (CER) beyond 2012; and (c) multi-source funding to broaden funding sources and spread the financial risks of CDM projects among several institutions.
- (vi) Promote other types of market mechanisms for mitigation, including voluntary carbon markets, as the reduction in GHG emission trajectories in developing countries will be too small, even if all CDM pipeline projects are implemented.

## Adaptation

Climate extremes already take a terrible physical and human toll on the Asia-Pacific region and global climate change will make the situation worse. A “wait and see” attitude to climate change is no longer tenable and “no regrets” adaptation measures need to be implemented now. Specific recommendations regarding adaptation include:

- (i) Facilitate mainstreaming of climate change adaptation into economic development programmes, including agricultural development plans, by creating reliable capabilities for quantitative vulnerability assessment and adaptation planning, establishing improved metrics and standards, documenting best practice examples, improving capacities in developing countries, and requiring all major development policies and measures to undergo adaptation screening.
- (ii) Enhance the resource base to support adaptation efforts by (a) effectively involving the private sector; (b) carefully building adaptation measures on existing indigenous coping strategies, where applicable; and (c) promoting measures such as flexible farming systems, improved disaster preparedness and public awareness, early warning and monitoring systems, hazard mapping and asset inventories, reforestation, engineering of structures in coastal areas, and land use planning.
- (iii) Mainstream adaptation measures into water resource development and management plans, strengthening existing water resource management systems and measures to cope with potential impacts of climate change (such as increasing groundwater volumes stored in aquifers).
- (iv) Diversify water sources, improve water-related infrastructure, and conserve water to minimise the risks of more frequent and prolonged droughts.

## Integration with sustainable development

In some quarters there has been an unfortunate tendency to treat climate change and sustainable development as if they were separate domains of human endeavour. The White Paper findings reinforce the conclusion that climate change must be addressed within the overarching context of Asia’s sustainable development priorities. Asia needs

to ensure that (i) the global post-2012 climate change regime reinforces sustainable development efforts; and (ii) domestic and international efforts to achieve sustainable development in Asia contribute to reduction in GHG emissions. Specific recommendations include:

- (i) Implement integrated development and climate strategies by linking climate policies with related multilateral environment agreements (MEA), measures designed to achieve the millennium development goals (MDG), and national energy plans, while building synergies with policies in non-energy sectors.
- (ii) Design a post-2012 regime that reconciles global climate objectives with Asia's sustainable development priorities and treats mitigation, adaptation, technology and financing in a more balanced manner.
- (iii) Create mechanisms to recognise and support the synergies between sustainable development benefits, climate change adaptation and GHG mitigation including maintenance of a registry of best practices.
- (iv) Strengthen the assessment of each CDM project's contribution to sustainable development and devise a system that provides a premium to those projects that may have low CERs but high developmental co-benefits.
- (v) Visualise a low carbon future for Asia, by basing national energy strategies on a thorough reassessment of alternative energy potentials through a comprehensive inventory of natural resource endowments.
- (vi) Place EE at the centre of industrial development policy, as it yields quick, tangible environmental and economic benefits.
- (vii) Prevent direct or indirect conversion of peat land and tropical forests in Asia to monoculture biofuel crops.
- (viii) Ensure that biofuel production from food crops does not result in unaffordable basic food prices for the poor in developing Asia.
- (ix) Check that the land is not used by the landless poor for livestock grazing or other purposes when considering "wasteland" for non-food oil crops like jatropha for biofuels.
- (x) Formulate policies to encourage labour intensive production methods for biofuels while ensuring the health and safety of workers.

## Technology

There is no single "silver bullet" technology that will overcome global climate change, but there are many promising technologies that will contribute to the solution. The challenge is to ensure that development of these technologies is accelerated through expanded research programmes and then rapidly transferred to developing countries. Barriers to the accelerated deployment of promising technologies need to be overcome through partnerships at many levels. Specific recommendations include:

- (i) Facilitate the development, transfer, and deployment of low carbon technologies in developing countries of Asia by actively promoting synergies with technology initiatives outside the climate regime and engaging in early stages of low carbon technology development to lead to joint ownership of intellectual property rights.
- (ii) Even though the environmental and other benefits of second generation biofuel technologies (especially from waste organic matter) are expected to be significantly higher than those of first generation ones, further research in Asia is necessary on both technological options and the extent of their benefits.

(iii) Consider composting, which is less harmful to the environment and has multiple co-benefits, as a possible alternative (under appropriate local conditions), to upgrading municipal waste treatment systems from open dumps to landfills, which may reduce local environmental impacts but add (marginally) to global methane emissions.

(iv) Use centralised composting of market wastes (without any intention to profit from the sale of the product) as a suitable model for local governments to gain experience in alternative waste management practices.

(v) Use tight standards, ambitious EE targets and generous incentives to stimulate technological innovation at the company level, and ensure natural turnover of obsolete production processes.

(vi) Leverage supply chain partnerships and foreign direct investment to improve access to advanced EE technologies available in OECD countries.

## Finance

The cost of inaction on climate change far outweighs the cost of action. Therefore, there should be no absolute constraint in providing funding to combat climate change. There are barriers in ensuring that funds are applied where they can do the greatest good, however. Misplaced subsidies promoting first generation biofuels is one example drawn out in the White Paper. Innovative financing options, the leverage of financing institutions and the power of markets need to be creatively combined in Asia to generate long term climate change benefits. Some specific recommendations outlined in previous chapters include:

(i) Promote innovative financing options (such as carbon taxes, “green” procurement, or a regional technological development fund) to make the currently available low carbon technologies commercially viable, and create funding mechanisms to acquire and deploy low carbon technologies.

(ii) Broaden funding support for climate change mitigation and adaptation beyond the narrow confines of the CDM through initiatives of the multilateral financial institutions, the insurance industry, and venture capital, among others.

(iii) Require further identification and systematic addressing of the barriers to investment in more comprehensive EE programmes in developing countries by governments, business, and development partners.

(iv) Require public policy initiatives such as tax credits and accelerated depreciation for energy efficient technologies and servicing models to remove the barriers to EE by reducing the investment pay-back periods and minimising any perceived performance risk.

(v) Reach small and medium enterprises by a specialised institution with sufficient resources that can assess their technology needs and provide up-front financing of EE improvements and ongoing technical assistance.

(vi) In the forest sector, select a mix of non-market and market mechanisms which incorporates sustainable development concerns, protects forest dependent communities and ecosystem services, and does not rest on price alone.

(vii) Defer introduction of stronger biofuel promotion policies, such as increased fuel blending requirements, production targets, subsidies, or tax incentives unless there is a reasonable assurance that biofuels can be sustainably produced.

## Capacity building and institutional strengthening

Leadership, strong institutions, enhanced negotiating and implementation capacity, and effective inter-agency coordination are within reach throughout Asia, but additional capacity building is needed. Some specific recommendations include:

- (i) Demonstrate leadership by policymakers and politicians in Asia by moderating the growth of GHG emissions in the near term and putting in place a comprehensive plan of action for changing the region's emissions trajectory by no later than 2012, with a view to achieving a near-term peak and eventual reduction in emissions.
- (ii) Institute a well-structured inter-agency coordination committee, headed by the country's leadership, to deal with climate change as a cross-cutting, multi-sectoral challenge to the nation's economy, environment, and society.
- (iii) Strengthen the negotiating capacity of developing Asian country delegations, so that they may be fully engaged in the future global climate change negotiations.
- (iv) Make sectoral agencies responsible for mitigation and adaptation policies and measures specifically affecting their sectors.
- (v) Draft laws and regulations on climate change, covering fundamental principles, rules and norms, and integration of climate change into sustainable development.
- (vi) Prepare national action plans to guide integrated sectoral and local implementation of climate change responses.
- (vii) Retain the flexibility of climate policies to accommodate the continually evolving nature of climate change, but be firm enough to withstand opposition from vested interests.
- (viii) Strengthen institutional frameworks and incentive mechanisms to recognise and reward developmental co-benefits of climate actions at local, national and international levels.
- (ix) Pay serious attention to forest governance and tenure and the livelihood needs of forest dependent communities in the design and implementation of reduced emissions from forestry projects.
- (x) Reform institutional arrangements to promote adaptation options in planning and implementation of groundwater management and integrate effective climate change response policies into comprehensive water management plans.
- (xi) Promote and support local groundwater management to reduce the burden on central governments.
- (xii) Institute improved systems of allocating groundwater use rights, effective charging regimes, and volumetric monitoring.

## Multi-stakeholder participation

Climate change is a complex issue and multiple stakeholders in Asia need to work together as partners to find acceptable solutions. Some specific recommendations to enhance multi-stakeholder participation include:

- (i) Involve the entire community in climate change responses, with well established mechanisms to mobilise and empower stakeholder participation.
- (ii) Change perceptions so that there is a shared sense of responsibility and affiliation among all actors trying to solve climate change problems in Asia.
- (iii) Incorporate GHG emission accounting and carbon footprints not only in company reports, but at the household, community and municipal levels, with the

information disseminated widely throughout Asia.

(iv) Use multi-stakeholder processes and independent standards by accredited third party organisations to ensure positive social, environmental and economic outcomes of climate change projects in rural areas.

(v) Introduce carbon sequestration into community-based forest management models through REDD demonstration activities, paying attention to equitable distribution of benefits between government and the community, and within communities.

(vi) Clarify the expectations of each stakeholder group and evaluate how different models can meet those expectations for composting of household waste.

(vii) Provide timely and accurate information by the media in Asia on how individuals, companies and various groups can contribute to climate change solutions.

(viii) Increase involvement of Asian NGOs in international climate change policy forums and negotiations, intermediating between grassroots activities and national policy positions.

(ix) Strengthen the role of research institutes and universities in mobilising public support to tackle climate change, monitoring the effectiveness of mitigation and adaptation measures, and evaluating success factors of climate change policies, programmes and projects. Monitoring and evaluation activities by research institutes and universities should be supported by governments and international organisations.

## Research priorities

The uncertain extent and pace of climate change, the scope of potential future impacts, and the cost-effectiveness of multiple mitigation and adaptation options are often cited as barriers to short term responses to climate change. While the collective efforts of the Intergovernmental Panel of Climate Change and hundreds of associated researchers are gradually eliminating the uncertainty that worries policymakers, more research needs to be carried out in Asia and more Asian researchers need to become involved. Specific research priorities include the following:

(i) Downscaling global climate models to regional, national and local levels, so that changes in key parameters like river flows, storm frequencies, incidence of drought etc., can be better predicted.

(ii) Evaluation of impacts on Asia's vulnerable ecosystems and transmission of vector-borne diseases.

(iii) Economic analysis of the costs of action versus the costs of inaction, at regional, national and sectoral levels.

(iv) Cost-effective hazard mapping, vulnerability and risk assessments, assets at risk inventories, and evaluation of potential sea level rise impacts and adaptation measures.

(v) Revision of codes and standards (like building codes, engineering standards, setbacks from high tide etc.) to accommodate climate change impacts.

(vi) Technological research and development in the fields of second generation biofuels, carbon capture and storage, EE, RE, waste management, water harvesting and others, specifically adapted to Asian needs and conditions.

(vii) Design and implementation challenges for the transition to a low carbon, climate resilient economy.

(viii) Elements of non-climate policies that also generate climate benefits, in

industry, energy, transportation, agriculture, forestry and other sectors, along with possible means to reward the climate benefits and accelerate sectoral development.

(ix) Potential linkages between climate policies and MEAs, such as the Convention on Biological Diversity, the Vienna Convention and its Montreal Protocol, the United Nations Convention on Combating Desertification, and the Basel Convention.

(x) Documentation of indigenous coping strategies in dealing with extreme climate events and how this traditional knowledge can be incorporated into modern mitigation and adaptation strategies.

(xi) Causes and effects of poor geographic and sectoral distribution of CDM projects in Asia and evaluation of measures to redress the balance.

(xii) Implications of the various targets and climate change regime proposals on Asia's social and economic development prospects.

(xiii) Likely costs and benefits, implementation challenges and verification problems of sectoral and policy-based, programmatic approaches proposed as possible improvements to existing CDM guidelines.

(xiv) Desirability and practicality of developing a separate global accord or protocol on climate change adaptation, including alternative funding and implementation arrangements.

(xv) Mapping of natural resource endowments (wind, solar, geothermal, wave, biomass etc.) in Asia that will potentially contribute to nationally appropriate low carbon society transition strategies.

(xvi) Costs and benefits of engaging communities in protecting forests and in monitoring carbon stocks, composting municipal wastes, and protecting groundwater resources, in comparison to other options.

(xvii) Additional comprehensive life cycle assessment studies of environmental, economic and social effects of biofuels, and development of more cost effective and environmentally sound ways to produce biofuels, especially second generation biofuels.

(xviii) Environmental justice and equity consequences of climate change policies, especially in the impact of climate change on groundwater resources, use of wasteland and/or food crops for biofuels, and exclusion of forest-dependent communities from forests protected for carbon sequestration.

(xix) Institutional research on why climate change has tended to be treated as a stand alone issue, rather than fully integrated into already established sustainable development institutions in Asia-Pacific.

(xx) Cooperative South-South research on policy transfer and diffusion, in climate change related areas like EE and RE, to ensure that best practices are quickly recognised and widely disseminated.

## Overall

The one overriding policy recommendation of the White Paper is to ensure that climate change and sustainable development endeavours in Asia-Pacific are not permitted to diverge. Policymakers from the region should make this position, and its implications, abundantly clear in any future climate change negotiations. A sustainable development pathway for the Asia-Pacific region towards a low carbon, economically resilient society, in which poverty reduction, security, access to opportunities for all and a high quality environment are assured, must be a high priority goal.

