

# **Report of the Network of East Asian Think-Tanks (NEAT) Working Group on East Asian Environmental Cooperation**

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## **I. Preamble**

1. This paper aims to provide policy recommendations to address climate change issues in line with sustainable development of the Association of Southeast Asian Nations Plus Three (APT) region.

The climate change issue becomes an important policy agenda in the APT region against the backdrop of unprecedented worldwide momentum on the issue such as the publication of the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) and the agreement on the “Bali Action Plan” at the 13th Conference of the Parties (COP 13) to the United Nations Framework Convention on Climate Change (UNFCCC). The Fourth Assessment Report of IPCC highlighted that climate change is “unequivocal” and that it was at least 90% certain that human emissions of greenhouse gases (GHG) rather than natural variations are warming the planet’s surface. The Bali Action Plan is regarded as one of very important milestones in the process of the negotiations on the post-2012 agreement, not only because it contains a roadmap, an agenda and a deadline but also due to concurrent progress in discussions on all four building blocks of the climate regime beyond 2012 – mitigation, adaptation, technology and finance.

There are strong linkages between the issue of climate change and the issues of economic integration and trade liberalisation through various channels including prices of energy and food. In particular, the recent food crisis triggered by drastic food price hike highlights the importance of linkages between climate issues and food security, as it is argued that food price escalation is partly caused by a rapid shift to biofuels or drought in relation with climate change. Hence, the success of the APT region, which is making strenuous efforts both to promote economic integration and trade liberalisation and to tackle non-traditional security issues, in addressing the issue of climate change will be a great contribution to sustainable development of the global community.

## **II. General Principles**

2. The APT region is characterised by its great diversity in many aspects, including historical background, cultural or social dimension, and level of economic and social development. In terms of purchasing power parity adjusted gross domestic product per capita in 2006, according to the estimate of the World Bank, the range across countries in the APT region stretches from less than USD 2500 (Laos) to more than USD 30,000 (Singapore and Japan). It is also the region with one-third of the world’s poor and the region generating more than one-quarter of the global emission of CO<sub>2</sub> from fossil fuel combustion. Due to the high rates of population growth and a quest for higher standard of

living in many countries in this region, tackling these problems becomes increasingly difficult. Furthermore, countries of the region are particularly vulnerable to the impact of climate change, as the region has large population concentrated in coastal and low lying areas. In addition, the excess dependent on agriculture, marine resources and growing water requirement further affect their livelihood. It is therefore crucial for the countries of the region to cooperate and collaborate in areas of common interest to respond to the impact of climate change.

Against this backdrop, sustainable development of the APT region primarily targets on (i) poverty alleviation in less developed countries, and (ii) realisation of social system/life style in all relevant countries compatible with the carrying capacity of the Earth, while pursuing synergies between them through regional cooperation. The policy recommendations therefore attempt to address the issues by linking, in a synergistic manner, the strategies for higher economic growth and poverty alleviation in less developed countries and the strategies for realising low carbon social system in all countries. In this regard, it is worth noting that Asia has traditionally perceived human being as a part of nature, thus nature is not an object to be conquered but is the source of life to all creature including human being. This Asian view of nature has unique potential for pursuing primary targets of sustainable development and may facilitate to present an APT model of climate change policies useful to the rest of the world.

3. The policy recommendations should address major issues of mitigation and adaptation, requiring technology and financing. Further, they should be linked to other important issues of APT such as economic integration, risk management and disaster contingency planning. Adaptation is particularly critical to the poor who are most severely affected by climate change, and the issue of environmental migration/refugees is closely linked to adaptation. Integrated policy packages to tackle poverty alleviation, adaptation and environmental refugees will be not only desirable but also essential in the developing Asia. Potential areas of integrated approach include biofuels, forestry, and solid waste management all of which could create employment opportunities, while simultaneously contributing to adaptation and mitigation, if policies are carefully designed to promote sustainability.

4. The importance of effective implementation of policies must be emphasised, as many APT countries have faced far greater difficulty in implementation rather than formulation of policies. In this regard, political feasibility of climate change policies at the national level can be significantly improved by regional cooperation particularly for capacity development. The Common but Differentiated Responsibilities and Capabilities principle should prevail under regional cooperation mechanisms, if at all effective, in which the ambitious targets for the reduction of GHG emissions by developed countries and the preferential support for climate actions that are consistent with economic and social development in developing countries must be linked in a synergetic way. This type of joint actions will be necessary to give proper incentive for win-win solution.

5. The policy recommendations should facilitate operationalising the following existing agreements among the APT regarding climate change issues as well as the policy

recommendations by the Network of East Asian Think-tanks (NEAT) Working Group on energy security cooperation:

(i) The Cebu Declaration on East Asian Energy Security agreed at the Second East Asia Summit (EAS) on 15 January 2007, in which all signatories made commitment to mitigation of greenhouse gas emission through effective policies and measures and to energy security improvement through further energy efficiency and conservation efforts, and the promotion of renewable energy and, for interested parties, nuclear energy

(ii) The Joint Ministerial Statement of the First EAS Energy Ministers Meeting (EAS-EMM1) on 23 August 2007, in which all the energy ministers reaffirmed the importance of mitigating greenhouse gas emission through regional cooperation, agreed to formulate, on a voluntary basis, quantitative energy efficiency goals and action plans, as well as principles for production and promotion of environmentally and socially sustainable bio-fuels, and recognised the importance of eradicating energy poverty in this region.

(iii) The Singapore Declaration on Climate Change, Energy and the Environment agreed at the Third EAS on 21 November 2007, in which all signatories made commitment to the common goal of stabilising atmospheric GHGs by putting emphasis on both mitigation and adaptation.

(iv) The NEAT Working Group on energy security cooperation in 2005 proposed a) to institutionalise regional energy cooperation framework, b) to develop a regional market for conventional energies such as oil and natural gas, and c) to promote energy conservation through improved energy efficiency and alternative energy such as clean use of coal or renewable energy.

### **III. Focus Areas of Policy Recommendations**

6. Given the commitment of the APT leaders to mitigate GHG emission, serious efforts in implementing various mitigation measures should be made in the APT region at the national level and through regional cooperation. In particular, energy efficiency improvement and promotion of renewable energy may be crucial to addressing both resource capacity limitation, a potential bottleneck in economic development in this region, and water and food security, the potentially most serious social problems related to climate change in this region. It is also worth noting that carbon pricing based on market mechanisms for mitigation, such as carbon tax or emission trading, not only is a mitigation measure itself but also can generate revenues for funding adaptation and enhancing developmental co-benefits of climate policies. In this regard, regional emission trading mechanisms of one type or another may merit further studies.

7. Climate change will exacerbate not only environmental problems but also disasters such as rampant cyclones and typhoons, floods, or droughts that have taken and will likely take a huge human toll and that the poor is the most vulnerable to negative impacts of climate change. Given this fact, mainstreaming adaptation concerns into development planning at all levels should be urgently realised by way of, among others, removing

institutional, informational, participation- and policy-related barriers. The policy recommendations should address these barriers.

8. Developmental co-benefits should be reflected explicitly in the APT climate regime in order to contextualise climate change policies in sustainable development, particularly in poverty alleviation strategies. Developmental co-benefits of climate change policies include (i) improved energy security, (ii) MDG-focused poverty alleviation through regional(sub-national) development, employment generation, income generation as well as improved health condition at the community level (iii) improved environmental quality through air and water pollution reduction and waste management, and (iv) disaster and environmental risk management. As one of the effective instruments to exploit developmental co-benefits of climate policies, potentials of the clean development mechanisms (CDM) should be further exploited by enhancing efficiency of the CDM approval process and contribution to sustainable development.

9. Realisation of prosperous low carbon development in the APT region requires deployment of existing low carbon technologies and introduction of innovative low carbon technologies such as energy efficiency and conservation (EE&C) technologies, renewable and environmentally friendly energy resources. These technologies can contribute not only to reducing nation-wide GHG emissions but also to eradicating energy poverty. The APT region contains top runner countries of low carbon technologies, and technology transfer and technical cooperation through the effective regional cooperation mechanisms underpinned by the Common but Differentiated Responsibilities and Capabilities principle will greatly contribute to sustainable development in the region.

10. Given the fact that forests play a vital role in conserving rain water and preventing landslide and soil degradation and that deforestation is not only the major threat to sustainable livelihood of many local communities but also the second largest anthropogenic source of CO<sub>2</sub> emissions after fossil fuel combustion, the sustainable management and conservation of forest is one of the most urgent challenges in the APT region. Reducing Emissions from Deforestation and Degradation (REDD) as well as afforestation are a commonly shared concept of conserving forests as a climate mitigation strategy by providing incentives for the conservation of carbon stored in existing forests, as discussed at COP 13 of UNFCCC, but further elaboration must be sought to identify ways towards effective implementation.

#### **IV. Policy Recommendations**

##### Mitigation with regional cooperation

11. Various mitigation measures including quantitative targets of reduction in carbon intensity, e.g., carbon emission per capita, should be introduced in the APT region, based on a thorough analysis of the past trend and future projection of GHG emissions in the region, with careful consideration for differences in development stage of the member countries. The effective and feasible measures such as regulatory, market based and voluntary approaches to achieve the carbon intensity targets must be sought, and information sharing of the existing best practices in and outside the region must be

promoted. Japan has developed energy efficient technologies and is expected to play a leading role in facilitating effective implementation of those mitigation measures in the APT countries. Advanced environmentally sustainable transportation (EST) policies practiced in Singapore and some APT countries and methane recovery from domestic waste and industrial waste from livestock industry are also promising best practices with significant mitigation potentials.

12. As a facilitation measure to implement mitigation actions in developing countries, periodic peer reviews on national mitigation plans for reducing CO<sub>2</sub> emissions in both developed and developing countries is proposed. The peer reviews aim to assess the implementation of national mitigation plans and to recommend measures to improve developing countries' mitigation efforts utilising existing good practices in the region. The peer reviews and adoption of recommendations from peer reviews will be voluntary, but it is recommended to provide economic incentives such as conditional transfer of green technologies and conditional foreign aid for facilitating mitigation measures only if developing countries' national mitigation plans are verifiable. This proposal by no means denies developed countries' bigger responsibilities in reversing climate change, but coping with global climate change requires global cooperation, and developing countries' responsibility for reducing CO<sub>2</sub> emissions and voluntary peer reviews should be seen from that perspective.

13. While halving the global GHG emission by 2050 and developed country initiatives are considered essential to restrain global warming at manageable level, cooperative sectoral approaches and sector specific activities, in line with developmental policies in industrial and land use sectors in all countries have significant potential for reduction of transaction costs, facilitation of low carbon technologies transfer, and equitable participation of diverse countries, by providing workable incentives and encouraging the realistic setting of country goals and targets within cooperation framework across key sectors. Carefully designed cooperative sectoral approaches and sector specific activities can play an important role to address concerns related to international competitiveness, and the potentials of these approaches in facilitating implementation of mitigation measures must be exploited.

14. Development of affordable renewable energy has synergetic effects among GHG mitigation, energy security and poverty reduction, as hundreds of millions of people out of normal electrical grid connections are forced to use various inefficient fuels with very high emission factors like fuel woods, kerosene, and so on, for meeting their day-to-day energy requirement. Development of renewable energy resources through various measures including setting up of realistic targets for renewable energy production, as already announced by quite a few Asian countries, should be given high priority, taking into account the vast untapped potential of this region.

15. The effective implementation of national policies to promote renewable energy must be supported by regional coordination. The developed economies can play a significant role in making renewable energy generation affordable for developing countries through technological innovation as well as technological and financial cooperation. To realize this, a comprehensive mechanism including financial and

technical support by developed countries for enhancing renewable energy generation and institutional capacity building in developing countries has to be developed in this region.

16. Formulation of the principles and suitable guidelines on production and promotion of environmentally and socially sustainable biofuels must be accelerated, taking into account all the ongoing attempts such as the Roundtable on Sustainable Biofuels and the Roundtable on Sustainable Palm Oils. It is essential to address rising concerns over possible negative agricultural, ecological and social impacts of the rapid promotion of biofuel production in the region, and to maximize biofuel potentials in addressing both climate change issues and energy security concerns in the region.

17. Civilian nuclear power and carbon capture and storage (CCS) technologies have significant potential in addressing both energy security and carbon reduction simultaneously, but they are also associated with high risks such as operational failures, mishandling of nuclear wastes or stored carbon dioxide, as well as security problems, e.g., preventing proliferation of weapons-grade plutonium.

The APT countries should enhance regional cooperation to address safety and security issues toward sustainable utilisation of these technologies for interested countries.

#### Mainstreaming adaptation concerns into development planning

18. The APT countries should mainstream adaptation concerns into development planning through improving adaptation capacities and requiring all development policies to undergo strategic environmental assessment from the standpoint of adaptation, given the fact that the poor is the most vulnerable to climate change damages. It may be useful to distinguish short-term adaptation from mid-term or long-term adaptation. The main objective of short-term adaptation is to provide safety net for the most vulnerable people. The mid- and long-term adaptation mainly aims to equip local communities with resilience against negative impacts of climate change. In this connection, accurate information on climate change such as weather forecast and long term regional climate projection is essential for prediction which will help decision makers to plan ahead to avoid and reduce the impact of climate related events.

19. For short-term adaptation, robust insurance mechanisms should be established (i) to create a viable business environment for the private sector, (ii) to provide rapid financial assistance after catastrophic climate-related events, and (iii) to enhance proactive adaptation. Contributions to the facility should come not only from the public but also from the private sector, since disaster prevention will provide new business opportunities for private firms.

20. For mid-term and long-term adaptation, it is crucial to develop capability of local communities to cope with negative impacts of climate change. Community-based natural resource management such as coastal and forest management must be promoted as it contributes to empowering communities. Similarly, it is recommended to establish an early warning system underpinned by community-based monitoring system. The governments of the APT countries should provide institutional and legal support as well as physical infrastructure to facilitate these community-based activities. They should also take measures to raise public awareness of the critical importance of these activities. Regional cooperation through bi-lateral and multi-lateral assistance mechanisms,

including Japan's initiative for disaster reduction through ODA, shall be enhanced in this regard.

21. Information sharing of the disaster experience and training of disaster management personnel are important adaptation measures. It is recommended to enhance regional cooperation in this field by networking existing disaster management institutes in the region. The Asian Disaster Reduction Center is expected to play a key role with necessary support from the APT countries.

22. Involvement of various stakeholders including civil society and private sectors is essential for effective implementation of adaptation measures at local level. Education for Sustainable Development with particular focus on action for energy and climate change issues should be promoted in schools and higher education institutions. Further, education of policy-makers to understand urgency and seriousness of climate change and energy issues should be realised. To secure funding for these education activities, it is recommended to expand the mandate of Global Environmental Facility (GEF) and adaptation funds to cover these education activities.

23. It is recommended for each APT country to explore new and additional financial resources for raising sufficient funds to meet the costs of adaptation, based on the principles such as the polluters pay principle. A part of the revenue of carbon offsetting scheme could be channelled to adaptation funding. A levy on carbon intensive investment that exceeds certain carbon intensity criteria such as carbon emission per capita set by each country can also be a possible source of funding, while the levy can be discounted if there was evidence of mainstreaming adaptation concerns into development planning. It is worth noting that introduction of carbon emission trading and channelling the revenue to adaptation fund may greatly facilitate implementation of adaptation measures.

#### Developmental co-benefits

24. A rapid and phenomenal urbanisation is ongoing in many APT countries, and adopting low carbon and climate change robust urban design will greatly contribute to achieve win-wins in terms of mitigation, adaptation and economic development. It is recommended to enhance existing initiatives and activities, such as ASEAN Working Group on Environmentally Sustainable Cities and to promote low carbon cities having adaptive capacity to climate change in this region. This requires significant investment in infrastructure development and bi-lateral or multi-lateral assistance should be enhanced to facilitate such investment.

25. Promotion of sound material recycling, particularly metal recycling and composting, shall be promoted as one of the most effective policies in terms of developmental co-benefits in this region. Establishment of sound material recycling will reduce carbon emission and alleviate resource capacity limitation, a potential bottleneck to economic development in this region. Furthermore, it will significantly contribute to income generation for the poor.

26. Technologies to recover energy from wastes, and EST such as Bus Rapid Transit (BRT) introduced in Jakarta and other major Asian cities, are considered effective in reducing GHG emissions while simultaneously contributing to economic development,

and they are appropriate subjects of regional financial cooperation including triangular cooperation in which developed countries support cooperation among developing countries.

27. A number of joint energy infrastructure development projects including natural gas exploration, the Trans ASEAN Gas Pipeline and the ASEAN Power Grid, are underway in the region for improving energy security and efficiency. While they would have significant mitigation potential, their construction could have negative social and environmental impacts. Joint research programmes to measure such negative impacts and reduce them in the planning and implementation of these energy infrastructure projects should be conducted.

28. Policy environment conducive to the efficient operation of market mechanisms including CDM and carbon markets should be installed, while ensuring equity, environmental integrity and cost effectiveness, in order to induce long-term low carbon investments.

#### Technology transfer and technical cooperation

29. The importance of research should be recognised on indigenous knowledge and technologies that could contribute to adaptation as well as technology transfer from developed countries in mitigation and adaptation including disaster management. In this connection, improving individual competence and institutional capacity in all sectors, public and private, is essential in developing countries of the region to accelerate their efforts to adapt to climate change and mitigate the greenhouse gas emissions in an environmentally sustainable and cost-effective manner.

30. The APT countries should install better policy environments wherein respecting intellectual property rights (IPRs) and technology transfer can be compatible. It must be noted that (i) developing countries will hopefully become developed countries sometime in the future to which the protection of IPRs will be beneficial, and (ii) whether and to what extent IPRs are barriers to technology transfer depends on the stage of economic and technological development in receiving countries and the nature of the technology itself.

31. When IPRs hamper desirable transfer of green technologies, technological transfer through-tied ODA for transferring green technologies should be implemented. Domestic policy thrusts including a flexible IPR regime and green subsidies or preferential tax treatment for the firms that provide green technologies may be crucial to making vertical and horizontal technology deployment economically and politically feasible. For this purpose the APT countries should take initiative to form a global consensus on IPR and green technology transfer at the coming sessions of World Trade Organisation. In addition, it will be effective for them to develop appropriate technologies jointly with developed countries so that IPRs can be shared.

#### Forest conservation and climate policies

32. Both sustainable forest management and climate change mitigation through an active involvement in REDD scheme should be promoted. Further, serious commitment of the APT countries on afforestation and reforestation to increase carbon sink capacity is



required. As the deforestation problems are specific to local conditions such as land tenure, or means of livelihood and quality of life for the community, an effective implementation of REDD requires holistic approach in which forest is regarded not only as a carbon sink but also as an essential means to achieve poverty alleviation and conservation of biodiversity. Further, it is crucial to give appropriate incentives for land owners to realise sound management of the forest.

33. Sustainable forest management and conservation must be coordinated with land use policy, as often natural forests have been cleared to cultivate food crops or energy crops for biofuel production. Food crops and biofuels production may be necessary for poverty alleviation, but it must be pursued without causing deforestation, because of the importance of natural forest conservation for sustainable development. It must also be recognised that forest is critical natural assets in disaster management. For example, mangrove forests have played a key role in the protection of coastal communities from high tidal waves.

34. Domestic measures to combat illegal logging and timber trade must be given a top priority to promote sustainable forest management and conservation. Such domestic measures can be facilitated through international cooperation such as timber certificate scheme. While a number of difficulties may be involved due to great diversity of domestic conditions, regional cooperation for the introduction of such scheme is recommended.

#### Finance

35. Financial and technical assistance to adaptation capacity development in terms of human resources, institutions and physical infrastructure must be one of the major targets of regional cooperation for enhanced ODA. Regional financial cooperation including triangular cooperation should be enhanced in which developed countries support cooperation among developing countries.

36. Energy subsidies shall be reformed from the viewpoints of (i) reflection of the social costs of energy including environmental impacts, (ii) correction of the distortions of international competitiveness, and (iii) fiscal reform to raise revenues for the climate measures.

37. The APT countries should expand total investments and financial flows in the development and deployment of low carbon technologies through establishing a regional low carbon technology research and development (R&D) fund, linking financial provision with emissions reduction commitments, and creating venture capital funds for nearly commercialised low carbon technologies.

38. In COP13 of UNFCCC, the World Bank launched the Forest Carbon Partnership Facility (FCPF) that provides technical assistance to implement REDD and makes payments to countries that have ceased deforestation and that can achieve measurable and verifiable emission reductions. Not only this facility be utilised but also the APT leaders should seek possibility to establish "Asian Sustainable Forest Management and Conservation Fund" under the Asian Development Bank, which extends the eligibility of

the fund to countries that make serious efforts to implement sustainable forest management and conservation.

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