Asian Approaches to Green Growth & Climate Change Mitigation:
Experience, Lessons & Opportunities for Cooperation

April 11 – 12, 2013
Seoul, Korea
INTRODUCTION

Organized jointly by the Korea Development Institute (KDI) and The Asia Foundation (TAF) and hosted by KDI, with funding support from KDI, TAF, and the Australian Agency for International Development (AusAID), the “Asian Approaches to Development Cooperation” (AADC) dialogue series brings together development experts and government officials from the Asia region and beyond to share perspectives and to facilitate mutual learning between and among “emerging” and “traditional” development actors. After a planning meeting in Seoul in December 2010, KDI and TAF convened three workshops over the course of 2011 in Kuala Lumpur (March), Colombo (June), and Seoul (September). The 2011 dialogues culminated with a side event at the Fourth High Level Forum on Aid Effectiveness (HLF-4) in November in Busan, Korea, the world’s largest and most important gathering for discussing issues of international development and foreign aid. The conference edition of “Emerging Asian Approaches to Development Cooperation,” authored by participants in the AADC series, was released at the HLF-4.

In 2012, the AADC dialogues focused on the theme of development cooperation and pro-poor, inclusive growth. Over 40 participants convened in both New Delhi (March) and Beijing (June) for the fifth and sixth meetings in the dialogue series. An authors’ workshop and a public conference, both held in Seoul, followed in November. The authors’ workshop hosted by KDI enabled focused discussion on the forthcoming publication, *Inclusive Growth and Development Cooperation: Experiences and Lessons from Asia.* The 2013 AADC dialogues focus on providing an opportunity for knowledge exchange on the theme of climate change. The April meeting in Seoul highlighted climate change mitigation, low carbon development, and green growth strategies. In August, the complementary issues of climate change adaptation (CCA), disaster risk reduction (DRR), and disaster management (DM) will be discussed in Vietnam.

OBJECTIVES OF DIALOGUE SERIES

- To clarify and raise awareness of how Asian development actors operate: their objectives, principles, motivation, and funding levels.
- To contribute Asian views to the international dialogue on development cooperation effectiveness and architecture, particularly in connection with follow-up to the HLF-4 and the shaping of the post-2015 global development agenda.
- To promote mutual interest, learning, understanding, and opportunities for collaboration between and among development partners.
- *For 2013:* To make specific policy contributions and recommendations from Asian development actors on the low carbon development agenda, and on ways to address CCA in the region through improved DM and DRR.
OVERVIEW OF SEOUL DIALOGUE

Hosted by KDI, the Seoul meeting provided a forum for focused knowledge exchange on climate change mitigation. Sessions highlighted policy recommendations for low carbon development and green growth agendas, examined specific national actions and strategies for climate change mitigation, surveyed experiences with bilateral and multilateral climate finance mechanisms, and shared lessons learned on innovative energy, transport, and forestry projects. The meeting also included a visit to Songdo city in the Incheon Free Economic Zone, Asia’s premiere sustainable “smart city” and the site of the UNFCCC’s Green Climate Fund.

Dr. Kim Joo Hoon (Acting President through May 29, 2013, Korea Development Institute) and Mr. David Arnold (President, The Asia Foundation) opened the meeting. Citing the urgency of heightened regional and global response to climate change, they emphasized the timeliness of the Seoul dialogue and the significance of convening it in Korea, a regional and global leader in green growth strategies.

In the closing ceremony, Dr. Wonhyuk Lim (Director, Global Economy Research Team, Korea Development Institute) and Dr. Gordon Hein (Vice President, The Asia Foundation) highlighted the ongoing partnership between KDI and TAF. Dr. Lim provided an overview of the AADC dialogue series’ history, noting that the series brings together KDI’s extensive research experience, Korea’s increasing bridging role between developed and developing countries, and TAF’s network of 17 offices and longstanding partnerships throughout the region. He highlighted the series’ value in bringing together comparative perspectives from both developed and developing countries, many of which have been both recipients and donors, often simultaneously.

Participants’ presentations can be accessed via KDI’s website.

KEY TERMS

AADC Asian Approaches to Development Cooperation
ASEAN Association of Southeast Asian Nations
CCA Climate change adaptation
CO2 Carbon dioxide
DM Disaster management
DRR Disaster risk reduction
GDP Gross domestic product
GHG Greenhouse gas
Serving as overarching commentary to provide a framework for the two days of discussion, this session highlighted important concepts, frameworks, and trends relevant to low-carbon development, green growth, and urbanization in Asia. Moderated by Ms. Anthea Mulakala (Country Representative, Malaysia | Senior Advisor, International Development Cooperation, The Asia Foundation), the session featured Dr. Guanghua Wan (Principal Economist, Asian Development Bank).

Dr. Guanghua Wan opened the workshop with a presentation titled “Green Urbanization in Asia,” which is the theme chapter he authored for the recent ADB flagship publication *Key Indicators of the Asia and Pacific 2012*. He first argued how urbanization both challenges and supports inclusive green growth and low-carbon development paths that work toward tackling global environmental issues. He emphasized that both the scale and pace of urbanization in Asia are unprecedented, and if not properly managed, urbanization will continue to lead to high population densities, growing economic inequalities, urban crime, expanding slums, heightened vulnerabilities to natural disasters, as well as environmental degradation to air and water. However, he demonstrated how governments can use socially- and environmentally-responsive urban development to promote economic growth, public health, environmental improvements, climate resilience, and resource efficiency. The rise of megacities in Asia (by 2050 about 2/3 of population in Asia will live in cities and 21 out of 37 global megacities will be in Asia) will pose significant challenges as Asia has less time and resources to make the necessary adjustments and investments, particularly regarding impacts from climate change, such as inland and coastal flooding. Dr. Wan warns that business-as-usual is not an option, but well-managed urbanization could provide positive benefits. Asian countries must gain experience in urban planning, actively promote technological innovation, and
embrace green urban design. Also, Asia must exploit late comer advantages, leapfrog technological advancements, and introduce regulations on time in order to steer onto the green, low-carbon growth path.

**Discussion topics included:** research methodology; data sources and disaggregation; and impact of rural-to-urban migration on energy consumption.

---

### NATIONAL STRATEGIES FOR GREEN GROWTH

In this session, panelists discussed their countries’ national green growth strategies. They outlined overarching priorities and funding mechanisms, and referenced specific successes and challenge areas. Moderated by Ms. Srabani Roy (Director, Environment Programs, The Asia Foundation), the session featured:

- **Dr. Wonhyuk Lim**  
  Director, Global Economy Research Team, Korea Development Institute (KDI)

- **Dr. Kejun Jiang**  
  Senior Researcher, Energy Research Institute, National Development and Reform Commission, China

- **Dr. Prodipto Ghosh**  
  Distinguished Fellow, The Energy and Resources Institute (TERI) | Former Secretary, Ministry of Environment and Forests, India

- **Mr. Gantulga Sanjaasuren**  
  Director, Forest Research and Development Center, Ministry of Environment and Green Development, Mongolia

**Dr. Wonhyuk Lim** emphasized how “green growth” could be both viable and beneficial for low- and middle-income countries as well as high-income countries. To make this point, he drew extensively from Korea’s experience with "old" and "new" green growth strategy: the former focused on reforestation and energy conservation in the 1960s and the 1970s and the latter focused on technology as a new growth engine and climate response tool.

Dr. Lim first acknowledged that there are political as well as conceptual issues with green growth. Politically, some developing country officials and experts view "going green" as essentially a post-modern agenda for high-income countries who are satiated with economic growth and are now focused more on the environment and well-being and who support fancy technological solutions...
and rigid quantity targets without cost consideration. Furthermore, they suspect that advanced countries may use the green agenda as a conditionality for ODA and a pretext for trade protectionism. Also, unlike development cooperation, which is based on the principle of solidarity, climate change action is based on the principle of responsibility (as encapsulated in Article 4 of UNFCCC), but the green agenda is oblivious to this distinction. Conceptually, green growth may be defined as growth that is efficient, clean, and resilient and try to make it broad-based by adding the qualifier "inclusive" (World Bank 2012). However, there are various views on the relationship between "green" and "growth." The traditional view is to posit a (short-term) tradeoff between the two, but if we take into account the economic risks past the climate tipping point, there really is no (long-term) tradeoff between "green" and "growth." The contrarian view (cf. Michael Porter hypothesis) is to posit a synergy between the two, and note that the technologies required to implement adaptation and mitigation actions would create new business opportunities for early movers, who could accelerate economic growth by taking a large share of the global market. This is the point that Korea's "new" green growth strategy adopted by the Lee Myung-bak government emphasized, but, due to the fallacy of composition, not every country can be an early mover. Dr. Lim emphasized that to be development-friendly, green growth should highlight the broad, long-term synergy between environmental sustainability and economic growth rather than the narrow notion of green technology as a growth driver. As an example, he cited Korea's "old" green growth strategy focused on reforestation, energy conservation, and price normalization efforts in the 1960s and 1970s.

Dr. Kejun Jiang provided commentary on “China’s Energy and Low-Carbon Development Strategy,” highlighting the 12th Five Year Plan (2010-2015) for energy and climate change. After the 2009 Conference of Parties to the UNFCCC meeting in Copenhagen, when the well-known average global temperature increase of 2-degrees Fahrenheit maximum was agreed, China set aggressive targets to reduce their energy intensity by 16% and CO2 emissions by 17% during the period 2010-2015, as well as capped total energy consumption at 4 billion tons of coal equivalent by 2015 and peak CO2 emissions by 2025. China also set a target to increase the total share of non-fossil fuel energy sources to 11.4% by 2015 (including increasing overall output from sources such as wind, solar, biomass, landfill power, hydro, and nuclear significantly), natural gas to 7.5% and decrease coal to below 65% (peaking use in 2010). He then discussed how much reduction is actually feasible for the Asia-Pacific region as part of a global effort to stay within the 2-degree limit, citing context from China’s own challenges passing such legislation as a developing economy, with policy regulation tribulations, pro-poor growth needs, less aptitude to implement and manage new technology solutions, and limited ability to afford start-up investments in low-carbon development paths.

Dr. Prodipto Ghosh discussed “India’s National Action Plan on Climate Change and Relevant Policies.” He discussed environmental policies since the 1970s that have been able to significantly reduce India’s energy consumption, citing high percentages of fiscal expenditures on programs directly related to climate change adaptation and an accelerated deployment of clean technologies as the main drivers of change. Dr. Ghosh then highlighted two key mechanisms of India’s ongoing National Action Plan on Climate Change under the Energy Conservation Act and the Electricity Act, known as Perform, Achieve, and Trade (PAT) and Renewable Energy Certificates (RECs) respectively. PAT sets energy targets and uses stringent measuring to create a market incentive structure based on trading energy efficiency and renewable energy certificates that can minimize excess energy consumption, and promote RECs through a nation-wide renewable energy market. State Action Plans coordinate with the national framework, but offer suggested interventions for the local power sectors, industries, transportation, forestry, and construction, as well as focus on building the capacity of various local stakeholders to effectively participate in national energy
programs. In India’s 12th Five Year Plan (2012-2017), the major policy thrust areas are in developing clean coal technology, improving solid waste management, increasing urban public transportation, and strengthening climate research. In addition, Dr. Ghosh described a few of India’s energy-economy and resource-economy modeling methodologies that work to predict GHG emissions trajectories and drive global climate change policy debates, emphasizing that India’s estimates are more able to capture the national realities of developing countries in terms of technological change, GDP growth and energy prices over the computer modeling scenarios of the Intergovernmental Panel on Climate Change (IPCC). He shared examples of modeling results that predict India’s per-capita GHG emissions will remain below the global average per-capita level in 2005 until 2030 even without any new mitigation policies, and that India’s demonstrated decline in energy intensity and associated GHG intensity will continue until 2030.

Mr. Gantulga Sanjaasuren commented on “Mongolia’s National Strategies for Green Growth.” The country’s accelerated economic growth path has been accompanied by rising carbon emissions due to the most prominent economic drivers being natural capital (mainly coal), mining industries, and commodity exports. He described that Mongolia’s energy sector accounts for 58% of national GHG emissions, agriculture for 36%, industry for 5%, and the remainder from solid waste, and stated that GDP is expected to grow under a business-as-usual model at double digit rates through 2017 (it was 17.2% in 2011 and 11.4% in 2012). However, the newly-elected government is prioritizing green growth strategies in a post-2015 framework based on a continuation of current sustainable development policies in Mongolia’s Action Program for the 21st Century (MAP21) enacted shortly after the 1992 Rio Summit. Beginning in 2012, Mongolia established the Ministry of Environment and Green Development charged with strengthening the policy and regulations for a green economy and low-carbon society. The Ministry will work to prohibit the depletion and/or degradation of natural resource assets, develop financing mechanisms for green technologies, increase the use of renewable energies in all sectors, and raise cooperation between central government, local communities, and NGOs for environmental conservation. Mr. Gantulga emphasized the large role that stringent monitoring and evaluation, target setting, and incentive programs will play in attaining such objectives.

Session discussion topics included:

- the diversity of national green growth strategy focus areas, ranging from use of price adjustment mechanisms to promotion of new technologies;
- debates concerning the meaning of “innovative” climate financing;
- the need for locally articulated demands to achieve sustainable behavioral and policy changes;
- comparison of initiatives led by local governments versus by the national government;
- decreasing costs and increasing availability of technology, such as in China;
- changing attitudes in China, as exemplified by the recent shift from a focus on the “cost” of going low-carbon to the “benefit” of doing so;
- equitability of energy caps within countries themselves, such as in China;
- environmental trade-offs in advocating for renewable energy (e.g., hydropower’s negative impact on biodiversity and forests in Vietnam);
- persisting questions of how to facilitate country-to-country technology transfers and how to incentivize the private sector to contribute; and
- the importance of SMEs when discussing the relationship and potential trade-offs between growth and the environment, as well as how to facilitate and incentivize SMEs’ compliance with government-mandated environmental regulation.
This session featured specific Asian initiatives and innovations that provide lessons and learning for other countries in the region. Presentations focused on lessons from the energy sector, transport, and forestry. Moderated by Ms. Kamisah Mohd Ghazali (Senior Vice President, Economic Intelligence, Iskandar Regional Development Authority (IRDA), Malaysia), the session featured:

**Ms. Wan Portia Hamzah**
Senior Fellow, Technology, Innovation, Environment and Sustainability (TIES), Institute of Strategic and International Studies, Malaysia

**Ms. Chutinthon Praditphet**
Policy and Plan Analyst, Office of Transport and Traffic Policy and Planning, Ministry of Transport, Thailand

**Dr. Kirsfianti L. Ginoga**
Director, Research and Development, Center for Climate Change and Policy, Forestry Research and Development Agency (FORDA) Ministry of Forestry, Indonesia

Ms. Wan Portia Hamzah focused on “Malaysia’s Energy Lessons.” Policies for green growth, sustainability, and social inclusiveness have begun to be incorporated since the enactment of Malaysia’s 10th and 11th Five Year Plans (2011-2015 and 2016-2020). The National Green Technology Policy (2009), the Renewable Energy Act (2011), and the forthcoming National Energy Policy all contribute to Malaysia’s evolution toward a low-carbon economy. However, Ms. Hamzah also commented that Malaysia’s energy security issues exist within a complex institutional framework with limited collaboration and open-access to information, therefore fragmenting any progress and cooperation between government agencies and state-owned enterprises. She warned that future energy production and consumption challenges will be how stakeholders can balance a continual rise in per capita income, higher standards of living, and rapid urbanization (that has been increasing since 1990s and is projected to keep growing) with low-carbon growth and aggressive GHG emissions reduction targets. Malaysia energy security strategies going forward include: 1) gas price revision/removing market distortions created by subsidies; 2) implementing national green technology initiatives; 3) improving policy planning coordination; 4) strengthening the institutional framework; 5) boosting renewable energy capacity (5.5% of total energy mix by 2015); 6) reducing carbon intensity to 40% lower than 2005 levels by 2020, and 6) giving incentives and benefits to participants (polluter pays concept). Key energy improvement projects are to make the transmission and distribution of petrochemical refineries and gas/coal/hydro/nuclear power plants more efficient and “clean.” Ms. Hamzah commented that the lesson learned from Malaysia’s experience is that
countries must first define the potential barriers to renewable energy transitions, then they can select the appropriate mix and support of policies, work to overcome financial constraints, harness human resources and development, and enhance strategic alliances within the region.

**Ms. Chutinthorn Praditphet** reported on “Thailand’s Environmental Sustainable Transport Master Plan,” and discussed how Bangkok’s urban planning has had difficulties controlling urban sprawl leading to traffic congestion, overpopulation, slums, and air pollution issues. She described that the transportation sector contributes to 27% of total GHG emissions (and 97% of this is from road vehicles) compared to 39% for energy and 25% for industry, concluding that Thailand’s emission reduction challenge is equally a transportation issue as any other sector. In the 11th National Economic and Social Development Plan (2012-2017) and the Transport and Traffic Master Development Plan (2011-2020), Thailand has pledged improvements to transportation infrastructure to make all movement of goods and people more environmentally-friendly and energy-efficient based on stakeholder consultations of what to avoid, what to shift, and what to improve in order to reach the objectives. From this, six long-term strategies for reducing GHG emissions in the transportation sector have been devised, which include among others establishing a more comprehensive and integrated network, ensuring it is efficiently managed and innovated as necessary, and that there are fees, reforms and incentives to increase public participation. Such institutional improvements to the transportation sector could reduce GHG emissions between 16-19% by 2017 without huge technological changes. Ms. Chutinthorn then presented a small-scale, electric tram program in Rayong Province offering free public transportation that was successfully able to reduce vehicle use, fuel consumption, traffic, and improve public health.

**Dr. Kirsfianti Ginoga** presented on Indonesia’s forestry policies on reducing emissions from deforestation and forest degradation (UN-REDD+) programs as they are related to climate change mitigation. She outlined Indonesia’s National Action Plan for GHG Reductions (NAP-GhG) and highlighted that it targets reversing trends in deforestation and increasing/conserving carbon sinks from tropical forest and peatland cover (currently, land use change and forestry contribute to 60% of total GHG emissions). Measuring progress since the baseline year of 2000 through 2011, Indonesia has been able to reduce CO2 emissions by 72.8%, equal to 489 million tons of CO2 per year, through preserving forest cover. However, Dr. Ginoga recommended that the awareness raising, access to technology, and other supporting resources are still needed to minimize gaps related to action plan for reducing GHG emissions at the provincial level. She also urged a need for enhancements to transparency, comparability, and accuracy in the governance of REDD+ or general climate change mitigation programming, with better data management and standards/methodologies for taking measurements, reporting and verifying.

**Session discussion topics included:**
- different challenges faced by central versus local governments in implementing sectoral policies, as well as persisting challenges in coordinating intra-government cooperation;
- the need to better leverage domestic resources (e.g., real estate and inheritance taxes);
- benefits and limitations of UN-REDD (e.g., in Indonesia);
- lessons learned from applying sustainable transport strategies to small, concentrated areas facing rapid growth (e.g., island in Thailand newly popular with tourists);
- the need to integrate pricing mechanisms as well as a nationwide “mindset change” with sectoral strategy discussions;
- regional cooperation with regard to technology and R&D (e.g., Thailand’s ongoing invitations to Laos and Cambodia when conducting transport program training);
• the importance of not only enhancing cooperation between countries, but also among actors within the same country (e.g., in Thailand, communities active in deforestation prevention);
• the important role of civil society in monitoring performance indicators across sectors;
• community responses to development of renewables such as nuclear energy and hydropower;
• the impact of environmental policies on marginalized populations (e.g., indigenous groups in Malaysia);
• strategic alliances within ASEAN and related implementation challenges (e.g., pricing);
• the importance of land use policy and the government’s role in mandating it effectively; and
• Asian countries’ sectoral cooperation outside the region, such as with countries in Africa.

**PARTNERSHIPS & COOPERATION FOR INCLUSIVE GREEN GROWTH**

This session discussed how development cooperation can and does successfully support green development in Asia. Examples included SSC and knowledge exchange, traditional ODA, and global partnerships. Moderated by Dr. Siriporn Wajjwalku (Associate Professor, Faculty of Political Science, Thammasat University, Thailand), the session featured:

**Mr. Darius Nassiry**
Head of International Cooperation, Global Green Growth Institute (GGGI)

**Professor Ryokichi Hirono**
Professor Emeritus, Seikei University, Japan | Senior Adviser, Institute for Global Environmental Strategies (IGES)

**Dr. Fuqiang Yang**
Senior Adviser, Natural Resources Defense Council, China

**Dr. Nguyen Trung Thang**
Deputy Director General, Institute for Strategy, Policy on Natural Resources and Environment (ISPONRE), Ministry of Natural Resources and Environment (MONRE), Vietnam

Mr. Darius Nassiry presented on the work of the GGGI as it relates to regional cooperation in green growth, titled “Asian Approaches to Green Growth and Climate Change Mitigation: Experience, Lessons and Opportunities for Cooperation.” He highlighted that the major global challenges to sustainability are that the world will need 50% more food, 45% more energy, and 30% more water to sustain future generations and so the efficient use of resources and energy is essential for humanity. He urged that governments work together with the private sector and other stakeholders to promote enabling environments for transformational change and to keep the costs of CCA and mitigation goals within reach – this is a matter of choice and political will toward “sustainable” policies about global public goods. He illustrated that the number of natural disasters in Asia has risen from under 100 in 1980 to over 300 in 2010 (especially flooding and stronger
storms), in the first nine months of 2011 80% of all economic losses from natural disasters occurred in the Asia-Pacific, and emphasized that climate change impacts tend to be seen through local lenses in terms of political economy. Mr. Nassiry recommended improved South-South dialogues, development of country strategies, and implementation of low-carbon projects in order to promote the needed growth in institutions to respond to such challenges. He also commented that middle-income countries, such as Korea, can play a greater and more proactive diplomatic role in global governance of climate change issues and fulfilling responsibilities to make necessary climate change investments, maybe even before larger global powers. In reference to GGGI, he presented the organization’s “theory of change” model in which a paradigm shift toward global green growth occurs through country green growth planning and implementation, research-knowledge sharing, and public-private cooperation. GGGI recently converted to a treaty-based international organization and is beginning to demonstrate this new governance structure (member state assembly, council, advisory committee), and a hybrid multi-stakeholder design that brings together like-minded countries (both developed and developing), institutions, NGOs and the private sector dedicated solely to green growth. Furthermore, Mr. Nassiry stated that the placement of the UNFCCC’s Green Climate Fund (GCF) in Songdo, Korea also exemplifies the geopolitical transformation of setting the green growth hub outside of the western world. As political power shifts toward Asia, the promise of developing and implementing a new paradigm to fulfill the potential of green growth and shape impact in this sector throughout the world can be realized – but only if other countries support the development of new institutions, such as the GGGI, which is based in Asia. He expressed optimism that GGGI and GCF will be available to work with member states and potential beneficiaries to find solutions and effect growth in positive ways.

Professor Ryokichi Hirono outlined “Japan’s Cooperation for Low-carbon and Green Cities in the Asia-Pacific Region.” Prof. Hirono began by stating that the world and the Asia-Pacific in particular have been seriously set back by the global financial crisis (Japan’s debt is over 200% of GDP), higher instances of severe natural disasters, and other increasing threats to environmental sustainability endured in recent decades. However, he feels in general that Asian government expenditures to keep up with such set backs and to build resilience to future shocks are not prioritized and therefore the type of current public spending has not helped much in reducing economic and climate change vulnerabilities in the region. Japan understands that economic globalization has shaped the market system and distribution of global wealth we know today, but Prof. Hirono emphasized that the profits reaped from this growth must become more equitable throughout the world if all nations are to realize the benefits of transitioning to a low-carbon society. He emphasized that partnerships and active stakeholder engagement within the same regions and strong, democratic governance will be key to strengthening industries that are able to “green” production and benefit society more equitably, such as the East Asia Low-Carbon Partnership Dialogue initiated by Japan in 2012. In Japan, for example, to deal with high social costs associated during the period of rapid industrialization in the 1950s to 1960s (especially in terms of increasing health risks from air, water and land pollution), Japan adopted more stringent regulatory mechanisms through the enactment of a series of anti-pollution laws and through the establishment of an Environmental Protection Agency. Since the 1970s, Japan has placed more emphasis on economic incentives such as tax reliefs and green subsidies in pursuing cleaner production and restructuring industries in favor of higher productivity and environmental protection particularly in the public and private sectors, as well as increasing environmental awareness among all stakeholders. And with the Earth Summit in 1992, Japan’s international technical and financial cooperation for reducing air, water and soil pollution in developing countries as well as for protecting global environment through forestation, energy saving technology and biodiversity has increased significantly, reinforced since the 2000s by pursuit of the Millennium Development Goals (MDGs).
Dr. Fuqiang Yang reported on “China’s Renewable Energy Development and International Collaboration Potential.” China’s energy growth rate is not sustainable even though its intensity level is not above many highly industrialized country averages. China is projected to peak in CO2 emissions by 2025, but depending on the aggressiveness of investments in green growth, it could peak much earlier. Dr. Yang outlined that China’s current national actions to realize an “ecological civilization” are to reduce coal use, enforce environmental laws and regulations more consistently and transparently, pursue low-impact urbanization, increase public awareness, and promote renewable energy use. In 2008, China became both the largest GHG emitter in the world, but also the largest investor of renewables in the world. China’s aim is to have renewable energy account for 11.4% and 15% of total energy consumption mix by 2015 and 2020 (e.g., small hydro, wind, biomass, solar PV, water heater and biogas), which is equivalent to 540 million tons of coal use by 2020. China also invested USD$51 billion in renewable energy in 2011 and plans to increase this to 37.5% over the next five years. However, China’s renewable development is still behind on a global scale, and government ministries have a lot to learn from other developing countries who have committed action plans for full renewable energy use. By 2050, China could achieve 50% renewable energy use through implementing solar PV systems on buildings and utilizing its already well networked smart grid across the country. Nonetheless, Dr. Yang concluded with the fact that greater involvement from China in SSC will help countries in the region succeed in meeting low-carbon growth goals, especially in the areas of data compiling, technology research and development, manufacturing capacity, technology transfers, best policy practice, South-South green funds, and improved grid networks for transnational distributed power (e.g., China to Mongolia).

Dr. Nguyen Trung Thang reported on “Responding to Climate Change and the International Support Program (SP-RCC) in Vietnam.” He emphasized that Vietnam is one of the most high-risk nations in the world to climate change in terms of its vulnerability to typhoons, flooding, sea-level rise, warmer temperatures and droughts (citing that if there is a 1m rise in sea-level, then almost all of the Mekong Delta will be submerged, and this could lead to 10% loss in GDP/year in Vietnam under a business-as-usual model). Among Vietnam’s own aggressive national climate change policies, in 2009, Japan International Cooperation Agency (JICA) and the L’Agence Française de Développement (AfD) initiated the Support Program on Responding to Climate Change (SP-RCC) in Vietnam, which has since received additional financial contributions from donors such as World Bank, Canadian International Development Agency (CIDA), AusAID, German Society for International Cooperation (GIZ), and Korea’s Export-Import (EXIM) bank. The objectives of the program are to assist Vietnam in the development and implementation of its national climate change policies, improve the institutional framework related to climate change, serve as a platform for developing a climate change policy matrix, set criteria for projects and guidelines for ministries, as well as to monitor/evaluate/report to Vietnam’s National Council on Climate Change. The financial mechanism component of SP-RCC seeks co-financing through loans/grants from government ministries (MONRE/MOF/MPI) to support the National Target Program for Responding to Climate Change (NTP-RCC) among other related projects and budgets. Dr. Thang reported that achievements of SP-RCC up to 2012 include 15 policy actions (PAs) for CCA, 14 PAs for climate change mitigation, and 15 PAs for cross-cutting projects, although numerous PAs have been delayed despite increased mobility in funding. He concluded by sharing lessons from the SP-RCC on how the program has been able to identify priorities, gain a better understanding about appropriate responses, collect funding from development partners, balance state budgets, avoid project redundancies, and create more policy dialogue to improve coordination between ministries and localities in Vietnam. However, he warned that PAs can be delayed for lack of consensus and that some donors find it difficult to monitor change and benefits from project investment. Dr. Thang
recommended that future policy matrices should be developed for longer periods of time (not annual), be more feasible in terms of implementation (top-down/bottom-up approaches), and establish special financial mechanisms for better transparency to international donors.

Session discussion topics included:

- the need for governments to work with the private sector and other stakeholders to promote enabling environments, and the persisting challenge of generating political will to do so;
- although a global trend, the reality of climate change as a local phenomenon in terms of political and economic transformation and the resulting need for localized solutions;
- implications related to the recent upsurge in the number of climate change and low-carbon, development-focused organizations outside of the United States;
- importance of “middle powers” such as Korea in terms of global governance;
- comparative advantages of treaty-based international organizations, such as GGGI, versus NGOs, which can be constrained in fundraising and impact;
- the importance of breaking the dichotomy between developed versus developing countries, as GGGI does, in order to move international policymaking forward;
- the symbolic importance of headquartering multilateral organizations outside of the West;
- the need for infrastructure and grid systems to be in place beforehand when attempting to facilitate SSC in renewable energy;
- the Government of Vietnam’s sector-based cooperation with external donors in order to avoid duplication and overlap of roles;
- the value of region-specific organizations in reducing GHG emissions, as opposed to overarching global agreements;
- roles of different types of banks (commercial, private, export-import) in financing renewable energy;
- current barriers to broad-based R&D and technological cooperation, given that SSC primarily focuses on regional blocs;
- the need for a holistic low-carbon development approach that encompasses social, economic, and environmental concerns and that is based on countries’ growth aspirations, rather than on constraints;
- the importance of success stories for green growth to be seen as viable and attractive;
- challenges related to timeline, as institutional frameworks require time to mature and attract capital;
- financial challenges related to risk (e.g., in China, despite favorable government tax incentives, many renewable energy projects face bankruptcy);
- relative definitions of low-carbon;
- the importance of local human resources to program sustainability; and
- the value of data, which many developing countries currently lack.

DEVELOPMENT FINANCING FOR CLIMATE CHANGE MITIGATION

This session discussed the emergence, relevance, and impact of different multilateral and bilateral financing mechanisms. Moderated by Dr. Wonhyuk Lim (Director, Global Economy Research Team, Korea Development Institute), the session featured:

Dr. Hyungna Oh 
Associate Professor, College of International Studies, Kyung Hee University, Korea
Dr. Hyungna Oh provided framing commentary on multilateral financing mechanisms for climate change. She covered the core areas of how funds are raised, how they are spent, and how various existing mechanisms are governed and administered. In charting out the existing global climate finance architecture, Dr. Oh outlined both non-market and market channels under the UNFCCC, as well as non-UNFCCC mechanisms. She also highlighted characteristics of climate finance specific to the Asia-Pacific region. While most countries in Asia bear limited historical responsibility for the accumulation of GHG emissions, today the region is the fastest growing source of GHG emissions globally. Dr. Oh noted that 21 dedicated climate funds currently exist in the region (15 multilateral, five bilateral, one national), primarily with a focus on mitigation, and provided examples of active initiatives, including the Clean Technology Fund in the Philippines. In addition, Dr. Oh highlighted several areas of concern within the global climate finance arena. These included the need for strengthened capacity in partner countries, the complexity of the climate finance architecture, and the need to scale-up funds to meet estimated need. Dr. Oh closed by providing insights into ways to encourage private sector participation, spend wisely, build accountability, and better leverage the respective roles of the UN, multilateral development banks, and climate finance programs.

Dr. Tomonori Sudo provided an overview of “Bilateral Support for Climate Change: JICA’s Cooperation Toward Low-Carbon Development,” covering JICA’s work at the country, regional, and global levels. Citing Japan’s contribution of approximately USD$15 billion to climate change assistance for developing countries from year-end 2009 to year-end 2012, Dr. Sudo noted that Japan is the largest Organization of Economic Co-operation and Development-Development Assistance Committee (OECD-DAC) donor in the climate change field. While the majority of these funds centered on mitigation efforts, JICA employs a comprehensive, tailored approach to low-carbon and climate-resilient development cooperation in partner countries. For example, in Vietnam, JICA has supported physical infrastructure development, policy and institutional improvement, and capacity building to assist both climate change mitigation and adaptation efforts. At the regional level, Japan is extensively involved with developing a knowledge exchange network, such as through the East...
Asia Knowledge Platform for Low-Carbon Growth. Furthermore, JICA is active in global discussions that aim to foster innovation in available climate change finance instruments. One such way is through JICA’s membership in the UN Environment Program’s Bilateral Financing Institutions Climate Change Working Group.

Mr. Shantanu Mitra presented on “Low-Carbon Development: Lessons from DFID.” He described DFID’s overall approach to low-carbon development, how this is being implemented, and how some of the internal challenges and questions within DFID are being addressed. He noted that DFID’s approach focuses on catalyzing private sector finance and innovation—not only in technologies, but also in financing models—and that the International Climate Fund is the United Kingdom’s main bilateral funding vehicle for climate change. DFID complements this via partnerships with other bilateral agencies such as AfD and multilateral funding mechanisms. Mr. Mitra provided a thematic breakdown of DFID’s key climate change programs throughout Asia and emphasized that these have emerged through a bottom-up, country-level consultation process. Currently, DFID’s portfolio retains a strong focus on renewables rather than on energy efficiency, transport, or buildings. This distribution has led to discussions within the agency as to whether the balance will and should hold in an urbanizing world. Noting that bilateral agencies should continue to lead transformation in their respective niche areas in addition to partnering with the private sector, Mr. Mitra commented that DFID is working to scrutinize the environmental impact of its overall programs and to promote mitigation and resilience across the board.

Ms. Fiona Lord provided an overview of “Australian Support for Green Growth and Mitigation.” With a rapid increase in funding from 2010 to 2012 as part of the country’s growing ODA budget, AusAID’s climate change portfolio is roughly split half-half between mitigation and adaptation efforts—48% and 52% respectively. On the mitigation side, Australia’s objectives include the creation of an enabling environment, particularly for private sector investment, and strengthened human and institutional capacity. Noting that AusAID’s overarching objective is poverty reduction with enhanced country-level prioritization, Ms. Lord highlighted a few case studies of AusAID’s work to develop solar cooling systems in India; provide affordable, reliable energy to rural communities at scale, also in India; promote low-carbon, pro-poor growth and development in Indonesia; and facilitate low-carbon growth in Vietnam. In addition, Australia has played an important role in shaping a number of multilateral global partnerships from their early stages, including the Climate Investment Funds, GGGI, and GCF. Ms. Lord also commented that AusAID retains a targeted focus on quality and distribution of assistance, as well as on integration—such as how climate change support aligns with gender and poverty assessments.

Session discussion topics included:

- the need for a public goods component of climate finance to provide risk mitigation, attract private financing, and thereby raise funds on a large scale, as many related projects are likely to be socially beneficial but not commercially viable;
- the global distribution of climate change funds: potential benefits of a need-based approach over a focus on evenness of funding distribution;
- interactions between and among bilateral, multilateral, and private sector financing and the need for strengthened information-sharing and coordination;
- comparative advantages of bilateral versus multilateral financing—potentially more efficient versus more effective;
- the importance of treating climate finance not as an isolated mechanism but as an integrated component of overall development cooperation programs (e.g., with gender and poverty assessments in the case of AusAID);
• differing notions of the term “responsibility” and various stakeholders’ perspectives on appropriate burden-sharing (e.g., “polluter pays” principle versus payment by those who can afford to do so), where those who have resources/can afford to pay is a very different obligation from who is responsible for causing the problem.

• development finance stems from solidarity paradigm where resources can be provided at the discretion of donors’ legislators, through institutions and governance mechanisms, yet UNFCCC propagates a responsibility paradigm where rich countries are condemning developing countries to more catastrophes, floods and droughts through lack of financing/investments in climate change mitigation actions.

• developing countries’ climate change commitments as a key question for the post-2015 development agenda—particularly with respect to China and India;

• how to mobilize resources within developing countries themselves via more effective tax mobilization and targeted fiscal policies;

• the role of households in producing GHG emissions versus the role of industry;

• intellectual property rights issues associated with technology deployment;

• the recognition that developing countries should not be expected to take on commitments that conflict with their development and poverty reduction priorities;

• the difference between investing directly in technologies versus investing in the creation of an enabling environment through policy directives (e.g., AusAID focuses on the latter approach);

• climate finance as additional ODA;

• how traditional donors are working to engage the private sector and what governance mechanisms are being used for public-private partnerships (e.g., need for concessions and minimized risk); and

• the various indicators used by banks to assess investment opportunities (e.g., DRR, vulnerability, sustainability).

**Welcome Dinner, Site Visits & Closing Reception**

**Ambassador Shin Boonam** (Ambassador for Climate Change, Former Ambassador for Green Growth, Ministry of Foreign Affairs, Korea) provided the keynote address at the welcome dinner held in honor of the AADC delegation. In his remarks, Ambassador Shin highlighted key features and experiences of Korea’s investment in green growth over the years, as well as the development of GGGI headquartered in Korea.

A site visit to Songdo, the region’s premiere “smart” and “green” city, near Seoul provided dialogue participants with hands-on exploration of sectoral and financing issues discussed during the conference. The visit included a briefing on the Songdo Development Plan provided by **Mr. Lee Seungjoo** (Managing Director, Business Promotion Bureau, Incheon Free Economic Zone Authority) and insights from **Mr. Scott Summers** (Vice President, Foreign Investment and Marketing, Gale International, Korea) on the overarching vision, strategy, and progress in implementation. The city is currently under construction with completion expected in 2014. Please see next page for photos from the Songdo site visit.
While in Songdo, dialogue participants also had the opportunity to visit the site of a pneumatic waste management system. There, they learned about the city’s partnership with a private company to implement an automated, energy-efficient waste disposal system that does not require garbage trucks. Areas of discussion included the nature of public-private partnerships, concerns related to funding and reliability of automated systems, and citizen engagement in advocating for these services. Furthermore, at the Cisco Songdo Global Center of Excellence, dialogue participants participated in demonstrations of the city’s technological components, such as energy-efficient systems for homes, hospitals, and offices. **Mr. Dong Hyun Ku** (Demo Engineer, Cisco Songdo Global Center of Excellence) provided these demonstrations.

At the closing reception held in honor of the participants, **Vice Mayor Jo Myong-u** (Vice Mayor for Administrative Affairs, Incheon Metropolitan City Government) provided welcoming remarks. **Director General Jung Hong-Sang** (Director General for International Economic Cooperation, Ministry of Strategy and Finance, and Alternate Member of the Board, Green Climate Fund) also provided insights on the work of the Green Climate Fund, to be headquartered in Songdo. In closing, **Dr. Gordon Hein** (Vice President, The Asia Foundation) and **Mr. Peter Beck** (Country Representative, Korea, The Asia Foundation) expressed special thanks to KDI, the reception’s welcome speakers, and the AADC dialogue’s participants for their participation.
The next AADC dialogue will be held in Vietnam in August 2013. Building on the Seoul meeting’s discussions, the Vietnam meeting will focus on knowledge exchange in the complementary areas of CCA, DRR, and DM. In late 2013, an authors’ workshop will follow in Thailand, where participants will discuss key lessons presented at the Seoul and Vietnam meetings and work toward curating them as a book publication.

In addition, a monograph drawn from the 2012 New Delhi and Beijing dialogues on development cooperation and pro-poor, inclusive growth is expected to be published in late 2013 as the second volume in the “Asian Approaches to Development Cooperation” publication series (conference edition of Volume I released in November 2011 at the HLF-4).
### Participants

#### China

<table>
<thead>
<tr>
<th>Kejun Jiang</th>
<th>Fuqiang Yang</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior Researcher, Energy Research Institute</td>
<td>Senior Adviser, Natural Resources Defense Council</td>
</tr>
<tr>
<td>National Development and Reform Commission</td>
<td></td>
</tr>
</tbody>
</table>

#### India

<table>
<thead>
<tr>
<th>Prodipto Ghosh</th>
<th>Tirthankar Mandal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distinguished Fellow, The Energy and Resources Institute (TERI)</td>
<td>Programme Coordinator, Climate Policy</td>
</tr>
<tr>
<td>Former Secretary, Ministry of Environment and Forests</td>
<td>Climate Action Network of South Asia (CANSA)</td>
</tr>
</tbody>
</table>

#### Indonesia

<table>
<thead>
<tr>
<th>Kirsfianti L. Ginoga</th>
<th>Ir. Subarudi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director, Research and Development</td>
<td>Senior Researcher</td>
</tr>
<tr>
<td>Center for Climate Change and Policy</td>
<td>Centre for Climate Change and Policy Research</td>
</tr>
<tr>
<td>Forestry Research and Development Agency (FORDA)</td>
<td>Forestry Research and Development Agency (FORDA)</td>
</tr>
<tr>
<td>Ministry of Forestry</td>
<td>Ministry of Forestry</td>
</tr>
</tbody>
</table>

#### Korea

<table>
<thead>
<tr>
<th>Shin Boonam</th>
<th>Wonhyuk Lim</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambassador for Climate Change</td>
<td>Director, Global Economy Research Team</td>
</tr>
<tr>
<td>Former Ambassador for Green Growth</td>
<td>Korea Development Institute (KDI)</td>
</tr>
<tr>
<td>Ministry of Foreign Affairs</td>
<td></td>
</tr>
<tr>
<td>Jung Hong-Sang</td>
<td>Jo Myong-u</td>
</tr>
<tr>
<td>Director General for International Economic Cooperation, Ministry of Strategy and Finance</td>
<td>Vice Mayor for Administrative Affairs</td>
</tr>
<tr>
<td>Alternate Member of the Board, Green Climate Fund</td>
<td>Incheon Metropolitan City Government</td>
</tr>
<tr>
<td>Lee Seungjoo</td>
<td></td>
</tr>
<tr>
<td>Managing Director</td>
<td></td>
</tr>
<tr>
<td>Business Promotion Bureau</td>
<td></td>
</tr>
<tr>
<td>Incheon Free Economic Zone Authority (IFEZ)</td>
<td></td>
</tr>
</tbody>
</table>

#### Malaysia

<table>
<thead>
<tr>
<th>Kamisah Mohd Ghazali</th>
<th>Wan Portia Hamzah</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior Vice President, Economic Intelligence</td>
<td>Senior Fellow</td>
</tr>
<tr>
<td>Iskandar Regional Development Authority (IRD.A)</td>
<td>Technology, Innovation, Environment and Sustainability (TIES)</td>
</tr>
<tr>
<td></td>
<td>Institute of Strategic and International Studies (ISIS)</td>
</tr>
</tbody>
</table>
MONGOLIA
Gantulga Sanjaasuren
Director, Forest Research and Development Center
Ministry of Environment and Green Development

THAILAND
Chutinthorn Praditphet
Policy and Plan Analyst
Office of Transport and Traffic Policy and Planning (OTP)
Ministry of Transport

Siriporn Wajjwalku
Associate Professor, Faculty of Political Science
Thammasat University

VIETNAM
Nguyen Trung Thang
Deputy Director General
Institute for Strategy and Policy on Natural Resources and Environment (ISPONRE)
Ministry of Natural Resources and Environment (MONRE)

RESOURCE PERSONS
Ryokichi Hirono
Professor Emeritus, Seikei University, Japan
Senior Adviser, Institute for Global Environmental Strategies (IGES)

Artemy Izmestiev
Policy Specialist, UNDP Seoul Policy Centre

Dong Hyun Ku
Demo Engineer
Cisco Songdo Global Center of Excellence

Fiona Lord
Policy Manager
Sustainable Development Funds Section
Global Funds & Financing Branch
Australian Agency for International Development (AusAID)

Shantanu Mitra
Senior Economic Adviser
UK Department for International Development (DFID), Beijing

Darius Nassiry
Head of International Cooperation
Global Green Growth Institute (GGGI)

Hyungna Oh
Associate Professor
College of International Studies
Kyung Hee University, Korea

Tomonori Sudo
Research Fellow, JICA Research Institute
Assistant Head, Office for Global Issues and Development Partnership
Operations Strategy Department
Japan International Cooperation Agency (JICA)

Scott Summers
Vice President
Foreign Investment and Marketing
Gale International Korea

Amanda J. Van den Dool
Development Assistance Specialist
Office of Donor Engagement
Bureau for Policy, Planning and Learning
United States Agency for International Development (USAID)

Guanghua Wan
Principal Economist, Economics and Research Department, Asian Development Bank