



WORKSHOP REPORT

Preparing for Scaled-up Climate Financing: New Business Opportunities for Green Growth

An Asia Low Emission Development Strategies (LEDS) Partnership Workshop on Financing for Green Growth

April 2-4, 2013 – Asian Development Bank Headquarters, Manila, Philippines



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ACRONYMS AND ABBREVIATIONS

ADB	Asian Development Bank
ADFIAP	Association of Development Financing Institutions in Asia and the Pacific
BPI	Bank of the Philippines Islands
BoP	bottom of the pyramid
BRT	bus rapid transport
CDIA	Cities Development Initiative for Asia
CDKN	Climate and Development Knowledge Network
CDM	Clean Development Mechanism
CHUEE	China Utility-Based Energy Efficiency Finance Program
CO ₂	carbon dioxide
CPEIR	Climate Public Expenditure and Institutional Reviews
CPI	Climate Policy Initiative
CTF	Clean Technology Fund
DFI	development finance institution
ESCO	energy services company
FiT	feed-in-tariff
GCF	Green Climate Fund
GDP	Gross Domestic Product
GET FIT	Global Energy Transfer Feed-in Tariff
GHG	greenhouse gas
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (German Agency for International Cooperation)
IFC	International Finance Corporation
IFI	international financial institution
JICA	Japan International Cooperation Agency
JNNURM	Jawaharlal Nehru National Urban Renewal Mission (India)
LDC	least developed country (UN definition)
LEAD	Low Emissions Asian Development (USAID Program)
LEDS	low emission development strategies
MPI	Ministry of Planning and Investment (Vietnam)
MRT	mass rapid transit
MRV	measurement, reporting and verification
MDB	multilateral development bank
MSME	micro, small and medium enterprise
MW	megawatt
NAMA	Nationally Appropriate Mitigation Action
NESDB	National Economic & Social Development Board (Thailand)
NREL	National Renewable Energy Laboratory (United States)

NGO	non-governmental organization
OCCD	Office of Climate Change and Development (Papua New Guinea)
ODA	Overseas Development Assistance
ODI	Overseas Development Institute
PAT	Perform, Achieve and Trade Program (India)
SME	small and medium enterprise
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
USAID	United States Agency for International Development
USD	United States dollar
WRI	World Resources Institute

INTRODUCTION

On April 2-4, 2013, the Asia Low Emission Development Strategies (LEDS) Partnership convened a regional workshop at the Asian Development Bank (ADB) headquarters in Manila, Philippines to exchange knowledge and lessons learned about financing low-carbon, climate-resilient growth in Asia. The event, entitled “Preparing for Scaled-up Climate Financing: New Business Opportunities for Green Growth,” was supported by the United States Agency for International Development (USAID), ADB, and the Climate and Development Knowledge Network (CDKN). More than 100 participants attended from 12 developing Asian country governments, multilateral and bilateral development finance institutions (DFIs), private sector banks, investment funds, and other organizations involved in promoting green growth. The diverse mix of public and private sector participants served as a unique and defining element of the workshop.

Objectives

The objectives of the workshop were to:

- promote increased understanding by Asian governments of available public-sector and private-sector mechanisms to finance green growth;
- build the capacity of Asian governments to access financing for green growth and low-emissions development; and
- enhance the role of private sector banks, financial institutions, investors, and fund managers in financing green growth investments, and strengthen their capacity to expand their portfolios by leveraging donor funding for climate-related projects and businesses.

Sessions

Utilizing a variety of session formats, the workshop provided opportunities for knowledge exchange, peer learning, and collaboration around key issues related to financing low-carbon, green growth in Asia.

An optional pre-workshop meeting entitled “Introduction to LEDS and Climate Financing” provided an introduction to the main concepts, issues, and trends involved in LEDS and climate finance in Asia. Three pre-workshop sessions featured topics including the costs of climate change, how LEDS fits into national development priorities and donor financing, and why both public and private sector financing mechanisms are essential to address climate change.

The main workshop began the following day, with four sessions featuring perspectives from the public and private sectors on the opportunities and barriers associated with climate finance. The day ended with a “marketplace” style session which provided an opportunity for small group and one-on-one discussions on national climate policy and finance frameworks.

The final day of the workshop featured a total of seven plenary and parallel sessions on mainstreaming climate finance; access to finance in the “bottom of the pyramid” (BoP); energy efficiency, renewable energy, and transport; and capacity building. During the final plenary session on capacity building, participants prioritized capacity building needs through a real-time electronic survey.

Structure of the Report

This report, prepared by the USAID Low Emissions Asian Development (LEAD) program as Secretariat of the Asia LEDS Partnership, serves as the proceedings of the workshop, and is based on notes from the session rapporteurs, as well as the speakers’ presentations, which are available online at:

<http://lowemissionsasia.org/events/presentations-climate-finance-workshop>.

This introductory section provides background and brief overview of the workshop. The balance of the report is a detailed, day-by-day summary of the topics discussed in each session. The report concludes with a brief summary of key themes and outcomes of the workshop.

The report also contains several annexes. Annex A contains the final workshop agenda. Annex B lists the capacity building suggestions developed by participants during the workshop. Annex C presents the results of a Climate Finance Capacity Building Survey taken during the last day of the workshop. Annex D contains a list of participants, and Annex E includes a transcript of question and answer dialogues held at the end of each session.

Additional information on the workshop can be accessed through the LEAD program website at <http://lowemissionsasia.org/events/climate-finance-workshop-manila>.

PRE-WORKSHOP MEETING: TUESDAY APRIL 2, 2013

A one-day pre-workshop meeting entitled “Introduction to LEDS and Climate Financing” provided an orientation to the main concepts, issues, and trends involved in LEDS and climate finance in Asia. The event began with opening remarks followed by a series of three sessions related to the economics of climate change, an introduction to LEDS and green growth, and an overview of LEDS and climate financing in Asia.

Opening Remarks

Bindu Lohani, Vice President, Knowledge Management and Sustainable Development, ADB

Secretary Mary Ann Lucille Sering, Climate Change Commission, Philippines

Doddy Sukadri, Co-Chair, Asia LEDS Partnership, and Secretary, Working Group on Land-use, Land-use Change, and Forestry, Indonesia National Council on Climate Change

Bindu Lohani, Vice President of the ADB, provided ADB’s perspective on climate finance while emphasizing the need for close cooperation between donors, governments, and the private sector.

Secretary Mary Ann Lucille Sering, Climate Change Commission, Philippines, discussed concrete steps that the Philippines is taking to address climate change, and stressed the importance of both mitigation and adaptation to the region’s welfare and sustainability.

Doddy Sukadri, Co-Chair, Asia LEDS Partnership, introduced the Asia LEDS Partnership and highlighted the partnership’s role in facilitating greater collaboration and sharing of experiences within the region.

Introduction and Economics of Climate Change

Session Moderator: *Juzhong Zhuang*, Deputy Chief Economist, Economics and Research Department, ADB

Session Rapporteur: *Peter du Pont*, USAID LEAD Program

Summary

This session provided an introduction to the economics of climate change for South and Southeast Asia based on two recent studies conducted by the ADB. The studies assess the impact of climate change adaptation and mitigation options and estimate their economic costs and benefits for their respective sub-regions. Key points from this session include:

- Climate change is having a disproportionately high impact on South and Southeast Asia due to the regions’ high vulnerability to the physical impacts of climate change and low adaptive capacities.
- The projected economic costs of climate change adaptation and mitigation are much lower than the costs of inaction, with estimated costs likely to put a significant drag on the region’s economy.
- The region’s attention is focused on adaptation. However, ample opportunities exist for cost-effective greenhouse gas (GHG) mitigation measures with high co-benefits.

Economics of Climate Change in South Asia

Akm Mahfuzuddin Ahmed, Principal Climate Change Specialist, South Asia Regional Department, ADB

Akm Mahfuzuddin Ahmed presented the results of a soon to be released ADB study on the economics of climate change in South Asia. A synopsis of the study is available at:

<http://www.adb.org/sites/default/files/pub/2013/economics-reducing-ghg-emissions-south-asia.pdf>.

Key Points

- Without a global deviation from a fossil-fuel intensive path, South Asia could lose an equivalent of 8.8 percent of its gross domestic product (GDP) on average per annum by 2100.
- For South Asia to be fully prepared for the worst case scenario, it requires investments in adaption equivalent to 1.3 percent of GDP on average per annum between now and 2050. This could increase to 2.3 percent of GDP per annum, taking into account climate uncertainties.
- Global GHG mitigation must start now to avoid prohibitively high future adaptation costs in South Asia. The region needs a forward-looking adaptation pathway to manage the large uncertainties associated with future climate change impacts.
- In an era of accentuated climate risks, resource- and energy-intensive paths of economic development are not sustainable.
- A paradigm shift pursuing opportunities in low-carbon, green growth through resource- and energy-efficient technologies will lower GHG emissions and the cost of adaptation.

Economics of Climate Change in Southeast Asia

Ancha Srinivasan, Principal Climate Change Specialist, South East Asia Regional Department, ADB

Ancha Srinivasan presented the results of an ADB study published in 2009 on the economics of climate change for Southeast Asia. The report is available at: <http://www.adb.org/publications/economics-climate-change-southeast-asia-regional-review>.

Key Points

- Southeast Asia is highly vulnerable to climate change impacts due to geographic and population factors, the region's heavy reliance on climate sensitive sectors such as agriculture, water, and tourism, and low adaptive capacities.
- Climate change impacts are already serious in the region. For example, flood-related damage increased by a factor of eight in the 1990s compared to the 1970s.
- Unabated, climate change will cost the region the equivalent of 6.7 percent of GDP each year by 2100—more than twice the global average loss.
- One priority action is to raise the awareness among decision makers of the significant co-benefits associated with GHG mitigation and climate change adaption measures. The inability to properly take into account these co-benefits is a barrier to green growth.
- The region has made significant efforts in adapting to climate change, but more is needed to mainstream adaptation into development planning.
- Adaptation and mitigation require a comprehensive policy framework, incentives for private sector action, elimination of market distortions, and ample financial resources.



Participants share reflections on topics presented.

Introduction to LEDS and Green Growth

Session Moderator: *Jem Porcaro*, USAID LEAD Program

Session Rapporteur: *Sandra Khananusit*, USAID LEAD Program

Summary

This session provided an introduction to LEDS and Nationally Appropriate Mitigation Actions (NAMAs), including what they are, why they are important, and how they work. Key points from this session include:

- Given the region's expected economic growth, it is critical to transition to a low-carbon development path and to decouple economic growth from GHG emissions.
- Decoupling economic growth from GHG emissions in Asia will require long-term comprehensive strategies that go well beyond the traditional project-by-project approach offered by mechanisms like the Clean Development Mechanism (CDM).
- LEDS offer a strategic planning framework to help promote long-term green growth.
- NAMAs take a country-wide programmatic approach (versus the project-by-project approach of the CDM) and can be a tool used to achieve LEDS goals.
- The LEDS Global Partnership and the Asia LEDS Partnership are collaborative efforts to provide platforms to build communities of practices on LEDS.

Foundations for Long-Term Sustainable Growth: Low-Emission, Climate-Resilient Development Strategies

Orestes Anastasia, Co-Chair, Asia LEDS Partnership, and Senior Regional Climate Change Advisor, USAID Regional Development Mission for Asia

Orestes Anastasia provided an overview of the LEDS concept and process, and highlighted LEDS partnerships available to practitioners interested in collaboration and peer learning.

Key Points

- There is unprecedented growth and value creation in Asia, but it is unsustainable.
- LEDS are strategic planning frameworks to help promote long-term green growth. A key goal of LEDS is to decouple economic growth and GHG emissions.
- The five key elements of LEDS include: (1) organize the LEDS process; (2) assess the current situation; (3) use analytical decision-making; (4) prioritize and plan; and (5) implement and monitor.
- LEDS can be integrated into country development plans and national budgets, and can apply at the sub-national level also.
- The Asia LEDS Partnership is a voluntary network created to foster greater regional collaboration, coordination, and support among LEDS practitioners in Asia. The Partnership builds on, and cooperates with, existing regional networks and initiatives. The topic of financing for LEDS and green growth was identified as a top priority area for collaboration.
- Both the LEDS Global Partnership and Asia LEDS Partnership offer platforms to promote better understanding and access to climate finance – ranging from organizing practitioner forums to offering no-cost technical advisory services.

NAMAs: Overview, Design, and Financing Sources

Brad Johnson, Senior Financial Advisor, Center for Clean Air Policy

Brad Johnson provided an introduction to NAMAs and used examples of NAMAs being developed in other regions of the world to highlight lessons learned.

Key Points

- NAMAs are national actions combined with financial mechanisms that provide incentives to the private sector to invest (i.e., regulation or legislation + incentives = NAMA).
- NAMAs are a tool that can help to achieve LEDS goals. NAMAs can be sectoral or cross-sectoral. They are less project-focused; while projects may be financed, they must have proper context.
- Funding can be in many forms, such as grants, low interest loans, and guarantees. Mechanisms that promote sustainability are preferred.
- Examples of innovative and successful NAMAs include: the Dominican Republic's lease financing program for renewable energy in the hospitality sector, Chile's price stabilization fund to improve bankability of energy projects, and Colombia's equity fund for solid waste management.
- Successful NAMAs must be tailored to country circumstances, leverage private sector resources, include effective measurement, reporting and verification (MRV) systems, and have national buy-in supported by institutional capacity.

LEDS and the Climate Finance Landscape in Asia

Session Moderator: *Randall Freed*, Senior Vice President, Global Climate Services, ICF International

Session Rapporteur: *Carina Paton*, USAID LEAD Program

Summary

This session provided a stock-taking of climate finance activity in Asia, including how much financing is flowing, its main sources, and where it is going. Key points from this session include:

- Numbers on the amount of climate finance needed and available vary and become outdated quickly. The numbers are not as important as understanding scale and urgency of the problem.
- Private sector climate finance is much larger than that of the public sector globally and in Asia, and is disproportionately allocated to too few countries (e.g., India, Thailand). Countries need stronger investment climates (e.g., policy, institutional, technical, and financial) to attract private finance.
- Public finance can leverage private finance, as public resources are insufficient to fill the financing gap. Building climate finance "readiness" and public-private partnerships are key to scaling-up climate finance.

Fast Out of the Gate: How Developing Asian Countries Can Prepare to Access International Green Growth Financing

Aidan Stretch, USAID LEAD Program

Aidan Stretch presented findings from the *Fast Out of the Gate* report, commissioned by USAID, which reviews over 200 public and private sector climate finance sources targeted for investment for low-

emission projects, businesses, and infrastructure in 11 Asian countries.¹ The report is accompanied by an extensive list of public and private sources of climate funds, including MRV and other eligibility requirements, intended to be used by both the public and private sector. The report is available at: <http://lowemissionsasia.org/resources/fast-out-gate-vol-1.pdf>.

Key Points

- Globally, by some estimates, USD 10 trillion of climate finance is required between the years 2010 and 2020 to avoid the dangerous impacts of climate change - this equates to a need of roughly USD 1 trillion per year. Current global climate finance is estimated at USD 200-360 billion per year. As such, there is a need to increase funding by three times current levels to fill the financing gap. Donor countries have pledged USD 35 billion for climate-related activities globally, and a total of USD 9 billion worth of projects and programs have already been approved.
- In Asia, it is estimated that India and Southeast Asia alone will require USD 144 billion per year of climate finance, or 14 percent of the global requirement. Currently less than USD 10 billion of total climate financing is flowing to the 11 Asian developing countries per year. As such, there is a need to increase investment volumes by roughly 14 times to fill the financing gap; this regional funding gap is much higher than the global one on a relative basis.
- To date, 25 international public climate funds have approved USD 1.6 billion of climate-related projects and programs in the 11 Asian developing countries, mostly in India and Indonesia.
- The private sector dominates climate finance flows. In 2012, USD 8.2 billion of private climate finance was invested in India and Southeast Asia; over 80 percent was allocated to India and Thailand.
- The importance of the carbon market is decreasing due to the weakening CDM market while climate bonds are expected to make an increasing contribution to private climate finance.
- Alternative asset investments (sovereign wealth funds, hedge funds, private equity funds, and exchange-traded funds) are growing in size and represent an important but largely untapped source of climate finance.
- Commercial banks are establishing specialized climate finance facilities, which are seeing success and should continue to grow.
- MRV frameworks and capacity is a critical pre-condition for increased public climate finance.
- At USD 1.9 trillion per year, fossil fuel subsidies dwarf the global climate finance funding gap thereby representing a major impediment to addressing climate change.
- Proper fuel price signals are important and an effective means of driving mitigation as evidenced by the fact that the private sector has reduced CO₂ emissions by 13 percent since 2007 through a switch from coal to natural gas.

ADB's Climate Change Financing Program

Michael Rattinger, Climate Change Specialist, Climate Change Program Coordination Unit, Regional and Sustainable Development Department, ADB

Michael Rattinger provided an overview of recent initiatives in ADB's Climate Change Financing Program, the current and anticipated roles of the program, and program focus areas.

¹ Bangladesh, Cambodia, India, Indonesia, Laos, Malaysia, Nepal, Papua New Guinea, Philippines, Thailand, and Vietnam

Key Points

- Environment, including climate change, is one of the five core areas of operations in ADB's Long-term Strategic Framework. The five strategic priorities within climate change are:
 - Scaling-up Clean Energy
 - Encouraging Sustainable Transport and Urban Development
 - Managing Land Use and Forests for Carbon Sequestration
 - Promoting Climate-resilient Development
 - Strengthening Policies, Governance and Capacity
- As ADB is a bank, the main modality is finance. But to add value to member countries, ADB also emphasizes knowledge management and partnerships.
- Multilateral finance institutions contributed USD 21.2 billion to climate finance globally in 2011. In 2012, ADB contributed USD 3.3 billion (USD 2.4 billion to mitigation and 0.9 billion to adaptation), not taking into account leveraged finance. This is only a small portion of the need.
- ADB uses three key methods to mobilize climate financing: (1) Deploying concessional resources (internal fund and external trust or multilateral funds); (2) Maximizing market mechanisms (carbon market, domestic emission trading); and (3) Catalyzing private investment (direct project finance and public-private partnerships).
- ADB set a target to invest USD 2 billion in clean energy annually by 2013, and has exceeded this target two years in advance. ADB has flagship initiatives supporting solar and wind energy, and access to energy.
- ADB's carbon fund is still searching for investment opportunities, and intends to continue to provide finance when finance is needed.
- ADB is encouraging public-private partnerships as a way to drive low-carbon investment, since public resources are not enough to fill the financing gap.
- Looking to the future, ADB's main tasks are to:
 - Mobilize and leverage climate change financing, and build climate readiness;
 - Crowd in the private sector;
 - Continue to support enabling policies and regulations, and enabling frameworks to plan and monitor climate finance; and
 - Help countries develop a pipeline of programs and projects for the upcoming mechanisms.

Mobilizing Climate Finance

Athena Ronquillo Ballesteros, Project Manager, Institutions and Governance Program, World Resources Institute (WRI)

Athena Ronquillo Ballesteros provided a non-governmental organization (NGO) perspective on climate finance in Asia and an overview of WRI activities to help build climate finance readiness.

Key Points

- Climate finance figures and data can become quickly outdated, and can change as we learn more about the risks and opportunities associated with climate change. What is important is that everyone understands the urgency and the scale of the problem.

- There is uncertainty on how much money will flow to developing countries and how financing will scale up after the fast-start commitment period, because although there is a USD 100 billion target for 2020, there is no medium-term target.
- Caution should be taken when defining climate finance: WRI uses a broad definition which includes both public and private investments toward a low-carbon and resilient economy.
- Domestic sources of climate finance often get overlooked. In Asia, national funds are beginning to play a more important role, such as in the Philippines.
- Developing countries need the right set of enabling conditions (e.g., policy and institutional, and industry and financial conditions) to scale up climate finance. More support for readiness capacity building is also needed.
- WRI has published several publications on the topic of climate finance. They include:
 - *“Moving the Fulcrum: A Primer on Public Climate Financing Instruments Used to Leverage Private Capital,”* an overview of global players, including some of the private sector.²
 - *“Mobilizing Climate Investment: The Role of International Climate Finance in Creating Readiness for Scaled-Up, Low-Carbon Energy,”* a catalogue of examples that is a good reference for work in various countries.³
 - *“Public Financing Instruments to Leverage Private Capital for Climate-Relevant Investment: Focus on Multilateral Agencies.”*⁴
- WRI is helping to determine what activities should be funded under the readiness facility in the Green Climate Fund (GCF). The GCF is in the design stage; countries are encouraged to voice what they want and need, based on development objectives and country priorities.
- There have been many challenges with the Clean Technology Fund (CTF), but WRI has seen good thinking arise. For example, in the Philippines CTF investment plan, the International Finance Corporation (IFC) channeled Canadian funds to the Development Bank of the Philippines to lend to local banks. WRI is encouraging more arrangements of this kind.
- Climate financing is helping to unblock barriers in the geothermal sector in Indonesia. If done successfully, this could help relieve some of the fossil fuel dependence.

Wrap-Up and Closing Remarks

Orestes Anastasia, Co-Chair, Asia LEDS Partnership, and Senior Regional Climate Change Advisor, USAID Regional Development Mission for Asia

Orestes Anastasia provided general observations about the key issues and needs identified throughout the day, and their implications for government officials, donors, the private sector, and NGOs. He emphasized the importance of the Asia LEDS Partnership and other networks in creating a strong community of practitioners. He also encouraged the participants at this workshop to learn from and use the wealth of knowledge and ideas shared by peers to help in designing future LEDS work.

² Available at: <http://www.wri.org/publication/moving-the-fulcrum>

³ Available at: <http://www.wri.org/publication/mobilizing-climate-investment>

⁴ Available at: <http://www.wri.org/publication/public-finance-instruments-to-leverage-private-capital-for-climate-investment>

MAIN WORKSHOP: WEDNESDAY APRIL 3, 2013

The main workshop began with opening remarks followed by two keynote speeches and three thematic sessions. The day closed with an interactive open space session dedicated to showcasing national climate policies and finance frameworks.

Opening Remarks

Woochong Um, Deputy Director General Regional Sustainable, Regional and Sustainable Development Department (RSDD), ADB

Reed Aeschliman, Deputy Mission Director, USAID Philippines

Doddy Sukadri, Co-Chair, Asia LEADS Partnership, and Secretary, Working Group in Land-use, Land-use Change, and Forestry, Indonesia National Council on Climate Change

Woochong Um, Deputy Director General at the ADB, offered welcoming remarks, emphasizing the important role that this workshop can play in helping ADB and other stakeholders in the region to forge partnerships with the private sector to leverage additional climate financing.

Reed Aeschliman, Deputy Mission Director, USAID Philippines, added that greater attention needs to be placed on leveraging private sector finance and having a more equitable allocation of climate finance among developing countries in Asia.

Doddy Sukadri, Co-Chair, Asia LEADS Partnership, introduced the Asia LEADS Partnership and noted that one objective of the workshop is to identify specific actions the Partnership can take to further address climate finance barriers.



Woochong Um, ADB RSDD Deputy Director General, welcomes attendees to the workshop.

New Business Opportunities for Green Growth

Session Moderator: *Alan Miller*, Principal Climate Change Specialist, Climate Business Department, IFC

Session Rapporteur: *Carina Paton*, USAID LEAD Program

Summary

This opening plenary set the stage for in-depth discussions on climate finance opportunities in the context of LEADS and climate change. Key points from this session include:

- One challenge to scaling up climate finance is the need to move from our current investment climate in which every deal is a unique “story” requiring specific attention, to an environment where clean energy and climate-resilient investments are streamlined.
- Climate finance should be thought of holistically, and placed in the context of broader policy, technology, institutional, and strategic issues.
- Private finance is the dominant source of global climate finance. However, national financial support is growing in prominence.
- De-risking instruments (targeted at perceived risks) are critical to creating the appropriate risk-reward profile necessary to attract more private capital into clean energy.

Keynote Address 1: Public Sector Perspective: How to Scale up Climate Finance and Make it More Effective

Barbara Buchner, Senior Director, Climate Policy Initiative Europe

Barbara Buchner provided an overview of global climate finance flows, as contained in the Climate Policy Initiative's *2012 Global Landscape of Climate Finance* report. This report is available at:

<http://climatepolicyinitiative.org/wp-content/uploads/2012/12/The-Landscape-of-Climate-Finance-2012.pdf>.

Key Points

- In 2010-2011, global climate finance flows reached roughly USD 364 billion annually.
- Private finance represented almost 75 percent of climate finance, with the domestic private sector as a cornerstone of climate finance in both developed and developing countries.
- Public and private financial institutions raised and channeled USD 110-120 billion of climate finance. DFIs played a pivotal role.
- The large majority of climate finance captured was invested in mitigation measures, with 85 percent directed to renewable energy and four percent directed to energy efficiency.
- Emerging economies were the key recipients of climate finance. China, Brazil, and India received nearly 33 percent of the total investment.
- Risk, whether real or perceived, is the single most important factor impeding investment in renewable energy projects. DFIs and the public sector have significant opportunities to address these risks.

Keynote Address 2: Private Sector Perspective: Mitigating Risk to Facilitate Private Sector Investment in Climate Initiatives

Silvia Kreibiehl, Head, Frankfurt School - UNEP Collaborating Center for Climate and Sustainable Energy Finance

Silvia Kreibiehl discussed mitigation of real and perceived risks in order to facilitate private sector investments in clean energy.

Key Points

- In developing and emerging countries, the market is often imperfect and the “financing bottleneck” is in patient and medium-risk capital.
- De-risking instruments, which range from guarantees to public co-investments, are designed to reduce actual or perceived risks.
- Perceived risks are particularly relevant to new markets and technologies. Asia's clean energy market needs to focus on mitigating these risks.
- De-risking should focus less on minimizing risks, and more on smart risk allocation.
- In order to tap the mainstream markets, which is required to scale up, renewable energy investments must compete with traditional investments. The private sector needs an attractive risk-reward profile in order to deploy more capital into clean energy.
- The private sector is particularly sensitive to political and regulatory risks given the long time horizons involved in clean energy investments (e.g. 20-year exposure to changes in regulations).

Public sector provision of de-risking instruments, such as guarantees from the World Bank, for political and regulatory risks is “smart” and cost effective.

- Open and unbiased dialogue must occur between the public and private sectors to facilitate the learning and trust-building that is requisite to increase private sector investments.

Climate Finance Outlook and Key Opportunities

Session Moderator: *Athena Ronquillo-Ballesteros*, Project Manager, International Finance Flows and the Environment, WRI

Session Rapporteur: *Dina Khan*, CDKN

Summary

This panel discussed the status of climate finance activities in Asia, including where and how climate finance has been mobilized. Key points from this session include:

- The provision of long-term credit lines and guarantees from development banks and DFIs is a valuable use of public resources to mitigate the long-term risks associated with clean energy investments and to attract private finance.
- Despite difficulty in tracking adaptation financing and in engaging the private sector, there are promising entry points, including insurance and disaster preparedness.
- Providing clean energy access to the BoP presents a tremendous opportunity to address climate change while promoting green and equitable growth. Several initiatives, such as ADB’s Energy for All and IFC’s Lighting India, target the BoP.

Private Sector Outlook on Climate Finance

Alexandra Tracy, Chairman, Association for Sustainable & Responsible Investment in Asia

Alexandra Tracy provided a private sector perspective on climate finance, drawing on the experience of the Association for Sustainable & Responsible Investment in Asia.

Key Points

- “Climate finance” can have different meanings to different people. The term has acquired a broader definition than what may be documented.
- One barrier to private sector involvement in climate finance is that “climate finance” is presented as a novel concept. Investment institutions are made to believe that private equity for clean technology or climate-friendly infrastructure is also a new practice. This is not true, and communication on climate finance must improve to overcome this barrier.
- Low-carbon projects do bring uncertainty. There are added risks in renewable energy and low-carbon infrastructure projects, particularly those related to the state of technology, supply chains, project developer experience, and policy uncertainty.
- Overcoming the current market sentiment is a challenge. There is a lack of skill and capacity, and there is competition with other methods and sources that may be simpler for investors.

Private Sector Outlook on Climate Finance

Pankaj Sehgal, Sun Group

Pankaj Sehgal highlighted the outlook and opportunities for renewable energy investments in India.

Key Points

- The renewable energy sector in India is focused on:
 - Hydro, the oldest and strongest form of clean energy;
 - Wind, the most pronounced source of power (16-17 GW generated). Investment has been driven by accelerated depreciation and tax incentives, but more new projects are driven by climate finance;
 - Solar, the fastest growing sector, receiving 40 percent of investment; and
 - Biomass, which does not offer scale to investors (2 GW generated).
- There is little venture or private equity investment in renewable energy in India. Most investment is asset financing, from wind and solar scale-up. Investors are typically businesses that already operate in the power sector and are familiar with power generation and transmission operations.
- Banks have had little involvement in the solar sector, with a small number providing debt financing.

Scaling up the Role of IFIs and MDBs in Climate Finance

Alexander Ablaza, Principal Advisor - Energy Efficiency, Development Finance International

Alexander Ablaza shared his experiences in trying to grow clean energy businesses (especially energy efficiency technology providers) in emerging markets, while leveraging the financial and intellectual capital of international financial institutions (IFI) and multilateral development banks (MDBs).



Alexander Ablaza discusses the role of MDBs and IFIs.

Key Points

- Development Finance International aims to work with two or three multinational energy efficiency technology providers on a global basis to deepen and broaden market reach of their low-carbon technologies by leveraging the financial and knowledge capital of IFIs and MDBs.
- Energy efficiency is the “underdog” in the climate finance world and is largely untapped, despite the great need and potential. According to McKinsey, USD 170 billion of investment is needed per year by 2020 to meet the energy efficiency financing gap. According to the IFC, USD 11.5 trillion in energy efficiency investment is needed by 2050 to limit global warming to two degrees Celsius.
- Different MDBs aspire to meet the gaps in clean energy production. The clean energy sector is dominated by renewable energy investment. MDB and IFI involvement in energy efficiency is very small despite very ambitious targets.
- Development Finance International is trying to stretch the operational boundaries of MDBs and private sector companies that are risk averse and do not want the exposure on their balance sheets. Development Finance International works to bridge the gap in risk management.

Asian National Development Bank Experiences in Climate Friendly Green Investment

Octavio B. Peralta, Secretary General, Association of Development Financing Institutions in Asia and the Pacific (ADFIAP)

Octavio B. Peralta spoke about the green finance activities and investments of ADFIAP members across the region, including activities in the micro, small and medium enterprise (MSME) sector. ADB created ADFIAP to focus on financial inclusiveness, green financing, green banking and governance

Key Points

- DFIs are specialized financial institutions that provide long-term financing as well as technical assistance to sectors that contribute to national economic well-being and growth.
- Development banks provide, among other tasks, environmental financing to MSMEs and large projects in the quest for a greener, cleaner future.
- ADFIAP, by pursuing sustainable finance policies, advocacy, and partnership practices through its members, believes that it can contribute to the continued development and growth in Asia-Pacific.
- Examples of member activities include the Financing Scheme for Energy-saving project in the MSME sector and the Green Technology Financing Scheme, among others.

Bank and Private Equity Perspectives on Climate Friendly Investments

Session Moderator: *Aidan Stretch*, USAID LEAD Program

Session Rapporteur: *Rey Guarin*, ADB

Summary

This panel brought together bankers and private equity fund representatives from developing Asian economies to discuss their perspectives on climate finance. Key points from this session include:

- Private investors face a myriad of risks when considering low-carbon and climate-resilient investments (e.g. feedstock and supply risks for biogas projects, legal and permitting risks).
- Feed-in-tariffs (FiTs) play an increasingly important role in attracting private sector finance to the renewable energy sector. However, the proper design of FiTs is critical to making them effective.
- Banks in Asia are willing to engage in renewable energy projects, but capacity building is required to create the necessary internal expertise within the banks to evaluate renewable energy projects.

BPI Globe BankO

Tessie Tan, President, BPI Globe BankO

Tessie Tan highlighted BPI-Global BankO's lessons learned in value chain financing through distributors.

Key Points

- Technologies must be tested and have full after-sales support from manufacturers or distributors in order to mitigate the risk of technology failure, and risk of borrowers defaulting.
- Private sector cooperation is crucial to mitigate risks when collateral for loans does not exist.
- Mobile banking is a relatively new business model that needs to be proven.

BDO

Edward G. Wenceslao, Senior Vice President and Head of Wholesale Lending and International Desks, BDO

Edward G. Wenceslao presented BDO's energy and renewable energy investment portfolio and experience.

Key Points

- The Philippines could benefit from improved government policies to expand renewable energy and energy efficiency investments.
- Examples of potential policy measures to enhance the investment climate include: reforming the FiT program so that project developers need not wait until their projects are fully developed to be allocated their FiT; speeding up implementation of rules for the FiT; relaxing the rules for land ownership by foreign investors; and providing incentives for energy efficiency measures.

IndoChina Capital

Jeffery Allen Dickinson, Head of Renewable Energy, IndoChina Capital

Jeffrey Allen Dickinson shared his experiences and lessons on developing renewable energy in Asia.

Key Points

- The perceived risks for renewable energy in Asia are high, particularly for banks. Future focus should be on technical assistance and capacity building.
- An insurance facility for mitigating biomass supply risk should be developed for biomass projects.
- The use of subsidies to support renewable energy in Asia has had mixed results. For example, subsidized grid-connected solar photovoltaics often increase the cost of power.
- Policy makers require a better technical understanding of renewable energy technologies and markets to apply the "right" subsidies in appropriate contexts.
- Access to venture capital is needed to support the transition of pilot projects to commercialization.

Asia Green Capital

Edgare Kerkwijk, Managing Director, Asia Green Capital

Edgare Kerkwijk shared his insights into the key opportunities and barriers faced by renewable energy investors in Asia.

Key Points

- An encouraging signal in the market is that "only very good projects with very good fundamentals" are financed in the region (versus the case of solar in Italy where there was too much liquidity).
- The finance sector does not have sufficient understanding of renewables. Future capacity building should be focused on building internal expertise within banks to evaluate clean energy projects.
- Many funds are being set up in Asia, however, their limited partners' strict investment criteria is limiting equity investments in clean energy.
- With the weakening of carbon markets, clean energy projects are now being driven by electricity income and the adoption of FiTs (e.g., in Thailand, Malaysia, and Indonesia).

Presentations on National Framework to Support Green Finance

Session Moderator: *Ancha Srinivasan*, Principal Climate Change Specialist, South East Asia Regional Department, ADB

Session Rapporteur: *Sandra Khananusit*, USAID LEAD Program

Summary

Four government representatives presented their country's plans and policy frameworks to stimulate climate finance. This was followed by informal contributions from other government officials in the audience. Key points from this session include:

- There are a wide variety of national and sub-national frameworks in support of climate finance within Asia, all of which are at different stages of development.
- Capacity building is a priority for the region, but needs vary among countries (e.g., modeling, fund development, environmental regulations).

Vietnam

Nguyen Tuan Anh, Deputy Director General, Ministry of Planning and Investment (MPI), Vietnam

Nguyen Tuan Anh presented Vietnam's plans and policy frameworks to stimulate climate finance.

Key Points

- The national framework for planning in Vietnam is led by MPI at the central level, Planning and Investment Departments in provinces, Planning and Finance Departments in districts, and it also reaches communes. The state budget addresses each level.
- Vietnam's Green Growth Strategy has set voluntary emission reduction targets for 2020 and 2030.
- Substantial capacity building, technology transfer, and upfront financing are needed in agriculture and for energy efficiency. The power sector also requires investment, as well as phasing out of fuel subsidies and carbon pricing.
- Climate-related financial sources include: one percent of the State budget allocated to environmental protection; domestic funding for energy efficiency and forestry/land use programs; Overseas Development Assistance (ODA) and public climate finance (e.g., by Germany, France, Japan, Canada); and private sources.
- Reforms and restructuring efforts are underway to better link climate change to public investment, and identify financing needs to meet low-carbon targets.
- Vietnam is working to establish a National Climate Change Commission in the next two years.
- MPI leads a task force on climate finance, which supports development of financing mechanisms for low-carbon growth. The Vietnam Green Growth Fund is envisioned to channel public and private climate capital inflows to align with national planning.



Nguyen Tuan Anh shares Vietnam's plans and policy frameworks for climate finance.

Papua New Guinea

Joe Pokana, Senior Policy Analyst, Office of Climate Change and Development (OCCD), Papua New Guinea

Joe Pokana presented Papua New Guinea's plans and policy frameworks to stimulate climate finance.

Key Points

- The OCCD was established in 2008, and leads on climate change issues. OCCD reports to the Minister for Climate Change and the National Executive Council. OCCD is responsible for coordination; technical working groups lead on policy; and sectoral departments implement.
- Papua New Guinea's Vision 2050 includes two 20-year development strategic plans, five-year medium term plans, and annual work plans. OCCD hired McKinsey & Company to detail these plans.
- The National Climate Change and Development Policy's thematic areas include mainstreaming, data and MRV, adaptation, mitigation, financing, and partnerships. On financing, potential funding sources include government departments, development partners, and the private sector.
- A climate fund is in the concept phase, and could manage incoming funds for governance and implementation. This concept is under review by the National Executive Council.
- Challenges include: policy creation is costly (i.e., when using consultants); sectoral policies do not always align with national climate change plans; stakeholder feedback is often not timely; and political instability is a challenge for implementation.
- Priority areas for further collaboration for Papua New Guinea include peer exchange on lessons learned, technical assistance, funding, and technology transfer.

Indonesia

Edi Setijawan, Senior Researcher/Assistant Director at Financial System Stability Group-Banking Research and Regulation Department, Bank Indonesia

Edi Setijawan presented Indonesia's plans and policy frameworks to stimulate climate finance.

Key Points

- Threats to national sustainable development include: energy consumption growth that outpaces GDP growth; dependence on oil and gas; a deficit on main food commodities; and evidence of climate change (e.g., uncertainty, extreme events, pollution, and degradation).
- There is high potential for renewable energy development in Indonesia. The role of financiers and private companies is very important to increase the share of renewable energy in the supply mix.
- Indonesia's policy responses to promote green banking include developing or enhancing the legal framework and incentive schemes. Implementation challenges include lack of finance, legal enforcement, lack of knowledge, lack of coordination, and information bottlenecks.
- Capacity building is needed to ensure that people fully understand what environmental requirements are and why they exist, and then help to enforce the requirements.
- Bank Indonesia regulations related to climate change include asset quality, risk management, and good climate governance. Bank Indonesia coordinates with the Ministry of Environment.
- Bank Indonesia also focuses on capacity building for banks, and serves as an information hub on topics such as green lending. For training events, Bank Indonesia presents a classroom case study on green financing and takes bankers to the field to look at implemented projects.

Thailand

Wannapa Khlaisuan, Senior Professional, Plan and Policy Analyst, Office of the National Economic & Social Development Board (NESDB), Thailand

Wannapa Khlaisuan presented Thailand's plans and policy frameworks to stimulate climate finance.

Key Points

- At the national level, the 11th National Economic and Social Development Plan facilitates the transition towards low-carbon cities, a low-carbon economy, and prepares for setting up a domestic carbon market and fund.
- Country strategies focus on GHG emissions reduction, resources and water management, environmental fiscal policy, and eco-industrial town development. There are 18 flagship projects underway, with a budget of USD 8.94 billion.
- Sectoral plans exist for renewable energy, energy efficiency, agriculture, and sustainable transport.
- At the local level, there are initiatives on green, low-carbon, livable, and sustainable cities.
- Thailand has conducted a baseline assessment of its climate fiscal framework and a Climate Public Expenditure and Institutional Review (CPEIR) supported by the United Nations Development Programme (UNDP) (2012). The CPEIR found that the climate budget is 0.5 percent of GDP and 2.7 percent of the government budget, with 21 percent for mitigation and 68 percent for adaptation.
- Thailand will undertake initiatives to link climate policy and public finance (2013-2015). CPEIRs will also be conducted at the sub-national level.
- Technical assistance needs include capacity building in general equilibrium modeling for evaluating impacts of low-carbon policies on the economy, and financial instruments to mobilize private funds for climate investment.

Informal Presentations from the Audience

Following the four country presentations, other country representatives in the audience briefly commented on their own respective national frameworks.

Bangladesh has two climate funds to support implementation of the Bangladesh Climate Change Strategy and Action Plan. The first is the Bangladesh Climate Change Trust Fund, which is resourced entirely from the government's own budget (USD 100 million annually during 2009-2011). The other is the Resilience Fund, which has received USD 190 million in donor funding.

Cambodia's Green Growth Roadmap was published in 2009 and the Ministry of Environment is leading development of the Cambodia Climate Change Strategic Plan. It integrates sectoral climate change plans developed by line ministries, and includes adaptation and mitigation. A Cambodia Climate Change Alliance Trust Fund offers grants to line ministries and civil societies for activities. The fund is currently administered by UNDP, but will transition to government management in the future. Climate change is being mainstreamed at the sub-national level.



A representative from Cambodia shares an update on frameworks to support climate finance.

Georgia is in the early stages of LEDS development. The government has identified several key focus areas and activities, such as energy efficiency, sustainable energy practices, clean energy, GHG inventories, low emission economic growth, natural resources stewardship, and increased public awareness.

India has a number of ongoing schemes and programs. For example, the National Clean Energy Fund was established to fund research and innovative projects in clean energy technologies. The National Action Plan on Climate Change includes eight national missions: solar, energy efficiency, sustainable habitat, water, Himalayan ecosystems, “green India,” agriculture, and knowledge for climate change. State Action Plans on Climate Change, developed under the Ministry of Environment and Forests, also offer forward looking strategies and voluntary action.

Mongolia is beginning to look at climate change finance, and is interested in establishing a climate fund. Restructuring of ministries has placed all core climate change matters under the Ministry of Environment (previously, selected issues fell under the Ministry of Tourism). The formation of a green development strategy and action plan is underway. Mongolia is interested in capacity building support to help establish a climate fund.

The **Philippines** has a People’s Survival Fund for implementation of adaptation projects by local governments and communities, particularly in vulnerable areas. The Department of Budget and Management is also conducting a CPEIR, and is developing screening guidelines (to be issued soon) for government agencies to identify climate change mitigation and adaptation projects, the aim of which is to accurately tag these projects in the 2014 budget. This will help to mainstream climate finance in the national budget process.

The **Solomon Islands** is in the process of developing a national climate change policy. Currently climate financing inflows are from bilateral and multilateral sources only. Overall, access to international funds is an obstacle.

Open Space Session: Country Showcases

A “marketplace” style session enabled small group and one-on-one discussions, allowing participants to learn directly from country representatives about climate policy and finance frameworks. The following country displays highlighted national frameworks in support of climate finance: Bangladesh, Cambodia, India, Indonesia, Malaysia, Papua New Guinea, Philippines, Solomon Islands, Thailand, and Vietnam.



Participants visit the Philippines and Papua New Guinea country displays during the open space session.

MAIN WORKSHOP: THURSDAY APRIL 4, 2013

The final day of the workshop began with a plenary session followed by two sets of concurrent sessions on issues related to mainstreaming, access to finance in the BoP, energy efficiency, renewable energy, and transport. Participants attended two sessions of their choosing from the five topic areas. The day concluded with an interactive plenary session on capacity building.

Using the Public Sector to Mobilize Private Climate Finance

Session Moderator: *Trevor Lewis*, Infrastructure Specialist (Public Private Partnerships), Regional and Sustainable Development Department, ADB

Session Rapporteur: *Barbara Buchner*, Senior Director, Climate Policy Institute Italy (CPI)

Summary

This session focused on lessons learned in blending public sector finance with private funds to enhance the viability of climate friendly projects. Key points from this session include:

- As demonstrated by the Global Energy Transfer Feed-in Tariff (GET FiT) program, guarantees are an important and cost-effective means to lower the cost of capital for project developers and, when combined with regulatory instruments like FiTs, can successfully leverage private sector financing.
- As demonstrated by the Philippines, there is a need for the public and private sectors to work more closely together to ensure enabling environments are well designed and “know how” is exchanged between both sectors.
- Supply of public financing is not the bottleneck *per se*. The challenge is spending public resources effectively since public institutions do not have the distribution that the private sector has. The focus should be on developing public-private sector partnerships.
- The public sector has a critical role in providing regulatory and political certainty for private sector participation. The challenge is creating regulatory certainty through political cycles which change over time.

Theory: What does the Public Sector have to do to Mobilize the Private Sector?

Tomonori Sudo, Research Fellow, JICA Research Institute, Japan International Cooperation Agency (JICA)

Tomonori Sudo presented the rationale for why the public sector should mobilize private climate finance and what specific roles it should play in doing so.

Key Points

- There is a clear rationale for the public sector to leverage private climate finance.
- The key roles of the public sector should be to: create an enabling environment (e.g., competitiveness, legal regulatory framework), including through use of ODA and public finance; increase the absorptive capacity of recipients; and take on risks that the private sector is not able (or not yet willing) to bear.

Lessons Learned in using Public Sector Climate Finance to Mobilize the Private Sector

Shelagh Whitley, Research Fellow, Climate Change, Overseas Development Institute (ODI)

Shelagh Whitley discussed lessons in using public sector finance to mobilize the private sector.

Key Points

- Governments have different tools they can use to mobilize the private sector (e.g., regulatory, economic, and information instruments), most of which are subsidies. There are methodologies for measuring these subsidies.
- Identify where capital is best suited, so that capital is not directed to where it is not best used due to different risk appetites or profiles.

The Case of Renewable Energy Feed-in-Tariffs in the Philippines: Improving Investment Outcomes through Better Engagement with the Private Sector in Policy Formulation

Miles Stump, Sustainable Energy Finance Specialist, IFC

Miles Stump used the example of the Philippines FiT to highlight why and how the public and private sectors should better collaborate on policy formulation.

Key Points

- The Philippines FiT regime was structured in a way that (inadvertently) increased risk and uncertainty for project developers, especially smaller-scale developers for whom the FiT was most important.
- The challenges the Philippines FiT program faced were in large part due to insufficient engagement of the private sector by policy makers.
- In addition to leveraging private sector resources, the public sector should also consider leveraging private sector know-how and their knowledge of how the market works.
- When designing public instruments, the public sector should engage those who are involved in financing, such as project finance representatives in private banks.

Case Study: GET FiT

Silvia Kreibiehl, Head, Frankfurt School - UNEP Collaborating Center for Climate and Sustainable Energy Finance

Silvia Kreibiehl provided a case study on the GET FiT program, which is an innovative public-public-private partnership piloted in Uganda.

Key Points

- Four major barriers to private sector financing of renewable energy projects in developing countries include: cost competitiveness, technical concerns, project development, and access to financing plus opportunity costs (particularly for international investors).
- GET FiT seeks to support renewable energy scale-up, improve energy access, catalyze private finance, and serve as a bridge to grid-parity.

- GET FIT seeks to address the following needs: direct incentives; smart risk mitigation strategies (e.g., guarantees for regulatory and political risks, off-taker risks sit with the public sector; construction, technology, and operational risks sit with the private sector); and technical assistance.
- Guarantees are a cost-effective means for lowering the cost of capital for project developers.
- The GET FIT Uganda pilot:
 - Seeks to add an additional 125 megawatt (MW) of renewable energy capacity through 10-15 projects.
 - Aims for grid connection within next three years.
 - Requires approximately USD 90 million in donor funding for the FIT top-up.
 - Will use guarantees issued by the World Bank.
 - Will leverage approximately USD 350 million in private sector financing (4:1 ratio).
 - Has local ownership, through close cooperation with the Ugandan government and the Electric Regulatory Authority (which standardized power purchase agreements).

Concurrent Session A: Mainstreaming LEDS Finance in National Budgets and Plans

Session Moderator: *Barbara Buchner*, Senior Director, CPI

Session Rapporteur: *Bethany Speer*, National Renewable Energy Laboratory (NREL)

Summary

The session showcased country experiences in incorporating climate finance into existing budgets and plans. Key points from this session include:

- While private sector finance is critical to reach scale, the national budget and accounting and MRV systems must be present and effective to attract public sector funds and useful in unlocking private sector investment.
- While national funds provide for government ownership and visibility of climate action support, national funds can isolate climate activities from other development activities, divert human resources, and create a parallel structure that could result in duplicity.
- As demonstrated by Indonesia and Vietnam, sub-national governments (e.g. provinces) can be an important channel of climate finance.

Introduction to the Climate Public Expenditure and Institutional Review

Alex Heikens, UNDP

Alex Heikens provided lessons learned in conducting CPEIRs in over ten countries across the world.

Key Points

- CPEIRs help governments to understand how climate change is reflected in national institutions, policies, and budgets.
- In Asia, CPEIRs have been completed in Bangladesh, Cambodia, Indonesia, Nepal, Philippines, Samoa, and Thailand, and is underway in Vietnam.

- Findings and recommendations:
 - Climate change policies and national budgets must be better linked.
 - Greater coordination is needed between financing and planning ministries, both of which should seek technical input from environment and line ministries.
 - Local governments are key channels of climate finance (e.g. Bangladesh, Nepal)
 - Climate funds should have very specific goals and should not overlap with the role of the national budget.

Indonesia

Irfa Ampri, Director of the Center for Climate Change Financing and Multilateral Policy, Fiscal Policy Office, Ministry of Finance, Indonesia

Irfa Ampri presented Indonesia's experience in mainstreaming climate finance.

Key Points

- Indonesia is focused on its voluntary GHG reduction target (26 percent GHG reduction by 2020) and is engaging provinces to develop their own GHG reduction action plans by 2012; thirty provinces have delivered action plans so far. The challenge is how to standardize sub-national plans and align them to national-level priorities.
- Indonesia is integrating sustainability considerations into its medium-term budget. In doing so, it is trying to increase both the quantity and quality of environmental expenditures.
- Indonesia has developed a robust tool, called the Mitigation Fiscal Framework, for bridging the budget to climate policies, prioritizing actions, and engaging the sub-national governments to develop their own climate action plans that will be incorporated into the national policy and budget.

Vietnam

Nguyen Tuan Anh, Deputy Director General, MPI, Vietnam

Nguyen Tuan Anh presented Vietnam's experience in mainstreaming climate finance.

Key Points

- Vietnam would like to take a "green pathway" for its development over the next 20 years.
- Vietnam has a strong decentralized governance system that allows for close national and sub-national coordination.
- The use of the CPEIR has shown that most government funding is going towards adaptation. Vietnam is now adjusting its policies to strike a balance between mitigation and adaptation.
- Vietnam is likely to use the government budget to help finance adaptation activities while using different funding modalities (e.g. GCF) to finance mitigation.

Papua New Guinea

Joe Pokana, Senior Policy Analyst, OCCD, Papua New Guinea

Joe Pokana presented Papua New Guinea's experience in mainstreaming climate finance.

Key Points

- Papua New Guinea is developing a national climate fund.
- Coordination between ministries has been a challenge. However, with the establishment of an Office of Climate Change, there is now a clearer mandate for coordination.

Concurrent Session B: Access to Finance for Bottom of the Pyramid and Micro, Small and Medium Enterprise Sectors

Session Moderator: *Armin Bauer*, Principal Economist, Regional and Sustainable Development Department, ADB

Session Rapporteur: *William Beloe*, IFC

Summary

Speakers in this session discussed case studies from Asia on access to finance for climate-related activities in the BoP and MSME sectors. Key points from this session include:

- Additional resources are needed in the BoP and MSME sectors, particularly “catalytic capital,” which can serve as a bridge to commercial capital.
- There is a need to disseminate knowledge, build trust, and improve confidence among end-users and the financial community, such as through sharing what has worked.
- There are good investment opportunities for those that are patient and understand the technologies. The investment levels are still relatively small (USD 100,000 to USD 10 million).
- Attention should be paid to other high-impact interventions such as cooking and transport.

Microfinance as a Channel for Climate Finance

Sakshi Varma, Access to Finance Advisory, South Asia, IFC

Sakshi Varma discussed IFC’s lessons learned using microfinance as a channel for climate finance through case studies: Self Employed Women’s Association, Micro Energy Credits, and Lighting India.

Key Points

- Awareness of business opportunities and how to get started on microfinance is a key barrier for financial institutions, as is awareness among end-users.
- Another key issue is helping micro-financial institutions to decide on whether clean energy is a priority for them, strategically.
- Quality assurance is a key barrier that IFC is working to address.

Selling Solar as a Service: Pay-as-you-go Solar for the BoP

Paul Needham, President, SIMPA Networks

Paul Needham discussed SIMPA Networks’ experience in selling solar as a service to the BoP.

Key Points

- Technologies, such as pre-paid metering and mobile payments, which enable customers to pay-as-you-go for energy services versus paying for expensive upfront capital can help to

address end-user financing challenges. This can also lead to greater financial support for clean, distributed energy in the BoP/mass market.

- The BoP market requires more “catalytic capital,” which should serve to bridge impact capital and more commercial capital, and help create sustainable business models required to scale-up provision of clean energy to the BoP.

Access to Finance for Bottom of the Pyramid and Micro, Small and Medium Enterprise Sectors

Jeffery Allen Dickinson, Head of Renewable Energy, IndoChina Capital

- Evidence shows that the BoP/mass market will pay for energy solutions. This is true across Asia and Africa.
- Technologies must be proven and robust to avoid damaging market acceptance and growth.
- Providing the BoP/mass market with reliable, safe, affordable power can afford multiple opportunities for economic growth, covering education, business, culture, etc.
- There appears to be a lack of “patient capital” from those with the right technical and market experience.

Sector Breakout Session: Energy Efficiency

Session Moderator: *Jose M. Layug, Jr.*, Professor, U.P. College of Law, Former Undersecretary, Department of Energy, Philippines

Session Rapporteur: *Elmar Elbling*, ADB

Summary

The speakers in this session identified and discussed several success factors and barriers to energy efficiency investments in Asia. Key points from this session include:

- Energy efficiency reduces costs, addresses carbon emissions, and can set industry standards.
- Most energy efficiency programs adopted by governments address key issues such as climate change, protection of resources, reduction of energy consumption, and conservation of health resources and the environment.
- There is general acceptance by energy intensive industries in India of the Perform, Achieve, and Trade (PAT) program, as the private sector was consulted before implementation of the plan. Details on compliance and enforcement require further clarification.
- Financial institutions are taking a leading role in funding energy efficiency projects, as seen in involvement with green building and municipal waste-to-energy projects in the Philippines.

Case Study: Update on India’s Perform, Achieve, and Trade Program for Industrial Energy Efficiency

S.S. Krishnan, Principal Research Scientist, Center for Study of Science, Technology, and Policy, India

S.S. Krishnan summarized India’s PAT, the flagship program on energy efficiency for industries. The market-based policy targets large industries and highly inefficient plants, in particular the plants that lack adequate resources to implement effective change within reasonable timeframes.

Key Points

- The PAT program targets the aluminum, thermal power, iron and steel, fertilizer, pulp and paper, textile, and chemicals sectors. More sectors will be included in the future.
- Detailed investment grade energy audits must be conducted to determine the potential savings for each individual plant, and the estimated savings potential helps to develop targets. Industrial plants must comply with energy intensity targets within three years.
- Plants are awarded credits if they achieve the pre-determined target, and can purchase credits from other plants if they are unable to achieve targets.
- The intent of the PAT program is to have an effective monetary penalty mechanism for those who have failed to achieve their targets.
- The Bureau of Energy of Efficiency and the Energy Efficiency Financing Platform provide a financial Framework for Energy Efficiency Development that includes setting up risk guarantee funds and venture capital funds. In conjunction with a financial institution, financing is available at reasonable interest rates for industries that are targeted by PAT.

A Three-Way Partnership between Bank, ESCO and Client

Mek Meksarikul, Vice President, Corporate Credit Product Management Department, Kasikorn Bank

Mek Meksarikul provided insight into the energy efficiency lending portfolio of Kasikorn Bank of Thailand, with particular emphasis on small and medium enterprise (SME) investment.

Key Points

- Commercial bank lending is typically directly with the customer. However, the Kasikorn Energy Saving Guarantee Program partners with energy services company (ESCO), where savings from the project are used as a source of loan repayment.
- Program benefits include credit limits of up to 100 percent of the project investment; savings are guaranteed by the ESCO which reduces cost for the client.
- The guaranteed performance mechanism requires the ESCO to conduct an investment grade energy audit to establish the baseline.
- Establishing program traction can be difficult. Customer discussions with lending officers focus on loan interest rates, and seldom encompass the full benefits (e.g., energy and energy cost savings) of the deal as officers and customers may lack knowledge on the topic.
- Adoption of the program is easier once understanding of potential expense reduction and improvement of the bottom line profit and loss statement is achieved.

Case Study: Sustainable Energy Finance Program

Nanette Biason, Head of Sustainable Energy Program, BPI

Nanette Biason discussed the Sustainable Energy Finance Program in the Philippines.

Key Points

- Market opportunities for banks to engage in sustainable energy investment in the Philippines are created by: (1) electricity costs in the Philippines being one of the highest in Asia, and (2) inefficiencies in energy consumption primarily due to outdated equipment.

- The Sustainable Energy Finance Program promotes private sector financing in energy efficiency, renewable energy, cleaner production, fuel switching, and carbon financing.
- Barriers preventing industry and business engagement in the Sustainable Energy Finance Program include: lack of attention to production and market expansion, lack of information on reliable technologies, lack of marketing for proven technologies, non-replicable demonstrations, and first-cost being more important than life-cycle cost in decision making.
- An integral component of the Sustainable Energy Finance Program is the risk sharing facility. Initiating perceived higher risk energy projects enhances the credit risk and supports financing of new project models and new market sectors.

Case Study: CHUEE

William Beloe, Senior Operations Officer, IFC

William Beloe detailed IFC's China Utility-Based Energy Efficiency Finance Program (CHUEE) and offered suggestions on how to better engage SMEs, which are a major contributor of GHGs.

Key Points

- IFC aims to engage the private sector in climate change adaptation and mitigation, and help banks understand how they can make money through climate finance.
- It is important to more effectively engage the whole market and value chain, by interacting with associated groups such as equipment suppliers and consultants. Governments can provide an environment where risk is minimized.
- Eighty percent of funding needed for climate change adaptation and mitigation programs is expected to come from the private sector, since the private sector is more efficient at introducing effective climate change programs than the public sector. Sixty percent of China's GDP is a result of SMEs. SMEs have significant opportunity for energy improvement – industrial SMEs in particular are a major consumer of energy.
- Key selling points of energy efficiency to SMEs include improved cash flow due to energy savings, improved efficiency of resource utilization, enhanced control over internal processes, improved competitiveness, and improved social and environmental responsibility.
- Sharing success stories is one of the best ways to instigate catalytic change.

How IFC Leverages the Clean Technology Fund in Mobilizing Finance for Energy Efficiency Projects in Southeast Asia

Romel Carlos, Operations Officer, Sustainable Energy Finance, Access to Finance Advisory Services, IFC

Romel Carlos presented an overview issues when securing climate finance in Southeast Asia. Topics included common barriers and underlying principles of blended finance deployment.

Key Points

- All sustainable energy finance programs have the same objective: to enhance access to local sources of financing for sustainable energy projects in order to stimulate private sector investment and reduce emissions.
- The deployment of blended finance should encourage projects to move beyond IFC additionality, lead to sustainability, uphold transparency, and avoid market distortion.

- Barriers to sustainable energy finance programs include lack of clarity on how financial institutions collectively value the benefits of these projects, and limited capability to process and finalize sustainable energy deals.
- Companies and end-users must match needs with what is available in the market. This is not always facilitated as there can be a lack of awareness and technical capacity to take advantage of such measures.

Sector Breakout Session: Renewable Energy

Session Moderator: *Don Purka*, Principal Investment Specialist (Climate Finance), Regional and Sustainable Development Department, ADB

Session Rapporteur: *Hendrik Meller*, GIZ

Summary

The speakers in this session identified and discussed several success factors and barriers to renewable energy investment in Asia. Key points from this session include:



Participant engages speakers and peers.

- Success factors for financing renewable energy projects:
 - Government commitment and solid policies
 - Strong regulatory framework and incentive schemes
 - Different incentives work for different markets such as: FiT (Indonesia), Adder (Thailand), and Tax Exemption (Thailand)
 - Support from IFIs (e.g., IFC, ADB)
 - Education of banks, investors as well as general public
- Barriers for financing renewable projects:
 - Extensive time to develop projects due to administrative barriers
 - No stable investment framework
 - Unsecured feed stock supply and price hikes in the case of biomass. In this case, risks can be mitigated through being an energy producer and feedstock trader and by scaling the project size relative to risk management.

Case Studies from Bangchak's Solar Projects

Nintira Abhisinha, Vice-President Finance, Bangchak Petroleum

Ninitira Abhinsinha discussed why Bangchak Petroleum has an interest in renewable energy.

Key Points

- Bangchak Petroleum's interest in renewable energy is connected to the strong commitment of the Thai government to renewable energy. Thailand has set a clear target of 25 percent renewable energy in electricity share by 2021.

- Furthermore, the “adder” for renewable energy along with tax privileges proved to be a useful incentive to stimulate market development and investments in renewable energy.
- Bangkok Petroleum’s first solar project is being realized through a fixed interest rate loan from ADB. Although subsequent projects were also partly financed by IFIs, more and more finance is coming from local banks.

Biomass Energy in the Philippines: Opportunities and Challenges

Gao Pronove, CEO and President, Eco Market Solutions

Gao Pronove discussed experiences developing off-grid biomass energy projects in the Philippines.

Key Points

- In the Philippines, biomass projects are most viable when they can replace high cost diesel. This is more often the case in remote and rural areas of the Philippines.
- The main risk biomass projects face is a lack of sustainable feedstock supply. To manage this risk the supply chain must be well organized and diversified. The scale of the project also should be adjusted to secure a steady supply.
- Regulatory hurdles which result in project delays are a serious barrier to project finance and implementation.

Renewable Energy Case Studies from Indonesia

Edgare Kerkwijk, Managing Director, Asia Green Capital

Edgare Kerkwijk provided his perspective on the key drivers and barriers to financing renewable energy in Indonesia.

Key Points

- In Indonesia, the key driver for investments in renewable energy is the FiT regime.
- The main barriers to investment are: lack of well capitalized banks; weak political coherence in the government; unreliable transmission systems; and difficulties in implementing government policies to support renewable energy.

Gujarat Solar Rooftop Program

Anjali Garg, Energy Specialist, Sustainable Business Advisory, IFC, South Asia

Anjali Garg shared her experience on the Gujarat solar rooftop program in India.

Key Points

- The state of Gujarat has a strong commitment to renewable energy and a long-term goal to make the provincial capital of Gandhinagar a solar powered city.
- The pilot project, which is comprised of 5 MW of grid connected rooftop solar panels, was designed to combine public funding with private sector investment. The IFC provided funding and technical assistance, and the Government of Gujarat led the bidding process.
- The key success factors were: availability of rooftop inventory; attractive FiT; renewable purchase obligation for renewable energy (solar); incentives for individual rooftop owners; and a robust payment mechanism for investors (e.g., letter of credit, escrow, credit ratings).

Sector Breakout Session: Transport

Session Moderator: *Glynda Bathan*, Deputy Executive Director, Clean Air Asia

Session Rapporteur: *Michael Rattinger*, ADB

Summary

Speakers in this session used case studies from China, Pakistan, and India to highlight success factors in financing low-carbon transportation projects. Key points from this session include:

- Future climate financing mechanisms should capture the broader co-benefits of urban transport in addition to carbon emissions reduction.
- Funding for urban transport outside of the climate regime will likely come from public financing. This should be encouraged by the support of a political champion and broader group of stakeholders such as local NGOs already operating in the cities where these urban projects are taking place.
- In the case where national financing is readily available, financing is not sufficient without capacity building for municipalities to enable them to implement sustainable urban transport projects.

A Case Study on Lanzhou Bus Rapid Transit as a CDM Project Activity

Wayne Zhou, CDM Specialist (Consultant), Carbon Market Program, ADB

Wayne Zhou presented an overview of his experience with the planning and implementation of transport projects in least developed countries (LDCs) and non-LDCs by using the current ADB Bus Rapid Transit (BRT) project in Lanzhou, China, as an example. Considerations that may enhance the potential to access carbon finance for sustainable urban transport projects were emphasized.

Key Points

- ADB financing for Lanzhou were directed to construction and reconstruction of urban roads and BRT facilities, introduction of advanced traffic management systems, implementation of an advanced environmental monitoring system, and capacity building support for project implementation, operation, and management.
- Lanzhou BRT advantages include a reduction in the number of passenger transfers in the system, enabling the use of existing buses as well as BRT specialized buses, and minimizing the need for associated terminals.
- Currently there are 27 mass rapid transit (MRT) or BRT registered CDM projects in the transport sector that represent 0.4 percent of the total registered CDM projects globally.
- The United Nations Framework Convention on Climate Change (UNFCCC) is developing a tool to establish emissions baselines for the transport sector.
- Several conditions should exist for BRT and MRT-based CDM to be made possible: (1) a project feasibility report that is conducted by qualified professionals; (2) an adequate traffic survey and appropriate funding to undertake such a survey; (3) partnerships with local government agencies that can provide data access and facilitation of surveys; and (4) user-friendly methodologies that provide less stringent additionality requirements for non-LDCs.

Working with Cities to Attract Climate Finance: A Case Study of the Islamabad (Pakistan) Bus Rapid Transit Project

Nadir Ehsan, Senior Municipal Development Specialist, Cities Development Initiative for Asia (CDIA)

Nadir Ehsan provided insight into his experience with the first phase of the current BRT project in Islamabad, Pakistan. Several observations during the initial phase of project development were highlighted as well as core driving factors to initiate the BRT project.

Key Points

- More than half of the CDIA portfolio is focused on transportation however CDIA is also involved with projects related to water supply and sanitation, solid waste management, industrial waste management, and urban regeneration.
- Several NGOs and the Capital Development Authority of Islamabad have estimated traffic growth in the city to be seven to eight percent annually, one of the fastest growing urban populations in Pakistan. In Islamabad, 85 percent of the general population use private vehicles to commute, whereas only 15 percent use public transportation.
- The Pakistan Ministry of Climate Change revealed in 2012 that the transport sector is the fastest growing sector in terms of emissions within Pakistan.
- During the initial project development discussions climate change or climate financing was not discussed but was later introduced by CDIA and ADB. Currently, in the first phase of Islamabad BRT project development, there is potential for project financing from climate change mitigation funds.
- A pre-feasibility study has been completed. The project is estimated to cost USD 80 million over a three to four year period, with primary infrastructure cost estimated at USD 45 million and supporting infrastructure cost at USD 25-30 million.
- Project financing has not been determined but will likely include public and private financing and IFI assistance, as the city alone will be unable to finance the project.

National Investments in Urban Transport: The Indian Experience

Chhavi Dhingra, Program Manager - Capacity Building, EMBARQ India

Chhavi Dhingra suggested several improvements that would enhance the transport investments in India. These improvements involved more effective monitoring and evaluation, capacity building to implement reforms, Comprehensive Mobility Plan re-structuring, and better land use and transport using the “Avoid, Shift, and Improve” framework.



Panellists respond to questions from the audience on financing for sustainable transport investments.

Key Points

- India’s rapid growth and urbanization has pressed the government to look at transport interventions more seriously, as urban travel demand is expected to increase exponentially.

- Expected investment in urban transport, not including national transport, is estimated to be USD 72 billion over the next five years. Nearly 35 percent of this figure is expected to come from the private sector and an additional 49 percent from central and state governments.
- Investments for urban transport programs are propelled by the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) and the National Urban Transport Policy.
- The reform-driven JNNURM program targets 65 cities with investments totaling nearly USD 20 billion from central, state, and city governments.
- Urban transport is allocated significantly more funds than other sectors such as water supply, solid waste management, and sewage.
- Within urban transport, roughly one-third is spent on MRT systems and over half of funds are spend on roads and flyovers, which typically exacerbates associated challenges such as road widening resulting in more cars.
- There is lack of capacity in city governments throughout India in the area of transport and robust monitoring and evaluation of transport projects. Funding that is conditional on performance of programs is recommended.
- Sustainable transport can be encouraged by using the “Avoid, Shift, and Improve” framework that consists of avoiding travel or decreasing trip lengths, shifting to safer walking and biking environments, and improving basic public transport and encouraging low emission technologies.

Ensuring Climate Finance Readiness - Concrete Actions and Next Steps

Session Moderator: *Michael Rattinger*, Climate Change Specialist, Climate Change Program Coordination Unit, Regional and Sustainable Development Department, ADB

Session Rapporteur: *Maria Amparo M. Dato*, ADB

Summary

The final session of the workshop consisted of a panel of five speakers who discussed how to build capacity in the region to identify and effectively access financing mechanisms for climate change. Participants also took part in a real-time electronic survey aimed at identifying the most pressing climate finance capacity building needs in the region. Key points from this session include:

- Developing countries’ capacity building needs with respect to accessing climate finance vary by country and include institutional, programmatic, technical, and financial needs involving national and sub-national governments, banks, and other financial institutions.
- Two capacity building needs common to many Asian developing countries include: (1) building the capacity of government planners in designing effective policy and regulatory mechanisms to attract private finance; and (2) building the capacity of banks and other financiers to understand and evaluate climate projects and their risks.
- There are capacity building initiatives ongoing in the region and progress is being made through learning by doing. But capacity building is not happening fast enough to make countries ready for climate finance.
- Countries with strong and stable policy and regulatory frameworks including MRV systems, and strong institutional capacity for GHG emission reductions have a competitive edge in accessing climate finance.

Capacity Building Needs: Lessons Learned from the Fast Out of the Gate Study

Peter du Pont, USAID LEAD Program

Peter du Pont shared findings from the *Fast Out of the Gate: How Developing Asian Countries Can Prepare to Access International Green Growth Financing* report, commissioned by USAID, emphasizing the capacity building needs of the region with respect to climate finance.

Key Points

- The study identified 13 priority areas for capacity building ranging from: (1) establishing regulatory frameworks and MRV systems that support climate financing; to (2) building capacity to bridge the gap between project proposals and available financing; through (3) building awareness of, and capacity for, climate financing among private banks and investors.
- Governments are making progress through learning-by-doing. However, capacity building is not happening fast enough to make developing countries ready for climate finance.
- The outcome of study will guide the USAID LEAD Program in designing future capacity building activities.



Participant poses a question to the panel and peers.

Climate Finance Readiness Initiative (GCFit)

Xing Fu-Bertaux, Environment & Climate Change Division, GIZ

Xing Fu-Bertaux provided GIZ's perspective on what constitutes climate finance readiness.

Key Points

- Climate finance readiness measures should be undertaken immediately, and without waiting until the GCF modalities are in place.
- GIZ considers there to be five elements to readiness:
 - Strategic planning, which will require data availability, costing exercises, and financial needs and flows assessments;
 - Institutional framework and good financial governance, including coordination;
 - Accessing international climate finance;
 - Effective spending and implementation of projects, including pipeline development and monitoring and evaluation systems; and
 - Engaging the private sector, including support for project developers, research and development, and launch of green financial products.
- Project developers are important in mobilizing investments, technology identification, preparing bankable projects, project financing, construction, and operations.

Key Issues in Establishing Frameworks for Measurement, Reporting, and Verification of GHG Emissions Reductions

Tom Baumann, USAID LEAD Program

Tom Baumann discussed key issues in capacity building around MRV for green growth.

Key Points

- It is essential to look at how MRV systems across different accounting levels are integrated and the different needs and approaches among various user groups, applications, and priorities (including cost, accuracy, and transparency).
- Features of an effective MRV system include:
 - A harmonized operational framework that looks at different accounting layers and applications, and can accommodate additional components;
 - Extensible to consider co-benefits and is linked with innovation, research, and commercialization areas; and
 - Supported with a knowledge management system that allows sharing, and enables new markets to become leaders and innovators for MRV and green growth.
- Cross-training practitioners and forming teams are important because of the complexity of the MRV system and processes. It is crucial to bring together GHG and climate finance experts with other supporting competencies such as those that will help with co-benefits. The system must extend beyond practitioners to the public and business community to inspire leaders to take action. More integrated solutions to enable more rapid decision-making are required.
- MRV capabilities can be a competitive factor to access climate finance both at the national and sub-national levels.

Low Emissions Capacity Building Programme

Joyceline Goco, Deputy Executive Director, Philippine Climate Change Commission

Joyceline Goco presented key activities on capacity building in the Philippines, specifically under the Low Emissions Capacity Building program supported by the EU and UNDP, and a similar LEADS project supported by USAID.

Key Points

- Highly vulnerable to the adverse impacts of climate change, the Philippines places high priority on adaptation. Mitigation is part of the country's adaptation response and overall sustainable development agenda.
- The Philippines has consulted with various stakeholders, including government implementing agencies, the business sector, and civil society on its capacity building program. Capacity building activities cover preparing a GHG inventory, assessing the mitigation potential of different sectors, and identifying and filling data gaps.
- There are ongoing efforts to mainstream climate finance in national budgets, including the implementation of a CPEIR and the formulation of necessary guidelines for "tagging" climate mitigation and adaptation projects. The mainstreaming exercise involves prioritizing projects for government support and leveraging other sources.

- An example of a special fund that has been set up is the People Survival Fund, which can be accessed by local governments and communities for adaptation needs. The government is drafting the implementing rules and regulations for this fund.

Private Sector Perspective

Robert Schiffer, Managing Director, IndoChina Capital

Robert Schiffer provided a private sector perspective on climate finance capacity building.

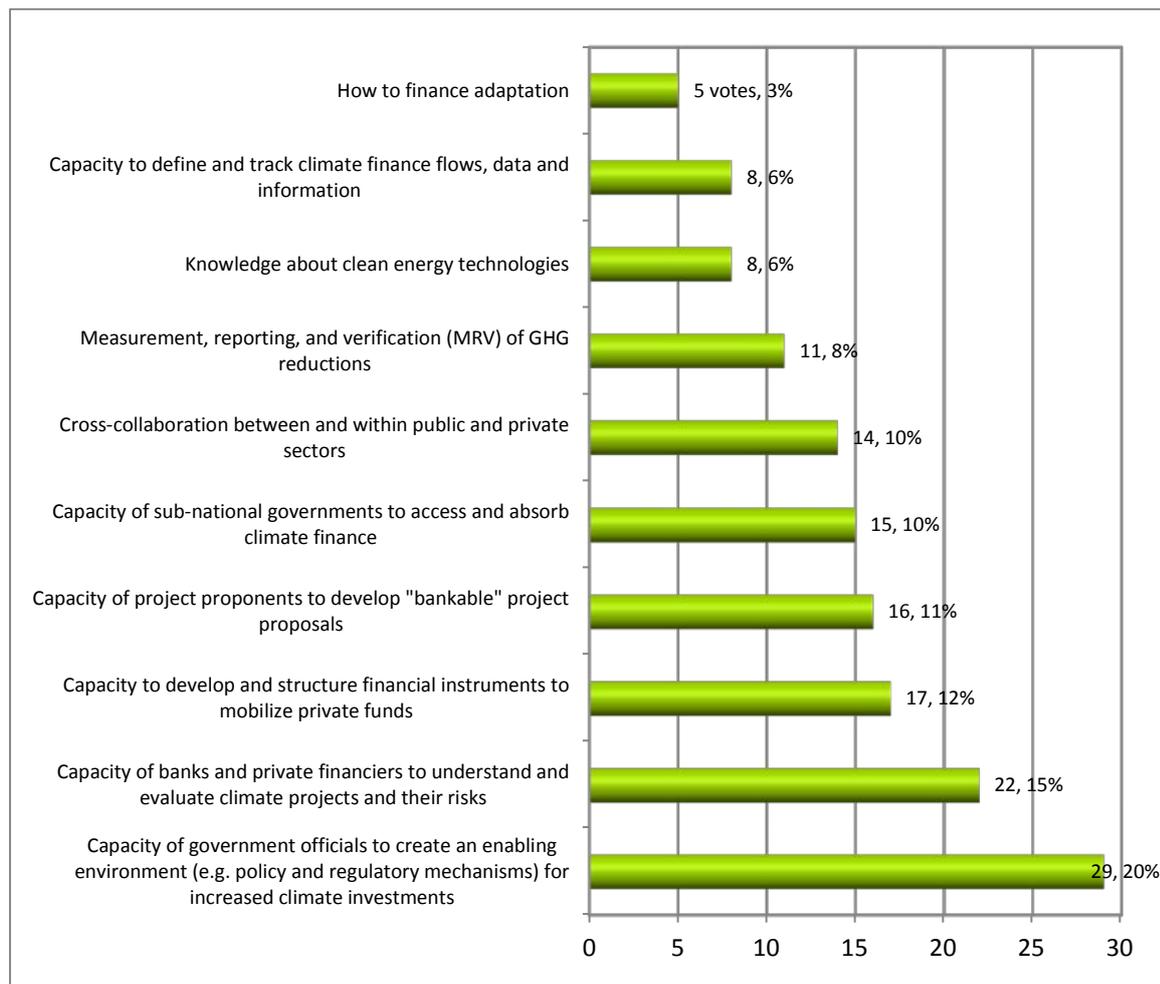
Key Points

- Each country should develop its own policies, regulations, and MRV systems, as each country is different. The stability of government policies can give countries a competitive edge in accessing climate finance.
- The private sector does not need MRV to move forward as they are largely driven by economic and financial considerations and workability. Lengthy and complicated processes such as the CDM can dampen private sector participation.
- MDBs can play a role in bringing together the public and private sectors at national and sub-national levels to facilitate climate actions. Public-private partnerships are the best approach to develop public and private sector champions. In providing equity support to selected private equity funds, MDBs can allow the funds to invest based on business considerations and, at the same time, can drive environmental objectives by requiring a certain percentage of investments in clean energy for platform companies.
- There is a particular need for capacity building among local banks in understanding the perceived and real risks associated with clean energy investments.

Climate Finance Capacity Building Survey

During this last session participants took part in a real-time electronic survey to identify areas of highest priority for capacity building to enable scale-up of climate financing in Asia. The results of the survey indicate that participants see capacity building needs in both the public and the private sector. As illustrated by Figure 1, the capacity building activity with the most votes (29 votes, 20 percent) was the “Capacity of government officials to create an enabling environment (e.g., policy and regulatory mechanisms) for increased climate investments.” This was closely followed by the “Capacity of banks and private financiers to understand and evaluate climate projects and their risks” (22 votes, 15 percent).

Figure 1: Results of Climate Finance Capacity Building Survey



Wrap-up and Closing Remarks

Orestes Anastasia, Co-Chair, Asia LEDS Partnership, and Senior Regional Climate Change Advisor, USAID Regional Development Mission for Asia

Woochong Um, Deputy Director General Regional Sustainable, Regional and Sustainable Development Department, ADB

The workshop concluded with remarks from Orestes Anastasia and Woochong Um who stressed the importance of the Asia LEDS Partnership in creating a community of practitioners and encouraged this workshop and future workshops to capture the wealth of knowledge and ideas contained within the community for the purposes of designing future LEDS work.

CONCLUSION

The workshop, “Preparing for Scaled-up Climate Financing: New Business Opportunities for Green Growth,” enabled participants to exchange a wealth of ideas and knowledge about financing low-carbon, climate-resilient growth in Asia. The most important themes discussed throughout the three-day workshop are summarized below.

Key Themes

- **Climate Finance Outlook:** The climate finance outlook for Asia is one of significant opportunities and challenges. Climate finance offers an important funding source to build more climate-resilient societies and advance the region’s energy security, energy access, and economic development. Yet, today a significant gap exists between climate finance needs and current flows. Participants agreed that the private sector is likely to remain the single largest and most important source of climate finance into the future. More action is needed to build stronger investment climates to scale-up and attract private climate finance to a wider range of countries.
- **Nationally-led Action:** Activities that are nationally-led rather than led by donors or multilateral players are growing in prominence in Asia. These are emerging in the form of national planning frameworks for green growth (e.g., Vietnam), national climate funds (e.g., Bangladesh, Philippines), climate change offices within national governments (e.g., Philippines, Papua New Guinea), domestic emissions trading schemes (e.g., China), as well as private sector action led by local investment funds for clean energy.
- **Mobilizing Climate Finance**
 - **De-risking Climate Finance Investments:** Several participants stressed that risk, whether it is real or perceived, is the single most important factor impeding investment in climate projects in developing Asian countries. Climate-related investments are perceived by many investors as relatively new and untested. As such, risk mitigation or de-risking instruments, which range from guarantees to public co-investments, are critical to scaling-up climate finance in the region.
 - **Effective Public Policy Instruments for Mobilizing Private Sector Finance:** Effective policy and regulatory instruments is key to mobilizing and attracting private sector financing to clean energy projects. FiTs, in particular, have become an increasingly important policy tool for attracting private sector finance to renewable energy projects. However, additional support is needed to ensure tools such as FiTs are designed properly and adequately respond to investor needs.
- **Cooperation:** Cooperation between the public and private sectors is essential in designing effective climate finance frameworks and increasing climate finance. Greater cooperation was frequently recommended, particularly for designing more effective public policy instruments such as FiT schemes. Greater coordination and cooperation within the public sector was also discussed, as was the need for greater public-private partnerships and networks such as the Asia LEDS Partnership.
- **Capacity Building Needs:** Participants consistently noted the need for capacity building. The final plenary session focused on capacity building and included a real-time electronic survey. The top two needs based on survey responses were: (1) building the capacity of government officials to create enabling environments for increased climate investments, particularly for investments from the private sector, and (2) building the capacity of banks and other

financiers to better understand climate projects and their risks. Several capacity building initiatives for climate finance readiness are under way in Asia (e.g. UNDP's CPEIR and the Low Emissions Capacity Building program supported by the European Union and UNDP). Despite these important initiatives and the learning by doing taking place, participants stressed that capacity building must happen even more quickly to properly prepare countries to access or make effective use of climate finance.

Next Steps

During the real-time electronic survey in the final plenary session, participants were asked about their interest in attending this workshop, if it were convened by the Asia LEDS Partnership again. An overwhelming majority of participants (87 percent) confirmed that they would attend again. Participants also expressed their desire for the Asia LEDS Partnership to continue to bring together a similar unique mix of donors, government officials, and private sector actors, and to follow-up on the actions and capacity building needs identified during the workshop.

ANNEX A: WORKSHOP AGENDA

Preparing for Scaled-up Climate Financing: New Business Opportunities for Green Growth

An Asia Low Emission Development Strategies (LEDS) Partnership Workshop on Financing for Green Growth

WORKSHOP AGENDA

April 2-4, 2013

Asian Development Bank Headquarters, Manila, Philippines

Tuesday April 2, 2013 – Pre-Workshop Event: Introduction to LEDS and Climate Financing

This one-day session on LEDS and climate finance will provide public and private sector professionals with an orientation to the LEDS and climate finance landscape and help them get up to speed on the main trends and issues. It will help participants to understand topics such as the costs of climate change, how LEDS fits into national development priorities and donor financing, why both public and private sector financing mechanisms are essential to address climate change, and who needs to be involved and why.

- | | | |
|------------|---|----------------|
| 8:00-8:45 | Registration | |
| 8:45-9:00 | Introduction to the Workshop | Auditorium A&B |
| | Opening Remarks | |
| | <ul style="list-style-type: none">▪ Bindu Lohani, Vice President, Knowledge Management and Sustainable Development, Asian Development Bank▪ Secretary Mary Ann Lucille Sering, Climate Change Commission, Philippines▪ Doddy Sukadri, Co-Chair, Asia LEDS Partnership, Indonesia National Council on Climate Change | |
| 9:00-10:30 | Plenary: Introduction and Economics of Climate Change
<i>Economics of Climate Change: Impacts in South and Southeast Asia</i> | Auditorium A&B |
| | Moderator | |
| | <ul style="list-style-type: none">▪ Juzhong Zhuang, Deputy Chief Economist, Economics and Research Department, Asian Development Bank | |
| | Speakers | |
| | <ul style="list-style-type: none">▪ Akm Mahfuzuddin Ahmed, Principal Climate Change Specialist, South Asia Regional Department, Asian Development Bank
<i>Report on findings of the soon to be released study on the economics of climate change for South Asia</i>▪ Ancha Srinivasan, Principal Climate Change Specialist, South East Asia Regional Department, Asian Development Bank
<i>Report on findings of recent study on the economics of climate change for Southeast Asia</i>▪ Panel Discussion – Q&A
<i>Moderated discussion with the speakers followed by Q&A with audience</i> | |

10:30-11:00	Coffee Break	Auditorium Gallery
11:00-12:30	<p>Plenary: Introduction to LEDS and Green Growth <i>Introduction to LEDS – what they are, why they are important and how they work?</i></p> <p>Moderator</p> <ul style="list-style-type: none"> ▪ Jem Porcaro, USAID LEAD Program <p>Speakers</p> <ul style="list-style-type: none"> ▪ Orestes Anastasia, Co-Chair, Asia LEDS Partnership, and Senior Regional Climate Change Advisor, USAID Regional Development Mission for Asia <i>Overview of the LEDS concept, process, and relationship to low-carbon, climate-resilient development.</i> ▪ Brad Johnson, Senior Financial Advisor, Center for Clean Air Policy <i>LEDS and NAMAs: Putting it all together, overview of Nationally Appropriate Mitigation Actions (NAMAs) developed in the Asia region, key issues and concerns</i> ▪ Panel Discussion - Q&A <i>Moderated discussion with the speakers followed by Q&A with audience</i> 	Auditorium A&B
12:30-13:45	Lunch	Executive Dining Room
13:45-15:15	<p>Plenary: LEDS and the Climate Finance Landscape in Asia <i>A stock-taking of climate finance activity in Asia – how much financing is already flowing, what are the main sources, and where is it going?</i></p> <p>Moderator</p> <ul style="list-style-type: none"> ▪ Randall Freed, Senior Vice President, ICF International <p>Speakers</p> <ul style="list-style-type: none"> ▪ Aidan Stretch, USAID LEAD Program <i>Climate finance in Asia: findings from USAID’s Fast Out of the Gate study</i> ▪ Michael Rattinger, Climate Change Specialist, Climate Change Program Coordination Unit, Regional and Sustainable Development Department, Asian Development Bank <i>Multilateral bank perspective on, and experience with, international climate financing mechanisms</i> ▪ Athena Ronquillo Ballesteros, Project Manager, Institutions and Governance Program, World Resources Institute <i>NGO perspective on climate finance in Asia</i> ▪ Panel Discussion - Q&A <i>Moderated discussion with the speakers followed by Q&A with audience</i> 	Auditorium A&B
15:15-15:30	<p>Wrap-Up and Closing Remarks <i>Putting it all together: discussion of the key issues and needs identified, and the implications for various stakeholders (country officials, donors, private sector, NGO viewpoints). Preview of main workshop.</i></p> <ul style="list-style-type: none"> ▪ Orestes Anastasia, Co-Chair, Asia LEDS Partnership, and Senior Regional Climate Change Advisor, USAID Regional Development Mission for Asia ▪ Jem Porcaro, USAID LEAD Program 	Auditorium A&B
15:30-16:00	End of Pre-Workshop Meeting -- Coffee Break	

16:00-17:30 **Informal Sessions** Auditorium A&B
Free time for informal sessions and meetings

- Expert Assistance on LEDS Finance: A Virtual Resource, led by Bethany Speer, NREL

17:30-19:00 **Welcome Reception** Auditorium Gallery

Wednesday April 3, 2013 – Main Workshop, Day 1

8:00-9:00 **Registration**

9:00-10:30 **Opening Plenary: New Business Opportunities for Green Growth** Auditorium A&B
Setting the stage: Climate finance opportunities in the context of LEDS and climate change

Opening Remarks

- Woochong Um, Deputy Director General Regional Sustainable, Regional and Sustainable Development Department, Asian Development Bank
- Reed Aeschliman, Deputy Mission Director, USAID Philippines
- Doddy Sukadri, Co-chair, Asia LEDS Partnership

Moderator

- Alan Miller, Principal Climate Change Specialist, Climate Business Department, International Finance Corporation

Keynote Addresses

- Keynote Address 1: Barbara Buchner, Senior Director, Climate Policy Initiative Europe
Public sector perspective: How to scale up climate finance and make it more effective
- Keynote Address 2: Silvia Kreibiehl, Head, Frankfurt School - UNEP Collaborating Center for Climate and Sustainable Energy Finance
Private sector perspective: Mitigating risk to facilitate private sector investment in climate initiatives
- Panel Discussion - Q&A
Moderated discussion with the speakers followed by Q&A with audience

10:30-11:00 **Coffee Break and Workshop Photo** Auditorium Gallery

11:00-12:30 **Panel: Climate Finance Outlook and Key Opportunities** Auditorium A&B
Where are we now with climate finance, and where do we need to go? Panel discussion with a select group discussing what climate finance is, how diverse it is, why it is important to them, what their regional activities are, what finance is needed, and where and how it has been mobilized so far. Focus on success factors.

Moderator

- Athena Ronquillo-Ballesteros, Project Manager, International Finance Flows and the Environment, World Resources Institute

Speakers

- Alexandra Tracy, Chairman, Association for Sustainable & Responsible Investment in Asia
Private sector outlook on climate finance
- Pankaj Sehgal, Sun Group
Private sector outlook on climate finance
- Alexander Ablaza, Principal Advisor - Energy Efficiency, Development Finance International, Inc.
Scaling up the role of IFIs and MDBs in climate finance - sharing experiences and potential of clean energy businesses (especially EE technology providers) to grow in emerging markets while leveraging financial and intellectual capital of IFIs/MDBs
- Octavio B. Peralta, Secretary General, Association of Development Financing Institutions in Asia and the Pacific
Asian national development bank experiences in climate friendly green investment
- Panel Discussion - Q&A
Moderated discussion with the speakers followed by Q&A with audience

12:30-13:30 **Lunch** Executive Dining Room

13:30-14:30 **Panel: Bank and Private Equity Perspectives on Climate Friendly Investments** Auditorium A&B
This panel discussion will bring together bankers and private equity funds from developing Asian economies to discuss their perspectives on the climate finance.

Moderator

- Aidan Stretch, USAID LEAD Program

Speakers

- Tessie Tan, President, BPI Globe BankO
- Edward G. Wenceslao, Senior Vice President and Head of Wholesale Lending and International Desks, BDO
- Jeffery Allen Dickinson, Head of Renewable Energy, IndoChina Capital
- Edgare Kerkwijk, Managing Director, Asia Green Capital
- Panel Discussion – Q&A
Moderated discussion with the speakers followed by Q&A with audience

14:30-15:00 **Coffee Break** Auditorium Gallery

15:00-16:00 **Plenary: Presentations on National Frameworks to Support Green Finance** Auditorium A&B
Brief presentations by officials from developing Asian countries on their plans, policy frameworks to stimulate climate finance, lessons that they have learned in the process, and areas for technical assistance needs.

Moderator

- Ancha Srinivasan, Principal Climate Change Specialist, South East Asia Regional Department, Asian Development Bank

Speakers

- Nguyen Tuan Anh, Deputy Director General, Ministry of Planning and Investment, Vietnam

- Joe Pokana, Senior Policy Analyst, Office of Climate Change and Development, Papua New Guinea
- Edi Setijawan, Senior Researcher/Assistant Director at Financial System Stability Group-Banking Research and Regulation Department, Bank Indonesia
- Wannapa Khlaisuan, Senior Professional, Plan and Policy Analyst, NESDB, Thailand
- Panel Discussion – Q&A
Moderated discussion with the speakers followed by Q&A with audience

16:00-17:30 **Open Space Session: Country Showcases** Annex 1&2

This session will follow up on the previous session and allow participants to learn more about the countries' climate policy and finance frameworks. The format will be that of a "marketplace," where LEAD countries will set up tables that focus on their development financing plans related to climate change. It will be a group interactive process building on the previous session on National Frameworks. The format will encourage discussion, information sharing, and interaction with peers. Participants are encouraged to visit all stations.

18:00-20:00 **Reception** Nostalg Ballroom (5th Floor), Oakwood Premier Joy~Nostalg Center

Thursday April 4, 2013 – Main Workshop, Day 2

9:00-10:30 **Plenary: Using the Public Sector to Mobilize Private Climate Finance** Auditorium A&B

Experiences with and lessons learned in blending public sector finance with private funds to enhance the viability of climate friendly projects.

Moderator

- Trevor Lewis, Infrastructure Specialist (Public Private Partnerships), Regional and Sustainable Development Department, Asian Development Bank

Speakers

- Tomonori Sudo, Research Fellow, JICA Research Institute
Theory: What does the public sector have to do to mobilize the private sector?
- Shelagh Whitley, Research Fellow, Climate Change, ODI
Lessons learned in using public sector climate finance to mobilize the private sector
- Miles Stump, Sustainable Energy Finance Specialist, International Finance Corporation
The case of RE feed-in-tariffs in the Philippines: Improving investment outcomes through better engagement with the private sector in policy formulation
- Silvia Kreibiehl, Head, Frankfurt School - UNEP Collaborating Center for Climate and Sustainable Energy Finance
Case study: GET FiT
- Panel Discussion - Q&A
Moderated discussion with the speakers followed by Q&A with audience

10:30-11:00 **Coffee Break** Auditorium Gallery

11:00-12:15

Concurrent Sessions

Plenary: Mainstreaming LEDS Finance in National Budgets and Plans

Auditorium A

High-level overview on how climate finance can be incorporated into existing budgets and activities, and the theory and rationale for doing so.

Moderator

- Barbara Buchner, Senior Director, Climate Policy Initiative Europe

Speakers

- Alex Heikens, United Nations Development Programme
Introduction to the Climate Public Expenditure and Institutional Review (CPEIR)
- Irfa Ampri, Director of the Center for Climate Change Financing and Multilateral Policy, Fiscal Policy Office, Ministry of Finance, Indonesia
Experiences and views from Indonesia
- Nguyen Tuan Anh, Deputy Director General, Ministry of Planning and Investment, Vietnam
Experiences and views from Vietnam
- Joe Pokana, Senior Policy Analyst, Office of Climate Change and Development, Papua New Guinea
Experiences and views from Papua New Guinea
- Panel Discussion - Q&A
Moderated discussion with the speakers followed by Q&A with audience

Plenary: Access to Finance for Bottom of the Pyramid (BoP) and Micro, Small and Medium Enterprise (MSME) Sectors

Auditorium B

Series of case studies from around the region focusing on access to finance for climate-related activities in the BoP and MSME sectors.

Moderator

- Armin Bauer, Principal Economist, Regional and Sustainable Development Department, Asian Development Bank

Speakers

- Sakshi Varma, Access to Finance Advisory, South Asia, International Finance Corporation
Microfinance as a channel for climate finance
- Paul Needham, President, SIMPA Networks
Selling solar as a service: pay-as-you-go solar for the BoP
- Jeffery Allen Dickinson, Head of Renewable Energy, IndoChina Capital
- Panel Discussion – Q&A
Moderated discussion with the speakers followed by Q&A with audience

12:15-13:30

Lunch

Executive Dining Room

13:30-15:00

Sector Breakout Sessions: Public and Private Sector Case Studies in Climate Finance

These concurrent sessions are designed for speakers to share their experiences and perspectives on financing sector-specific low carbon projects/initiatives by way of examples and case studies. These concurrent sessions aim to:

- *highlight the roles of different agencies and actors,*
- *describe how climate financing can get projects going,*

- describe examples of public-private partnerships, and
- identify key issues and capacity building needs in the different sectors: energy efficiency, renewable energy, transport and forestry/land use

Plenary: Energy Efficiency

Auditorium A

Moderator

- Jose M. Layug, Jr., Professor, U.P. College of Law, Former Undersecretary, Department of Energy, Philippines

Speakers

- S.S. Krishnan, Principal Research Scientist, Center for Study of Science, Technology, and Policy, India
Case study: Update on India's Perform, Achieve, and Trade (PAT) program for industrial energy efficiency
- Mek Meksarikul, Vice President, Corporate Credit Product Management Department, Kasikorn Bank
A Three-Way Partnership between Bank, ESCO and Client
- Nanette Biason, Head of Sustainable Energy Program, BPI
Case study: Sustainable Energy Finance (SEF) Program
- William Beloe, Senior Operations Officer, International Finance Corporation
Case study: CHUEE
- Romel Carlos, Operations Officer, Sustainable Energy Finance, Access to Finance Advisory Services, International Finance Corporation
How IFC leverages the Clean Technology Fund in mobilizing finance for energy efficiency projects in Southeast Asia
- Panel Discussion – Q&A
Moderated discussion with the speakers followed by Q&A with audience

Plenary: Renewable Energy

Auditorium B

Moderator

- Don Purka, Principal Investment Specialist (Climate Finance), Regional and Sustainable Development Department, Asian Development Bank

Speakers

- Nintira Abhisinha, VP Finance, Bangchak Petroleum
Case studies from Bangchak's solar projects
- Gao Pronove, CEO and President, Eco Market Solutions
Biomass energy in the Philippines: Opportunities and challenges
- Edgare Kerkwijk, Managing Director, Asia Green Capital
Renewable energy case studies from Indonesia
- Anjali Garg, Energy Specialist, Sustainable Business Advisory - International Finance Corporation, South Asia
Gujarat solar rooftop program
- Panel Discussion – Q&A
Moderated discussion with the speakers followed by Q&A with audience

Plenary: Transport

Annex 1&2

Moderator

- Glynda Bathan, Deputy Executive Director, Clean Air Asia

Speakers

- Wayne Zhou, CDM Specialist (Consultant), Carbon Market Program, Asian Development Bank
A case study on Lanzhou Bus Rapid Transit (BRT) as a CDM project activity
- Nadir Ehsan, Senior Municipal Development Specialist, Cities Development Initiative for Asia
Working with cities to attract climate finance: A case study of the Islamabad (Pakistan) Bus Rapid Transit project
- Chhavi Dhingra, Program Manager - Capacity Building, EMBARQ India
National Investments in Urban Transport: The Indian experience
- Panel Discussion – Q&A
Moderated discussion with the speakers followed by Q&A with audience

15:00-15:30 **Coffee Break** Auditorium Gallery

15:30-16:00 **Reports from Breakout Sessions** Auditorium A&B
Chairs will report back to the larger group on the main findings and issues discussed in the sector breakout sessions. Emphasis will be on successful solutions, innovative strategies, and areas where technical assistance and regional cooperation/learning are needed.

16:00-17:30 **Panel: Ensuring Climate Finance Readiness Concrete Actions and Next Steps** Auditorium A&B
This session will cover how to build capacity in the region to identify and effectively access financing mechanisms for climate change; and what needs to be done to get ready for the GCF and other funds.

Moderator

- Michael Rattinger, Climate Change Specialist, Climate Change Program Coordination Unit, Regional and Sustainable Development Department, Asian Development Bank

Speakers

- Peter du Pont, USAID LEAD Program
Capacity building needs: lessons learned from the Fast Out of the Gate study
- Xing Fu-Bertaux, Environment & Climate Change Division, GIZ
Climate Finance Readiness Initiative (GCFit)
- Tom Baumann, USAID LEAD Program
Key issues in establishing frameworks for measurement, reporting, and verification (MRV) of GHG emissions reductions
- Joyceline Goco, Deputy Executive Director, Philippine Climate Change Commission
Low Emissions Capacity Building Programme
- Robert Schiffer, Managing Director, IndoChina Capital
Private sector perspective
- Panel Discussion – Q&A
Moderated discussion with the speakers followed by Q&A with audience

17:30-17:45 **Wrap-up and Closing Remarks**

- Orestes Anastasia, Co-Chair, Asia LEDS Partnership, and Senior Regional Climate Change Advisor, USAID Regional Development Mission for Asia
- Woochong Um, Deputy Director General Regional Sustainable, Regional and Sustainable Development Department, Asian Development Bank

ANNEX B: LIST OF CAPACITY BUILDING SUGGESTIONS

During Wednesday, April 3, participants were asked to work with others at their table to provide two suggestions for where capacity building is needed most. These suggestions were collected and are listed below. Participants were presented with a summarized list of 10 capacity building needs to vote on the following day, the results of which are shown in Annex C.

Definitions, Data and Tracking

- Developing common definitions for climate finance and types of projects (both mitigation and adaptation) to enable tracking of funds
- Supports governments on subsidy estimation and understanding
- Creating baselines and/or databases to tap into climate finance (e.g. transport, GHG inventory)
- How do you monetize the benefits of a climate project so that financiers can evaluate the rewards they gain vs. the risk they bear

Instruments

- Financial instruments to mobilize private funds for climate investment
- Loan guarantee scheme, soft loan

Adaptation

- Very little capacity building related to Adaptation - Government and Private sector
- Monetizing/quantifying co benefits (especially of adaptation projects)
- We should include focus on adaptation in addition to mitigation - adaptation is of greater concern to developing countries in Asia. There is less info available on adaptation - the knowledge gap is greater
- Supports governments in estimating gaps in funding/finance requirements for mitigation and adaptation
- Engaging discussions within private sector for low emission activities in forestry

Measurement, Reporting, and Verification

- MRV capacity building
- Capacity building on MRV systems (especially for national financial institutions) and new funding mechanisms
- Technical support on measurement and verification for energy efficiency projects

Project Proposals

- Capacity to develop financeable project proposal on climate change mitigation
- Train local consultants to provide technical assistance to project proponents (governments, private sector, utilities etc.) to develop bankable projects. Part of the training should focus on marketing their services.
- Capacity building needs: training for project developers to design bankable project proposals
- Developing criteria for financeable renewable energy projects - both for project developer, and for lenders. Lessons learned and best practices.

Government Policy/Regulations

- Capacity building of governments (i) regulatory bodies, national assembly/legislators/provincial officials, (ii) trade and industry ministries, of tools they can be using
- Technical assistance in the areas of creation of the enabling environment

- The necessary change should be carried on the regulation
- Build policy/strategies/guidelines
- Build capacity for concern ministries and line agency
- Policy planning to create an attractive investor climate including investor incentives
- Capacity building activities for different minister officials (Ministry of Environment and Finance)

Sub-national Government/Policy

- Accessing money at the sub-national level and absorptive capacity at the sub-national level, i.e. education and awareness raising beyond core group at national level
- Support development of plans at national and sub-national level
- Capacity building in policy implementation at local government level taking into considerations variables in the region, take into consideration continuity and train institutions instead of individuals
- The capacity building on the project pipeline is needed in China specially focus on the provincial area stage
- Awareness raising of sub national financial institutions to support green projects

Coordination and Collaboration

- Institutional tool between ministries for channeling finance,
- Communication, mistrust - between donor and city/private sector
- For Vietnam, establish dialogue between private sector on green opportunities
- More events that assemble officials from finance, planning and investment ministries. It would be helpful if they include field visits and interaction with people on the job

Technology

- Proposal - technological information platform - LEDS can help establish a platform where technology practitioners/consultants can share information and/or assessment on a new technology being proposed for energy efficiency and renewable energy projects
- Easier means for technology transfer are needed. This raises issues of intellectual property rights
- Training to cover best available technology
- Capacity building would helpful - particularly in the power sector
- Could we have forums for exchange of information on these technologies?
- Training - exposure to technologies
- Technology standard for climate finance

Banks

- Capacity with bank employees, on risks etc.
- Provide information of real risk - extracting key points from a bunch of case studies
- For Vietnam, awareness raising for commercial banks on green financing/green profit
- Working with a Bank through a Technical Working Group, understanding the modality
- Training for development and commercial lenders

Risk

- Tools - to evaluate risk (create matrices etc.) to reduce perceived risk
- Capacity building to credit committees, Integrating climate change risks in identifying financing gaps for green investments

Fund Facilities

- Capacity to establish and to operate fund facility

Needs Assessment

- Countries could use technical assistance to assess their financing needs and technology needs (particularly for environmental technologies)

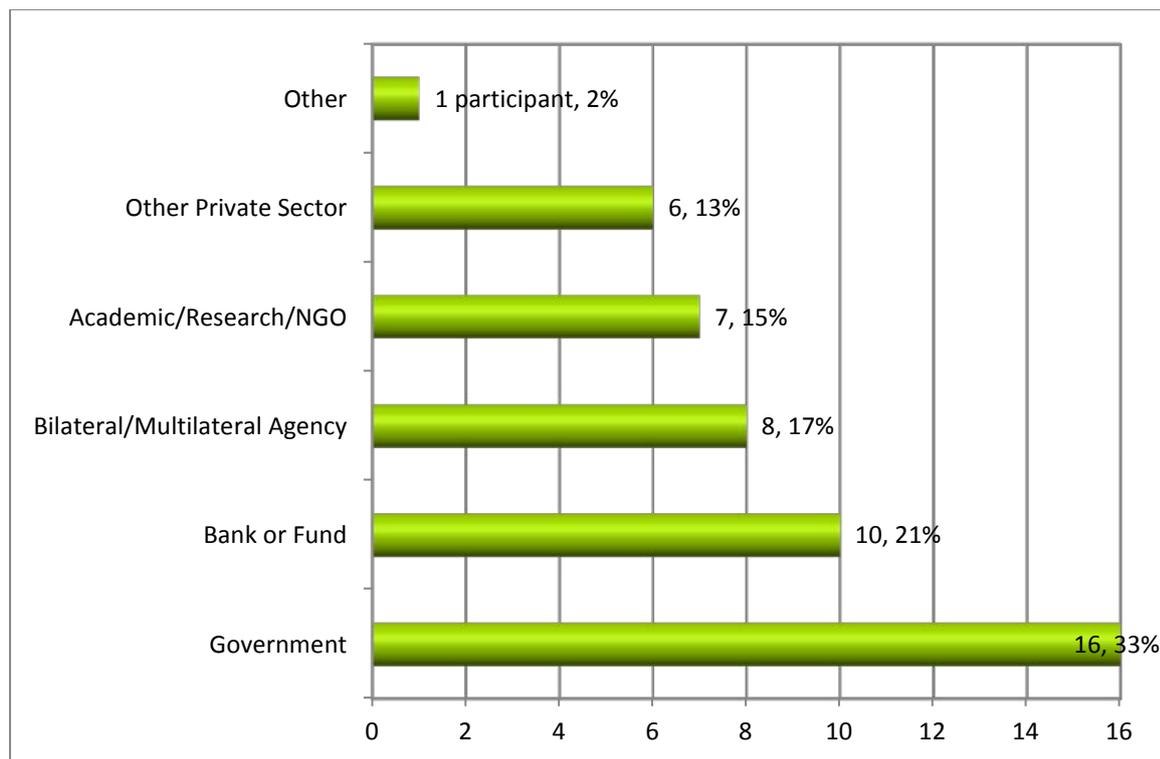
Other

- Gap analysis to discover plans for climate finance
- Change mindset of private sector from corporate social responsibility only point of view to a viable business model for mitigation
- Capacity building - hands on and study tours to share training best practices and training on how to develop effective promotion campaigns to raise awareness and encourage investments
- How to contextualize and make it more flexible access to existing climate change finance mechanisms
- How to scale up energy efficiency projects at the SME level, pilot deals with banks
- Creating new channels of climate project finance among existing market players (ESCOs, Infra Finance Co.)
- How do we incentivize stakeholders to discourage investments in fossil fuel technologies and redirect to cleaner/renewable technologies - either mitigation or adaptation
- Prioritize target is build management levels: (1) national climate change committee, (2) build to stakeholders in country level

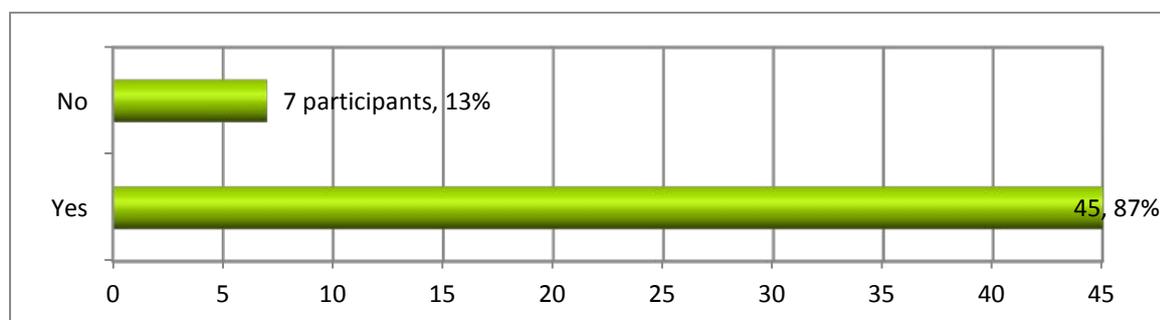
ANNEX C: CLIMATE FINANCE CAPACITY BUILDING SURVEY

During Wednesday, April 3, participants were asked to work with others at their table to provide two suggestions for where capacity building is needed most. These suggestions were collected and are shown in Annex B. Using a real-time electronic survey, participants were then presented with 10 capacity building activities to vote on the following day, based on their earlier suggestions. The results of this survey are presented below under Question 3. Questions 1 and 2 are accompanying questions which participants voted on as well.

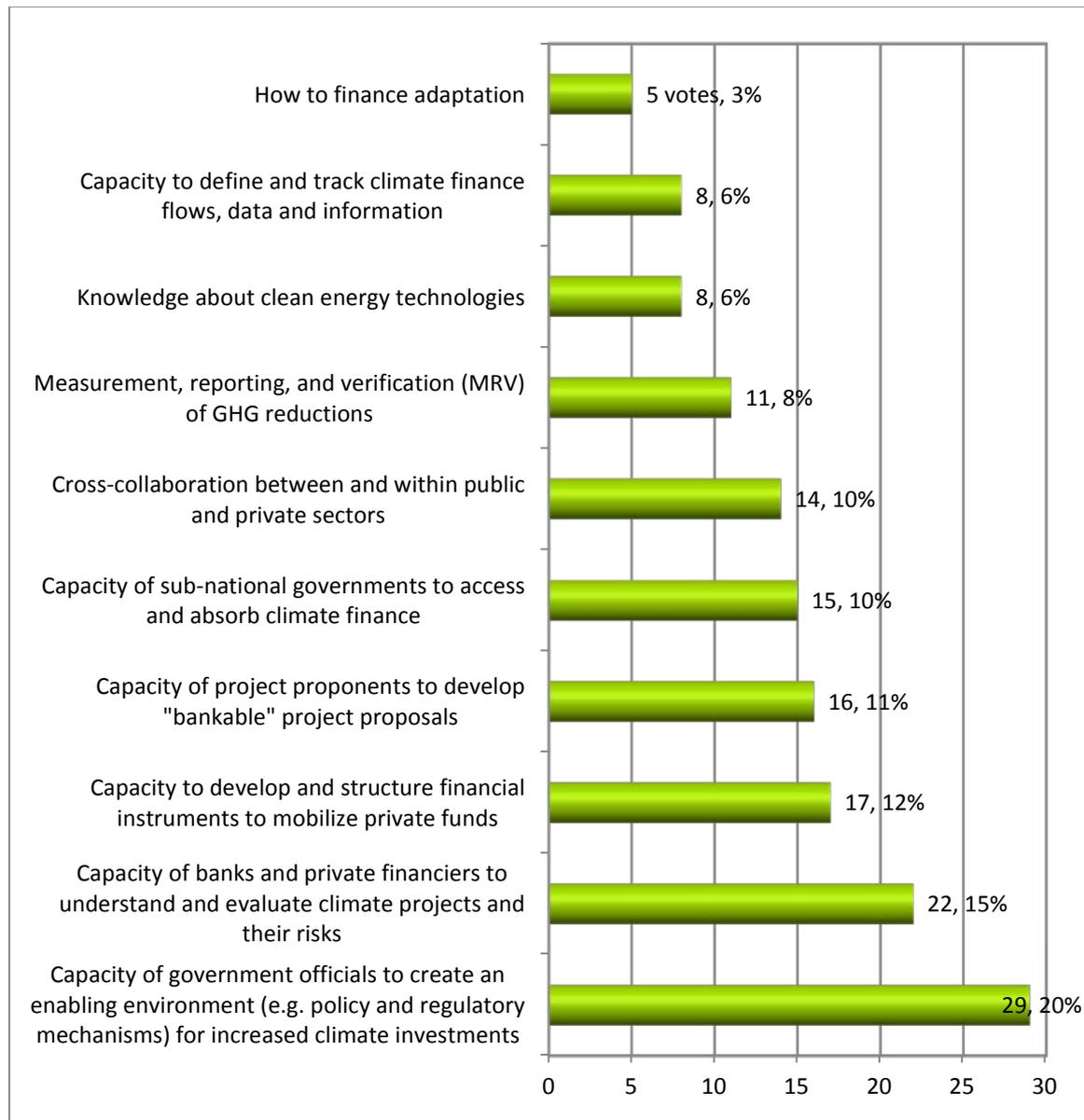
Question 1: What type of organization are you affiliated with?



Question 2: There has been some discussion about continuing this event on an annual basis. Would you attend this workshop if it were held next year?



Question 3: What are the major technical assistance and capacity building gaps that need filling in order to scale-up climate financing? (choose three)



ANNEX D: PARTICIPANT LIST

Country of Residence	Name	Organization	Title
Bangladesh	Tazdik, Junaed	Infrastructure Development Co., Ltd. (IDCOL)	Consultant, Renewable Energy
Bangladesh	Sadeque Ahmed, Fazle Rabbi	Palli Karma-Sahayak Foundation (PKSF)	Project Coordinator of Community Climate Change Project
Bangladesh	Sikder, Saiyid Hassan	Physical Infrastructure Division, Planning Commission	Joint Chief
Cambodia	Kresna, Tauch Chan	Ministry of Economy and Finance	Chief of World Bank Division
Cambodia	Sethea, Ma Chan	Ministry of Environment	Deputy Director of Climate Change Department
Canada	Baumann, Thomas	Greenhouse Gas Management Institute	Co-Founder
China	Meng, Li	Beijing Keji Consulting Ltd.	Deputy Chairman
China	Jia, Xiaohua	CITIC Carbon Assets Management Ltd.	Low Carbon Strategy Director
China	Shei, Edward	Future Perfect	Consultant
China	Zhang, Fan	Hunan Innovative Low-carbon Development Centre	President
China	Jiang, Zuqiong	Innovative Carbon Investment	Executive Director
China	Beloe, William	International Finance Corporation	Senior Operations Officer
China	Zhang, Jisheng	Ningxia CDM Service Centre	Director
Georgia	Lebanidze, Giorgi	Department of Environmental Policy and International Relations	Specialist
Germany	Kreibiehl, Silvia	Frankfurt School of Finance & Management	Head of FS - UNEP Collaborating Centre for Climate & Sustainable Energy Finance
Germany	Xing, Fu-Bertaux	GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit)	Advisor Climate Finance
Hong Kong	Tracy, Alexandra	The Association for Sustainable & Responsible Investment in Asia (ASRIA)	Chairman
India	Krishnan, Sivaraj Sivarama	Center for Study of Science, Technology and Policy (CSTEP)	Principal Research Scientist
India	Grover, Kanika	Climate Change Finance, Department of Economic Affairs, Ministry of Finance	Consultant
India	Dhingra, Chhavi	EMBARQ India	Program Manager- Capacity Building
India	Garg, Anjali	International Finance Corporation	Energy Specialist
India	Varma, Sakshi	International Finance Corporation	Operations Officer
India	Mehta, Jyotsna	Ministry of Finance	Consultant
India	Needham, George Paul	SIMPA Networks, Inc.	President
India	Sehgal, Pankaj	Sun Group	Managing Director
Indonesia	Setijawan, Edi	Bank Indonesia	Assistant Director
Indonesia	Ampri, Irfa	Fiscal Policy Agency, Ministry of Finance	Director

Country of Residence	Name	Organization	Title
Indonesia	Sukadri, Doddy Surachman	Indonesia National Council on Climate Change	Secretary of LULUCF Working Group
Indonesia	Wahyudi, Noeroso Loeloes	Ministry of Finance	Researcher
Italy	Buchner, Barbara	Climate Policy Initiative	Senior Director
Japan	Sudo, Tomonori	Japan International Cooperation Agency (JICA)	Research Fellow, JICA Research Institute
Malaysia	Thamotharan, Usha	Economic Planning Unit, Prime Minister's Department	Assistant Director
Mongolia	Tseren, Battsetseg	Climate Change Coordination Office, Ministry of Environment and Green Development	Officer for Climate Change Impacts and Adaptation
Mongolia	Bayartogtokh, Chimgee	Department of Development Policy and Strategic Planning, Division of Sector Development Policy and Regulation, Ministry of Economic Development	Specialist
Pakistan	Khan, Dina	Climate & Development Knowledge Network (CDKN)	Sub-Regional Coordinator, Asia
Papua New Guinea	Pokana, Joe	Office of Climate Change and Development	Senior Policy Analyst
Philippines	Ahmed, Akm Mahfuzuddin	Asian Development Bank	Principal Climate Change Specialist, South Asia Regional Department
Philippines	Bauer, Armin	Asian Development Bank	Principal Economist, Regional and Sustainable Development Department
Philippines	Lewis, Trevor	Asian Development Bank	Infrastructure Specialist (Public Private Partnerships), Regional and Sustainable Development Department
Philippines	Lohani, Bindu	Asian Development Bank	Vice President, Knowledge Management and Sustainable Development
Philippines	Purka, Don	Asian Development Bank	Principal Investment Specialist (Climate Finance), Regional and Sustainable Development Department
Philippines	Rattinger, Michael	Asian Development Bank	Climate Change Specialist, Climate Change Program Coordination Unit, Regional and Sustainable Development Department
Philippines	Srinivasan, Ancha	Asian Development Bank	Principal Climate Change Specialist, South East Asia Regional Department
Philippines	Um, Woochong	Asian Development Bank	Deputy Director General Regional Sustainable, Regional and Sustainable Development Department
Philippines	Zhuang, Juzhong	Asian Development Bank	Deputy Chief Economist, Economics and Research Department
Philippines	Peralta, Octavio B.	Association of Development Financing Institutions in Asia and the Pacific (ADFIAP)	Secretary General

Country of Residence	Name	Organization	Title
Philippines	Biason, Ma. Nanette A.	Bank of the Philippine Islands	Assistant Vice President/Head of Specialized Lending & Sustainable Energy Finance
Philippines	Dillague, Rolando L.	BDO Unibank, Inc.	First Vice President
Philippines	Lledo, Joseph Rhoderick Borja	BDO Unibank, Inc.	First Vice President
Philippines	Wenceslao, Edward G.	BDO Unibank, Inc.	Senior Vice President and Group Head of Wholesale Lending and International Desks
Philippines	Tan, Teresita Bautista	BPI Globe BankO	President and CEO
Philippines	Julian, Roberto Carmona	CH 2M Hill	Energy Specialist
Philippines	Bathan-Baterina, Maria Glynda	Clean Air Asia	Deputy Executive Director
Philippines	Punte, Sophie	Clean Air Asia	Executive Director
Philippines	Etheridge, Lionel	Climate Change and Clean Energy Project (Cenergy) (CH2M Hill)	Technologist Manager/Program Manager
Philippines	Comandante, Jr., Lorenzo	Climate Change Commission	Senior Administrative Assistant III
Philippines	Goco, Joyceline A.	Climate Change Commission	Deputy Executive Director
Philippines	Recabar, Sandee Gamulo	Climate Change Commission	Senior Science Research Specialist
Philippines	Segayo, Maria Lovella	Climate Change Commission	Development Management Officer IV
Philippines	Sering, Mary Ann Lucille	Climate Change Commission	Vice Chairperson
Philippines	Managuelod, Evelyn	Department of Budget and Management	Chief Budget and Management Specialist
Philippines	Mejorada Karim, Junaid Ibne	Department of Budget and Management	Budget and Management Specialist II
Philippines	Layug Jr., Jose	Department of Energy	
Philippines	Herrera, Yvette Christine	Department of Finance	
Philippines	Ablaza, Alexander	Development Finance International, Inc.	Principal Advisor - Energy Efficiency
Philippines	Pronove, Gao	Eco Market Solutions	President and CEO
Philippines	Broecker, Hauke	GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit)	Junior-Advisor
Philippines	Meller, Hendrik	GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit)	Chief Advisor for Renewable Energy
Philippines	Fernando-Pacua, Marianna Alfa	International Finance Corporation	Operations Analyst
Philippines	Stump, Miles	International Finance Corporation	Regional Specialist, Sustainable Energy Finance
Philippines	Verdote, Noel	International Finance Corporation	Operations Officer-Sustainable Energy Finance Program
Philippines	Sombilla, Mercedita	National Economic Development Authority	Director, Agriculture Staff
Philippines	Villanueva Aljecera, Gina	National Economic Development Authority	Chief Economic Development Specialist, Agriculture Staff

Country of Residence	Name	Organization	Title
Philippines	De La Torre, Joseph Benjamin	Philippine Business for the Environment	Project Officer
Philippines	Antonio, Maria Victoria	Promotion of Green Economic Development (ProGED) Project, GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit)	Senior Advisor
Philippines	Yvonne Lee, Claire Marie	Solutions Using Renewable Energy Inc.	Assistant Vice President for Operations
Philippines	Lumbao, Lisa Kircher	USAID ADAPT Program	Capacity Building Expert
Philippines	de Castro Paredes, Diwata	USAID Climate Change and Clean Energy Project	Information, Education and Communication Specialist
Philippines	Yamzon Domo, Kris Vernadette	USAID Climate Change and Clean Energy Project	Monitoring and Evaluation Analyst
Philippines	Genciagan, Eduardo Jr.	USAID Climate Change and Clean Energy Project	I.E.C. Coordinator
Philippines	Mangila Tioseco, Josephine	USAID Low Emissions Asian Development Program	Country Coordinator - Philippines
Philippines	Aeschliman, Reed	USAID/Philippines	Deputy Director
Philippines	Gutierrez, Leonila	USAID/Philippines	Energy Policy Advisor
Philippines	Itchon, Rafael Jose	USAID/Philippines	Intern
Singapore	Kerkwijk, Edgare	Asia Green Capital	Managing Director
Solomon Islands	Bago, Barnabas	Ministry of Development Planning and Aid Coordination	Principal Planning Officer
Thailand	Abhisintha, Nintira	Bangchak Petroleum Public Company Ltd.	Vice President - Finance
Thailand	Meksarikul, Mek	Kasikorn Bank	Vice President-Head of Corporate Credit product Solution Management
Thailand	Khlaisuan, Wannapa	Office of the National Economic & Social Development Board	Plan & Policy Analyst, Senior Professional Level
Thailand	Heikens, Alex	UNDP Asia-Pacific Regional Centre	Regional Policy Advisor Climate Change
Thailand	Khananusit, Sandra	USAID Low Emissions Asian Development Program	Regional Technical Officer
Thailand	Smith, Stanford	USAID Low Emissions Asian Development Program	Communications Manager
Thailand	Wells, John Bruce	USAID Low Emissions Asian Development Program	Chief of Party
Thailand	du Pont , Peter	USAID Low Emissions Asian Development Program	(Vice President, Government and Clean Energy Consulting)
Thailand	Paton, Carina	USAID Low Emissions Asian Development Program	(Research Analyst, Asia Government & Clean Energy Consulting)
Thailand	Stretch, Aidan	USAID Low Emissions Asian Development Program	(Clean Energy Finance Team Leader)
Thailand	Orestes, Anastasia	USAID/RDMA	Senior Regional Climate Change Advisor
Thailand	Ram-Indra, Khan	USAID/RDMA	Program Development Specialist
United Kingdom	Whitley, Shelagh	Overseas Development Institute (ODI)	Research Fellow, Climate Change, Environment and Forest

Country of Residence	Name	Organization	Title
United States	Westphal, Michael	Abt Associates, Inc.	Senior Associate
United States	Cerqueira, Julie	Center for Clean Air Policy	International Policy Associate
United States	Johnson, Bradley	Center for Clean Air Policy	Senior Financial Advisor
United States	Freed, James Randall	ICF International	Senior VP
United States	Dickinson, Jeffery	IndoChina Capital	Head of Renewable Energy
United States	Miller, Alan	International Finance Corporation	Principal Project Officer
United States	Speer, Bethany	National Renewable Energy Laboratory (NREL)	
United States	Huynh, Hoai	USAID Low Emissions Asian Development Program	Project Director
United States	Porcaro, Jem	USAID Low Emissions Asian Development Program	(Senior Project Manager, Asia Government & Clean Energy Consulting)
United States	Ballesteros, Maria Athena	World Resources Institute	Project Manager, IFFE
Vietnam	Schiffer, Robert Lyle	IndoChina Capital	Managing Director
Vietnam	Carlos, Romel M.	International Finance Corporation	Operations Officer
Vietnam	Anh, Nguyen Tuan	Ministry of Planning and Investment	Deputy Director General of Department
	Zhou, Wayne	Asian Development Bank	CDM Specialist (Consultant), Carbon Market Program

ANNEX E: QUESTION AND ANSWER SESSIONS

Annex E contains a transcript of question and answer dialogues held at the end of the workshop sessions. The transcript is based on notes taken by session rapporteurs and therefore some questions and answers may not have been captured or are only partially captured.

PRE-WORKSHOP EVENT: TUESDAY APRIL 2, 2013

Introduction and Economics of Climate Change

Comment from Peter du Pont, USAID LEAD Program: The costs of GHG mitigation or adaptation occur now, but benefits in terms of GHG reduction occur in future. There seems to be a policy maker gap between the past and the future.

Response from Ancha Srinivasan, ADB: This is a challenge that we face. Most of the costs are immediate, and benefits are global and long term in terms of greenhouse gas. For adaptation, the policy makers realize this and are investing resources into this already since the impacts are local. They are currently addressing how to mainstream adaptation in planning and budgets.

Response from Akm Mahfuzuddin Ahmed, ADB: Agriculture is one of the worst emitters, and there is awareness of this. However, the decision is not on economics, but on who you compromise or affect. Both government and in the private sector mechanisms are dealing with this. In Bangladesh, the private sector works hand in hand with the government in the brick making industry, which is one of the worst emitters, helping it to transform the industry to a new technology. Using some of these results, we were able to convince the actors in the market to invest. We all collectively have a lot to do in this area.

Questions from Randall Freed, ICF International: Both studies examine diverse portfolios from mitigation and adaptation. (1) Which measures tend to drive the most benefits from adaptation? (2) Which GHG measures drive the most reductions? (3) Do the climate change investments occurring now align with the measures with the biggest benefits, and if the answer to that is no, how do we match them?

Response from Ancha Srinivasan, ADB: The benefits are avoided damage. The impacts are local, especially in the coastal region which has huge impact from climate events. To drive benefits, you need to invest in infrastructure projects such as roads, and reduce the risk of damages to those assets, lengthening their lifespans so they continue to generate benefits, such as continued transport of farmed goods.

Response from Akm Mahfuzuddin Ahmed, ADB: Adaptation measures with the most benefit are related to water resources, agriculture, infrastructure (transport), and to some extent health. For mitigation, land use and energy are the two areas with relatively limited cost and high benefit. Countries have already been matching funding to these to some extent. Indonesia has a national climate change trust fund starting up, which has been allocating resources to areas such as forestry and water.

Southeast Asia (especially Vietnam, Philippines, Indonesia) is getting a lot of interest from the Climate Investment Funds (e.g., CTF, FIP, PPCR), which is targeting funding to low-cost, high-benefit measures, and this is where ADB is trying to target its funding. The experience from the CIFs will be useful as we approach the Green Climate Fund.

Comment from SS Krishnan, CSTEP: The cost of climate change mitigation and adaptation appears to be higher than annual growth in some cases. This perspective is important and gives focus to

policymakers. It will help make them realize that this is already a financing (GDP) issue, not just a climate change issue. It will help bridge the gap between policy and finance. Hidden costs are also relevant, and I would like to see those costs offline.

Response from Ancha Srinivasan, ADB: There are many technical challenges to estimate hidden costs, for example the cost of migration, and they vary by country. It is difficult to conclude that our measures are mature (i.e., foolproof) but we are happy to share them.

Response from Akm Mahfuzuddin Ahmed, ADB: For the eight South Asian countries, we are now concluding a study on the impacts of climate change on economies, society, and the environment.

Question from Lisa Kircher Lumbao, USAID ADAPT Program: We need to do more on public awareness, because although the public has a long term interest, politicians will change over time. What suggestions and tools does ADB have to increase public awareness of the impacts of climate change and the urgent need for action on mitigation and adaptation?

Response from Akm Mahfuzuddin Ahmed, ADB: The next step is to talk with sector ministries, because they are the ones that drive development.

Response from Ancha Srinivasan, ADB: Policymakers are increasingly aware of the impacts of climate change, but they may not be aware of the local impacts. We need to change the strategy, and cast the climate change issue as an opportunity to access financing rather than a burden. They want to see practical examples, so we need to continue collecting successful examples at the sub-national level and share across provinces and cities. We also need to do more work on monetization of co-benefits. This would make policymakers more interested in implementing such action.

Introduction to LEDS and Green Growth

Question from Jem Porcaro, USAID LEAD Program: There seems to be good lessons learned on NAMAs in other regions. Is there a mechanism for exchanging lessons learned that is similar to venues offered by the LEDS Global Partnership?

Response from Brad Johnson, CCAP: Donor countries are eager to see information sharing. CCAP organizes dialogues such as the summit in Copenhagen in May 2013.

Response from Julie Cerqueira, CCAP: Through the Mitigation Action and Implementation Network (MAIN), there have been series of regional dialogues including two held in Asia. The Copenhagen summit in May will share lessons learned, and CCAP is looking to organize more global and regional dialogues. CCAP also managed a knowledge sharing web platform that was terminated due to under-utilization.

Question from Jem Porcaro, USAID LEAD Program: The term “green growth” is generating diverse reactions – from enthusiastic to cautious – likely due to varying degrees of understanding and opportunities. What are Asian countries’ major concerns? Are there myths that persist that we should dispel?

Response from Orestes Anastasia, USAID: The term “green growth” is problematic in Latin America, but is recognized and accepted in Asia. A challenge in Asia is connecting green growth with adaptation and resilience, which is the number one climate change concern in many countries. Discussion of emission reductions is not fruitful unless you first build the case for comprehensive, sustainable development. Green growth is about better, smarter, and more growth – emphasize the “growth,” and not just the “green.”

Response from Brad Johnson, CCAP: In Asia, policy leaders are often ahead of the public. NAMAs are driven by countries and consider national economic and social agendas. A challenge is getting the broader public to understand the value of green growth. In many countries, policies are already comprehensive and aggressive. But regulations are often not enforced as there is inadequate buy-in at the local level or among the public.

Comment from Rey Guarin, ADB: Developed countries view CDM from the lens of mitigation and emission reductions, but developing countries often look at CDM as part of sustainable development.

Response from Brad Johnson, CCAP: (Brad acknowledged that his earlier statements may have been simplistic, and agreed with Rey's assessment.) CDM projects did create jobs. One difference between CDM and NAMAs is that CDM primarily focused on projects, while NAMAs take a programmatic view. NAMAs may be country-wide initiatives that can lead to multiple CDM projects.

Questions from Athena Ronquillo Ballesteros, WRI: (1) Descriptions of the LEDS and NAMAs processes were similar. This is layered over national planning. We're creating a situation where four to five donor initiatives are working in the same country, looking to build capacity of the same national institutions on climate change – each with a different plan. How can we empower and create expertise among institutions responsible? (2) Regarding the LEDS Global Partnership finance work stream, are we currently feeding technical discussions into the negotiations?

Response from Orestes Anastasia, USAID: (1) The LEDS Global Partnership and Asia LEDS Partnership are collaborative efforts meant to provide platforms to build communities of practices on LEDS topics. Countries have existing processes and plans, some of which may be donor driven. The aforementioned LEDS platforms enable exchange, learning, and better use of tools for decision-making; they do not intend to interfere with existing efforts. (2) The LEDS Global Partnership and Asia LEDS Partnership have no direct linkage to the negotiations; they are voluntary practitioner networks. Activities are participant driven.

Response from Bethany Speer, NREL: (Bethany leads the LEDS Global Partnership finance work stream.) The Climate & Development Knowledge Network, which is part of the finance work stream, offers climate finance advisory services to governments. They are very involved in negotiations.

Response from Brad Johnson, CCAP: Advancing all of these efforts under the LEDS banner is an effective way to coordinate on both donor and recipient sides.

Question from Edward Wenceslao, BDO: How sustainable is the Chilean price stability fund from a lender's perspective over longer term? If the price is set at certain level, and the price moves in your favor, can losses in initial years be recovered without funders putting more money in?

Response from Brad Johnson, CCAP: On sustainability, Chile conducted studies and stress testing to look at the price of energy in the last 50 years. Price stability is important since a large percentage of power is from hydro, which is influenced by rainfall. The price stability fund will reach a price for energy that makes profit over time. The rating agency will make this determination. The government of Chile has also asked what happens if they make money. The money will stay in the fund, with no dividends, ROI, etc. This is the "exit strategy" for the fund – when the fund is shown to be profitable it can be sold to private sector or other institution.

Questions from Peter du Pont, USAID LEAD Program: (1) Who endorses NAMAs? (2) What is the role of countries and the UNFCCC? (3) Does money or policy come first? (4) Is a NAMA always a public private partnership?

Response from Brad Johnson, CCAP: Endorsement of NAMAs is the decision of the donor countries. NAMAs are submitted by a developing country to a donor who decides, on a competitive basis, on

what has greatest impact per dollar of contribution. Mexico has been selected for a NAMA on mortgages for energy efficient homes. Donors have reached out to CCAP and others to help develop submissions.

Question from Chhavi Dhingra, EMBARQ: Do you have examples on successful institutional arrangements that help in implementation of NAMAs at the city level, to show us what models work or don't work?

Response from Brad Johnson, CCAP: In Colombia, many ministries were involved. A strong steering committee was formed, which included a senior person from each effective agency. The steering committee collectively discussed, reconciled, and decided on key issues. CCAP helped to initiate the process and accelerate dialogue, but stepped back when Colombia was positioned to move forward.

Question from participant, GIZ: Can NAMAs be translated to the local level, given the "national" in "NAMA?" In the Philippines, 90 percent of registered enterprises are small and medium enterprises.

Response from Orestes Anastasia, USAID: LEDS are not exclusive to national planning, and there are many examples of LEDS at the sub-national or local level. (Perhaps they need to be better catalogued and shared.) One activity of the Asia LEDS Partnership in 2013 will be to author a case study on sub-national LEDS. UN ESCAP and the Green Growth Best Practices initiative may also have existing case studies. A LEDS Global Partnership work stream will also focus on this topic.

Response from Brad Johnson, CCAP: This question is a debate within the NAMA community. Solid waste management in Colombia is a local initiative. Generally, if a local initiative aligns with national policy – in this case on waste management – then the equity fund is made available to the local government via a concession contract with a private company, private public partnership, etc.

Question from participant: (1) Who decides the baseline or target for NAMAs? (2) Who gets the credit? (3) How does a private company benefit from NAMA financing?

Response from Brad Johnson, CCAP: (1) The baseline is set and submitted by the country seeking NAMA support. The submission also includes relevant analysis, policy initiatives to accelerate investment, and selected financial mechanism. The funder can request clarification, but baselines are provided by the submitter. (2) Carbon savings, if they have a value, reside with the host country. There is concern for double counting; NAMA funds may be ineligible for use on CDM projects. (3) In the Dominican Republic, private hotel companies were beneficiaries of the NAMA. In Colombia, private waste to energy companies benefited. NAMA financial mechanisms are intended to offer the private sector needs to get projects "off the ground." The four parties involved are usually host country, donors, local banks, project developers.

LEDS and the Climate Finance Landscape in Asia

Question from Randall Freed, ICF International: As Athena mentioned, the numbers that our panelists provided were quite different, but nonetheless, they were quite huge. What needs to happen on the donor side or on the recipient side to get the funds and put them in the countries where they are needed?

Response from Michael Rattinger, ADB: That's a major question. I will start with how the donors will get the funds. It is going to be a real challenge to get the USD 100 billion for the GCF, and it will be a challenge to get to 2020 after the fast-start period ends. Right now, all the cards are on the table as to where the funds will come from. There are discussions of global removal of fossil fuel subsidies (which would bring USD 350 billion), discussions of imposing a tax on all airline travel (of USD 62 per business class passenger, and USD 6 per economy class passenger), and a financial transaction tax

passed by the government of France. These show that either things are progressing or are really desperate. Given the donor situation right now, no one will be able to produce USD 100 billion.

On the developing country side, those in this room can do a lot more, on building readiness (helping countries to plan through LEDS and NAMAs) and helping countries to access these financing modalities (preparing them to know how to submit projects to get some of this money). Next, when helping them deliver the money to projects, there will have to be a series of actors working together to deliver this finance.

Finally, and probably the most difficult, how are we going to account for the climate impacts of this money? This money comes with a tag saying “show me what the climate is getting for this money.” MRV of climate finance will keep a lot of us busy for the coming years.

Answer from Athena Ronquillo Ballesteros, WRI: There’s an interesting experiment happening right now on NAMA financing. I assume the LEDS Global Partnership and donors involved in this readiness facility all want the same thing: matching of the ambition of developing countries with incentives and financing from donor countries. The countries that want urgent action formulate policies and enable regulatory conditions to be conducive for private sector investment. Countries want to transform their economy into one that is low-carbon and climate resilient, and they want to be incentivized for that ambition.

Two things are important from a developing country perspective: First, ensuring readiness, making sure that policy, institutional, technical and financial barriers are unblocked, to be able to attract public and private sector investment. Second, there’s a lot of call for capacity support to develop bankable projects. The South Koreans have a USD 40 million readiness facility, and are looking for ideas. The Germans have EUR 40 million, waiting for countries to come forward. There’s an opportunity for the LEDS partnership to play that matching function.

Response from Aidan Stretch, USAID LEAD Program: From the private sector perspective, it’s clear that about 85 percent of investment has gone to two countries out of eleven. When we look at why it is going to those countries and why not the others, the key is the investment climate – most countries do not have the investment climate for private capital. We need to fix that.

Question from Orestes Anastasia, USAID: There were a lot of different statistics presented here and elsewhere. One interesting fact is that the World Bank and IEA changed their forecast of emission trends to suggest that we are on the path for a world that is four degrees warmer. Whatever one is correct is not really important – what is important is that we need more investment to address climate change.

Reflecting on your presentations, more money is not the problem. The problem is how to get the money into the hands of the people that need it. USD 20 billion in a particular sector or country is an overwhelming amount of money. Is there more that you can say on how we can help these countries get to this money, and use it effectively?

Response from Athena Ronquillo Ballesteros, WRI: Donor finance was traditionally through development finance institutions and UN agencies. Now national implementing agencies can access funds. Many countries are setting up national level climate finance institutions, to attract international finance and also identify other sources to leverage it with, e.g. the Philippines and Indonesia. To be fully qualified, these national institutions need to have the highest fiduciary standards and environmental safeguards.

The LEDS initiative could help, by figure out a smart way of collecting information on the multitude of donor interventions which are creating governance chaos. When we go to the 13 different ministries and agencies, most don’t know what the others are doing. If someone like the Climate

Change Commission in the Philippines can take control, they can channel the money to various sectors as needed. It's time to empower and strengthen national institutions to make access better.

Response from Michael Rattinger, ADB: I think everybody would benefit from a little more clarity and the long-term commitment of donors to this. For example, the carbon market collapsed despite a mature market of consultants to develop projects, but there was no demand. We need clarity on policy direction, what finance will be available, through what channel, and how to access this. Donors should get together and find ways to reduce the transaction cost of dealing with them individually. It would also be helpful to work upstream to make things clearer and easier for countries.

Response from Aidan Stretch, USAID LEAD Program: We have a hammer, and are looking for a nail. The private sector is efficient in allocating capital, and the public sector is not. Until we understand this, we will have misallocation of capital. We need to allow profit maximization to be the catalyst.

Questions from Randall Freed, ICF International: (1) In the quest for clarity, what is the distinction between public and private finance, and how do we interact? (2) Given the difficult state of government balance sheets around the world and the difficulty in allocating public finance, how can we mobilize private finance?

Response from Aidan Stretch, USAID LEAD Program: The difference between public and private is the source of capital. The amount of money we are talking about is not much in the scale of global asset management. The private sector is truly driven by profit maximization.

Response from Michael Rattinger, ADB: What is climate finance? Is it defined by a purpose? We have been able to observe the fast-start finance phase from 2010-2012 of USD 30 billion (USD 10 billion per year) over the short term. If you look at that money, it was not necessarily new, not necessarily public, and not necessarily additional. For example, Japan also counted the private sector it leveraged, while the UK only counts public sector money.

Response from Athena Ronquillo Ballesteros, WRI: One of the research pieces we did was look at the successful examples of how private finance was catalyzed by the public sector. We catalogued over 12 very complete case studies as examples, for decision makers to draw from.

There are several loans and de-risking mechanisms that have been used mostly by multilateral DFIs and bilateral financial institutions that allow private-sector investors to have their risks covered. For example, US OPIC provides political risk guarantees in low-income countries. Smaller markets have higher investment risk, so it is more difficult for them to get the investments.

The GEF still exists. If we look at some of their smaller scale but successful projects, the combination of grants and private finance has worked.

Questions from Rey Guarin, ADB: How do you distinguish clean energy finance from climate finance? What definitions and guidelines should my project have to define it as climate finance, as distinguished from a clean energy portfolio? And when countries apply for climate financing, how do we count it as so, so that we don't count clean energy finance as climate finance?

Response from Michael Rattinger, ADB: The label that you put on your package depends very much on what the funder wants to read on that label. If the funder wants climate finance, you label it as so. If the funder wants clean energy finance, you label it as so. We don't like to say this is donor driven, but in the end it is. We push the project in what directions we need to get the finance.

Response from Aidan Stretch, USAID LEAD Program: For private sector finance, there is no distinction. There are only projects that are profitable, and projects that are not. There is no distinction between climate finance and clean energy finance.

Response from Athena Ronquillo Ballesteros, WRI: We define it as broadly as possible. In UNFCCC space, the definition is different – it depends on MRV, and political dynamics. Why is the MRV conversation important? In our work on tracking fast-start finance, the target was USD 30 billion. At the end of the Doha meeting, there was a reported USD 33 billion. But looking at the flows, many were recycled, reflows, or repledged targets from 10 years back.

For IFC, if you are not able to prove that your pipeline will not result in significant reductions, it will not be eligible for climate finance. You cannot separate them out. That's why the DFIs are working to define what ODA is, what ODA plus climate is, and how much of a climate-proof project counts as climate finance.

Response from Michael Rattinger, ADB: There is a group of MDBs that presented a harmonized approach to doing this at Doha, and it is incredibly difficult. For example, the adaptation benefits of coastal road rehabilitation are quite difficult to estimate. It's early days, but is worth doing this activity to avoid inflating climate money.

Questions from Peter du Pont, USAID LEAD Program: We saw that 80-90 percent of private finance is going to two countries. What are the features of the investment climate in those countries? What can other countries do? What do you see as the role of the public sector?

Response from Aidan Stretch, USAID LEAD Program: If you look at large drivers in India, one example is the work on tax equity structure in the wind sector. A similar structure was also a driver for the solar industry in the US. It's just basic tax policy.

In Thailand, it is driven by a feed-in-tariff subsidy mechanism, and also a very favorable regulatory environment for outside capital. That made the industry take off overnight.

Both of these can be replicated in other countries – it's not rocket science. I don't think governments are good at allocating capital. I think they should stick to what they are good at and don't try to become allocators of capital.

Response from Michael Rattinger, ADB: It's hard to disagree with you as far as capital allocation goes. The public sector has to make sure whatever is done with climate finance is in pursuit of the climate goals. Design the framework, and then step back.

Response from Athena Ronquillo Ballesteros, WRI: We know that good enabling policies will attract investment. The Philippines is now a highly-investible country. And know that there is money. Why is it not happening? What do we have to do better? Are there new mechanisms or instruments to think about? It's not happening at scale. I think some of the problem is lack of institution – how do we think about channeling public money to unlock those barriers.

MAIN WORKSHOP: WEDNESDAY APRIL 3, 2013

New Business Opportunities for Green Growth

Questions from Edward Wenceslao, BDO, to Silvia Kreibiehl: (1) I want to know more about the Spanish experience. You said the investors were not happy, and maybe that is because the feed-in-tariff was changed mid-stream. We need to know what actually happened. What do you suggest bankers do in order to mitigate those political risks? (2) In the Philippines, we provide a seven-year income tax holiday, followed by a reduced income tax rate of 10 percent (from the regular 32

percent) for renewable energy projects. Have other countries followed this model to provide incentives to investors?

Response from Silvia Kreibiehl, Frankfurt School - UNEP Collaborating Center: The Spanish regulation change was related to concentrated solar power, which was the most expensive type of renewable energy in Europe. The retroactive changes of the feed-in-tariff made the business case less profitable than expected.

I tried to invest EUR 600 million into renewable energy projects in developing countries starting in 2009. After 1.5 frustrating years searching for projects, the UN asked us to provide a concept of how to scale up renewable energy. The GET FiT concept was a result of my experiences over the previous 1.5 years. We told them what our problems were and what we needed – this open dialogue is needed on the barriers, minimum return expectations, and maximum risk profile that can be absorbed.

Response from Barbara Buchner, CPI: I think that the type of tax breaks is extremely important, and is hard to quantify on a global basis. CPI is starting to work on national climate finance landscapes to understand implications of how countries are addressing these issues and what they can do. We have done this for Germany, and are starting to do it for Indonesia.

We are also doing detailed bottom-up case studies, project by project or program by program, where we try to understand which type of risk is taken off by which actor, and how to ensure risks that the private sector is not willing to take off are being taken care of. We need to add more evidence of experiences to share and learn from.

Question from Peter du Pont, USAID LEAD Program, to Silvia Kreibiehl: If the objective is to get to a low-carbon energy system, you said we should focus on scaling up infrastructure projects, and you said that in some countries that it's not so important to scale up renewable energy in power sector. Could you please explain what you meant in how you see this scale up occurring? As Alan Miller said, every deal is a story, but we don't have time to listen to them all, so we have to standardize them somehow.

Response from Silvia Kreibiehl, Frankfurt School - UNEP Collaborating Center: I agree that we have to standardize it. But we have made a mistake in the past in trying to duplicate very successful systems in Europe (e.g. the German feed-in-tariff) in developing and emerging countries. It can be successfully duplicated in some countries, but not in all of them. In Germany, the feed-in-tariff system works because renewables have a tiny share in the overall electricity mix, so priority grid access is not an issue, they can finance the incremental cost of solar PV, for example, and have strong utility companies managing the grid. In Uganda, they started to implement the same system with independent power producers (IPPs) and feed-in-tariffs. However, they have a targeted 125 MW increase in renewable energy capacity, about 25 percent of overall generation capacity, making grid management more difficult than in Germany. A strategic decision needs to be made on whether to have 10 IPPs with an installed generation capacity of 10 MW each, or have stronger utilities and bigger companies financing projects on their balance sheets making financing much easier for the banking sector and for investors.

Question from Jem Porcaro, USAID LEAD Program, for Silvia Kreibiehl: You implied that the gap between perceived and actual risk is a barrier for additional investment in clean energy. To what extent is capacity and awareness building an important strategy for closing that gap?

Response from Silvia Kreibiehl, Frankfurt School - UNEP Collaborating Center: Capacity building is not the only important strategy. It is important for DFIs to share data as well. When I tried to finance a wind project in a developing country, I went to the credit company, and they asked me for the usual default rates. I asked KfW for this data, but they couldn't provide it. It would really help the private

sector to have some reference data. We have to accept that as long as financial institutions do not have their own track record, there is an incremental perceived risk. Although we can't avoid it, we can shorten the period needed to reduce that risk.

Question from Lisa Lumbao, USAID ADAPT Program, for Barbara Buchner: In your work, do you have country-specific data to get you the world-wide data? It would be useful to some of us to have this.

Response from Barbara Buchner, CPI: In the last landscape, we started to break flows into countries. It is difficult, because we are using many different databases. We will try to include this in this years' update, and will be working with countries that are interested in getting the national data. We would be happy to share more of that information.

Question from SS Krishnan, CSTEP, for Barbara Buchner, CPI: You showed that the financing for energy efficiency was really low compared with renewable energy. What are your thoughts on why this is so?

Response from Barbara Buchner, CPI: It is not totally representative. There is more energy efficiency financing than we have captured – the problem is the availability of data. We have better data on renewable energy. For private financial flows, Bloomberg New Energy Finance is the biggest data provider but has no data on energy efficiency. We are working with the IEA to improve this, and some MDBs are working on improving their tracking systems. We need more information for energy efficiency, and hope it will be one of the key points for this years' update. I welcome suggestions if anyone has data.

Question from SS Krishnan, CSTEP, for Silvia Kreibiehl, UNEP: I would like to hear your thoughts on risk assessments and profiles on energy efficiency projects in emerging economies – what is the risk from a bankers' point of view?

Response from Silvia Kreibiehl, Frankfurt School - UNEP Collaborating Center: For household and building energy efficiency, we have seen a lot of support for this in capacity building and providing refinancing to local banks. Industrial energy efficiency is more complicated. The problem is that financing is not the bottleneck in industrial energy efficiency – it's an issue of capacity and the attention of management. We are about to release a study with Siemens on the impact of industrial energy efficiency investments in developing countries. The results show that required investments are about two to five percent of the company's balance sheet. For this, you don't need a dedicated credit line – it's simply a matter of management asking the bank for financing as part of broader corporate lending. I don't think we need to focus on capacity building for financial institutions; rather, we should create a technical assistance to present some good case studies.

Questions from Fazle Sadeque Ahmed, Palli Karma-Sahayak Foundation (PKSF), Bangladesh, for Barbara Buchner: You rightly pointed out that the definition of climate funding is still not finalized. You said that ODA flows have increased from 2009-2010 to the last two years. (1) Has the total allocation of ODA increased, or is it variable? (2) You mentioned that the flow of money to adaptation is negligible compared with that to mitigation. Over the last few years, how much has flowed from developed to developing countries, and do you have any data on how much finance has flowed to LDCs for adaptation?

Response from Barbara Buchner, CPI: These studies are a work in progress; we are improving the study and the data. We cannot compare the overall figures from the first to the second study. We can look at ODA numbers though, and from these two years, the amount had almost doubled. This shows that there have been implications from the fast-start period.

We also increased the geographic scope. The first year primarily looked at flows from developed to developing countries. There, we found that an average of USD 97 billion was being spent annually.

This seems to be close to the USD 100 billion mentioned in the Copenhagen agreement – so it's important to stress that the USD 97 billion is NOT new and additional, it is all of the flows. The value has increased due to the increase in domestic public spending. We cannot say anything on trends yet, but we will compare our figures and see the trends in this years' landscape. There was an increase in the two years in domestic spending, but we cannot yet say that it is a trend. We do not yet have a country breakdown on flows of adaptation finance. We will continue to do our best to share information.

Closing remarks by Randall Freed, ICF International: The number of accounting and definitional issues as Barbara described is quite significant. For example, IFC has used partial risk guarantees quite extensively. When those are supported by donors, they don't count as ODA, and they're not in the OECD number unless the guarantee is called. This is part of the question of what's included and what's counted. WRI has focused on climate finance definitions quite a bit.

There were three key points in this session: (1) Put finance into context – realize the extent to which it is consistently linked to policy, technology, institutions, strategy, and to a broader set of questions. It is very difficult to treat finance as if it were unrelated to this broader contextual setting. (2) National financial support has been growing in prominence compared with international institutions. The “public vs. private” term is now becoming more complex and more ambiguous – perhaps we will be able to revisit that. (3) As Silvia very effectively emphasized, de-risking is often the most relevant term, and it is often applied to perceived as much as real risks. This is an opportunity, because phantom risks are much easier to treat than real ones.

Climate Finance Outlook and Key Opportunities

Questions from Athena Ronquillo-Ballesteros, WRI: (1) What are good examples of the private sector's involvement in the smart use of public money to catalyze private investment? (2) What are the gaps in adaptation financing and what kind of mechanisms can be thought up to boost private sectors engagement in adaptation financing?

Response from Alexandra Tracey, ASRIA: One of the examples we use a lot is an IFC program called CHUEE which supports emerging markets in Asia. This is a great example that has been scaled up successfully.

Response from Alexander Ablaza, DFI: The challenge is to get the multi-technical partners to generate a projects pipeline. If you don't bring in the demand, the banks won't roll out the money. Stirring the market and bundling projects is what is needed. In the case of energy efficiency projects, how do you get them aggregated into an investable asset class? How do you bring in new institutions, other forms of aggregators that would bundle projects and take to investors? Can there be enough bundling service providers? There are challenges in mating the technology solutions with investment platforms. IFC is playing a role in this – the sustainable energy finance initiative by the IFC is a good example worth replication.

Response from Pankaj Sehgal, Sun Group: Banks are reluctant to provide debt financing for solar energy projects. To get bank financing, one of the portfolio companies with installation for solar energy divided the project into smaller chunks, banks and investors were easier to attract that way. The first phase of the project was for just 4 MW and it was easier to acquire a loan for that. Once completed, the project went for another 10 MW in the second phase. It was more practical to complete the project over a period of 15 months by implementing in smaller chunks and attracting financing for them separately.

In another example, the Asian Development Bank played a pivotal role in connecting a solar park (generating 300 MW), set up by the government of Gujarat, to the grid system. This was a catalyst for attracting more private investment to flow in.

Response from Octavio B. Peralta, ADFIAP: Development banks and development finance institutions just provide a bridging service. Development finance is a catalyst to attract more funding. Less than two to three percent of financing in this space is covered by development banks, while most other finance comes from the private sector. Development banks need support from the government, such as in the Green Technology Fund in Malaysia.

Question from a table with a number of bankers: Our bank doesn't have a problem in financing energy efficiency. However, it does have a problem in financing renewable energy, because most projects have very large investment costs and require very long tenor of financing (10-15 years). Our funds are short term, five to a maximum of seven years. What are the things you have done in order to mitigate risk or arrive at a compromise?

Response from Pankaj Sehgal, Sun Group: There are perceived risks and actual risk. Renewable energy project investment has two types of risk: (1) An upfront operational risk for the initial six to twelve months of the project, on whether you will develop the project in a timely enough manner to get the tariff. This is the bulk of the risk, and it goes away in the initial year or so of the project; and (2) When running the project, having the government honor their commitments (e.g., power purchase agreements) and in a timely fashion. If the government pays over the first few years of the project, they are likely to continue paying for the next six to seven years. This means that most risk is removed during the first two to three years of a project.

Assuming there are long term risks to investment, there are state government entities that are willing to come in and offer a lower interest rate and refinancing in the third or fourth year.

Response from Athena Ronquillo Ballesteros, WRI: Part of Canada's fast track finance goes to the IFC. In the Philippines, a portion of that finance is going to rural and commercial banks, smartly using global finance to match local banking needs. We need to be able to offer institutions effective use of such public money.

Response from Alexander Ablaza, DFI: To mitigate long term risk, we need to be creative about financial products and offerings at MDBs. ADB and IFC have a range of products and long term credit lines that will reduce the exposure of banks. Some of these financial products could be: mezzanine finance to reduce the exposure, a guarantee structure to take away long term risk, or a concessional blend that mobilizes other donor money so that first loss and other risk is mitigated.

Response from Octavio Peralta, ADFIAP: The source of funds that development banks are using determines the risk and mitigation strategies. In Malaysia and China, funds are coming from the governments and they can extend the tenure of the loan, which is long-term, anywhere from five to ten years. Sri Lanka got funds from the World Bank, so again that is long term.

Question from Nguyen Tuan Anh, MPI, Vietnam, for banks: When you provide credit and funds to projects, what takes priority: the return on investment, or the volume of CO₂ reduced?

Response from Alexander Ablaza, DFI: If you are a multilateral development bank, part of your investment decision will be driven by development impact. Some development bank and development institutions have development targets, others are developing them, and they are all tracking it. Pure project developers are tracking CO₂ reductions, but it is not driving the investment decision. It is the rate of return that prevails in private sector.

Question from Randall Freed, ICF International: For most Asian countries the main priority is adaptation rather than mitigation, yet all figures shown illustrate quite clearly that climate finance has been flowing more towards mitigation than adaptation. The long term paybacks from adaptation projects are hard to monetize, as opposed to investments in renewable energy which dominate climate financing as they generate a revenue stream. How do you bridge this gap and get over the mismatch in terms of demand, i.e., what countries need and what they ask for?

Response from Alexandra Tracy, ASRIA: Adaptation very challenging for the private sector. But companies are preparing for the risks of climate change. We did a study looking at the potential impacts of events such as typhoons, flooding, storm surge and sea level rise, on the infrastructure and supply chain. This kind of investment that companies undertake to protect their infrastructure and business can be called adaptation financing, but it is difficult to track this as so much of it falls under general corporate purposes. Going forward, we will see a huge role for insurance in adaptation finance, around the agriculture sector for example.

Response from Lisa Lumbao, ADAPT Program: We are working on DRR (disaster preparedness) as a delivery point to adaptation financing as it is much cheaper, more visible and short term. This is stimulating investment.

Question from Paul Needham, SIMPA Networks: It is good to hear about successful projects with flows of funds into energy efficiency and large scale grid-tied or centralized generation. However, there are a billion plus people without access to that grid. What about examples of good policy measures that are successfully expanding access to energy and at least beginning to attracting commercial capital?

Response from Octavio Peralta, ADFIAP: There is tremendous opportunity for the bottom of the pyramid. IFC has tremendous program called Lighting India, and is expanding energy access in Asia, India, and portions of the Mekong region. I see a growing intersection of climate change, clean energy, and bottom of the pyramid energy access type of investment. For example, IFC has just provided a guarantee to a woman-owned business, using micro-finance institutions in India to provide clean energy to households. ADB also has an aggressive energy for all initiative.

Response from Pankaj Sehgal, Sun Group: There are two elements that are critical to this, one is government policy and the other is business models enabling villagers to pay for energy. It is difficult to reach remote areas, and there are capital and return issues. Until recently, DFIs were doing biomass and solar projects, but now you mostly see solar and wind power. The private sector investments follow government policy. The emphasis in India is on grid connective solar. There is a very attractive roof-top non-grid solar policy that is attracting private investment flowing into micro-grid development.

Response from Athena Ronquillo Ballesteros, WRI: ADB's energy for all program has plugged into energy access already. There are three to four very large donors that have prioritized access to energy.

Questions from Peter du Pont, USAID LEAD Program: (1) Are there good examples or advice to set up country infrastructure to effectively disperse climate financing to where it is required? (2) Could Octavio please elaborate on the differences and linkages between the national development banks and the international financial institutions in terms of their roles and what they finance?

Response from Alexander Ablaza, DFI: ADB looks at provincial government insurance or financial institutions that would provide energy efficiency credit lines for on-lending, for example in bulk procurement, bulk finance, and bulk distribution programs. The World Bank continues to use sovereign guarantees to back up more bank credit lines for energy efficiency. This is how the government participates and shares in the risk.

Response from Octavio Peralta, ADFIAP: The national development banks are a product of the international institutions, and we have to revisit their relationship. In the 1970s, development banks were used as conduits by the World Bank and ADB. The landscape has now changed: each country has had economic development, and the national development banks have evolved. Three models are now emerging in our members: (1) Policy-based development banks that direct finance to development needs; (2) Multipurpose banks that lend to both development projects and commercial businesses; and (3) Specialized development banks that cater only to SMEs, infrastructure, housing, etc. These are widespread. Because of the changing landscape, the sources of funds have also changed.

Question from participant: There is risk in policy tools. In the case of the carbon market, we are still trying to create a new market mechanism. There is uncertainty around the CDM market and the fluctuating market price of CERs. Since risk discourages the private sector, who can mitigate this kind of uncertainty? Who can guarantee the long term value of CERs? Is there any policy tool that can adjust supply and demand? This is a political issue.

Response from Athena Ronquillo Ballesteros, WRI: The international climate regime should be able to come up with a solution to this. We are not there yet.

Response from Alexandra Tracy, ASRIA: On the carbon market issue, it is a moving target. Indonesia is developing its own scheme, and China and others are doing the same. People are sitting on the sidelines watching how those regional schemes develop.

Bank and Private Equity Perspectives on Climate Friendly Investments

Question from Aidan Stretch, USAID LEAD Program: What specific risks do low carbon and climate resilient investment generate for private investors, and how can these be mitigated?

Response from Jeffery Dickinson, IndoChina Capital: Looking at specific risks on biomass and biogas, there are feedstock and supply issues. The major risk for biomass is the feedstock supply availability and quality. Attempts to re-engineer the feedstock formulations cause equipment operations and maintenance issues.

Response from Edward Wenceslao, BDO: One of the biggest risks for investors is still legal risk. To get a timely and correctly processed permit or license, you need to know the correct government personnel and entities.

Question from Barbara Buchner, CPI: In Europe, one of the issues banks are struggling with is the implications of financial regulations. Are there any implications, difficulties or additional barriers due to regulations to banks financing green investment in Asia?

Response from Edward Wenceslao, BDO: In the Philippines, we have a central bank, and we are a heavily regulated industry. There are no major roadblocks to financing clean energy. The credit availability is more lenient than it was 30 years ago. We are happy.

Response from Jeffery Dickenson, IndoChina: I concur – there are no large roadblocks in the countries I have been working in. We did have trouble getting the local banks to lend in Nepal some years ago – the whole banking system was set up for short term agricultural loans, which did not fit with our needs for hydro power. We had a series of meetings with the bankers to figure out the issues, and then had meetings with the governor of the national bank. Within 18 months they had changed regulations, so that before the civil war, all banks had hydro power on their books.

Response from Edgare Kerkwijk, Asia Green Capital: In the local banks we have been dealing with, most of the clean energy people or teams have disappeared, so it is more difficult as there is a lack of experience. We hope this is temporary.

Response from Tessie Tan, BPI Globe BankKO: In our area (microfinance), our biggest challenge is the medium we are delivering the service. The insurance commission and the Philippine Central Bank have very supportive regulations for this. Their support in our work with electrical cooperatives plays a key role in facilitating the aggregation of micro finance borrowers.

Question from Michael Rattinger, ADB: How is the internal evaluation of clean energy projects done, especially in new technology? Do you use internal or external experts?

Response from Edward Wenceslao, BDO: The projects are treated like any other project in the power industry. The only difference is if there are structures that need to be put in place. We prefer projects which we are familiar with (e.g. biomass, hydro, and energy efficiency) over those which are new to us (e.g., wind and solar). Relevant technical skills on project evaluation are mainly provided via outsourced technical consultants (lender's engineers); in house experts are honed through experience.

Response from Jeffery Dickinson, IndoChina: Our investment is technology led. We identify a specific technology that it finds to be technologically reliable and financially viable and then select a market where such a project can be developed. Internally, we have a technology team to assess the project. We also tap cheap funding sources (i.e. grants) to improve financial viability.

Response from Tessie Tan, BPI Globe BankKO: Project stakeholder ownership and participation is a precondition for BankKO's investments. Based on our e-trike lending program, the local government (for license issuance), distributor (charging shop), and cooperatives (end users of e-trikes) all play a key role to make the project viable.

Response from Edgare Kerkwijk, Asia Green Capital: We don't want to be the first in the world to use a new technology.

Response from Aidan Stretch, USAID LEAD Program: The decision should be based more on the customer and its credit profile rather than the project profile.

Question from Randall Freed, ICF International for Edward Wenceslao: BDO's experience in energy efficiency projects have emission reductions many magnitudes smaller than the national emissions inventory. (1) Are there are lot more projects out there, to help meet the need? (2) If yes, then how can BDO scale up loan issuance?

Response from Edward Wenceslao, BDO: (1) Yes. (2) There are a number of obstacles. In upscale Makati for example, there are buildings from the late 1950s and early 1960s that have a lot of potential for energy efficiency. However, many properties are condominiums, meaning that many owners have to meet to pass a resolution, rather than having us just talk with one owner. We are addressing this by finding a person that the community listens to, convince him or her to do a project, and publicize that in the hope that others will follow suit. A second obstacle is that after persuading a customer to implement energy efficiency and computing the energy savings and cost, they say they don't need to borrow money because USD 1-5 million dollars is a small amount to them. Finally, BDO has a regulation from the Central Bank to lend a certain percentage of their portfolio to SMEs, which have a lot of potential. However, this requires a lot of investment in terms of branches, people, and logistics, and the penalty to not comply is small, so banks prefer to not comply to the risk of lending and losing money.

MAIN WORKSHOP: THURSDAY APRIL 4, 2013

Using the Public Sector to Mobilize Private Climate Finance

Question from Trevor Lewis, ADB: What are some examples of governments providing market certainty in their policy, and what are some examples where we see them being able to commit?

Response from Tomonori Sudo, JICA: Uncertainty is dependent upon a country's economic and social situation. Indonesia created barriers for foreign investors to invest in local projects following the Asian currency crisis in 1997. Another issue for foreign investors is exchange rate stability.

Response from Trevor Lewis, ADB: The Korean government introduced revenue guarantees across all sectors for a period of time. This provided certainty for the private sector to participate. A residual benefit was that they had created a market with real value, and had benchmarks on deals that had been accomplished because of the certainty during that period. The public sector can provide certainty in regulatory and economic frameworks.

Response from Miles Stump, IFC: IFC has first loss guarantees for financial institutions that have worked well in the Philippines and China. It helps banks get familiar with financing sustainable energy projects, dealing with the perception of risk of borrowers and technology. When they are comfortable with the risk they are willing to take the next step.

Response from Shelagh Whitley, ODI: The next challenge is getting these government climate plans, and getting them incorporated within long term national economic plans.

Comment from Jyotsna Mehta, Ministry of Finance, India: The private sector has a huge potential to leverage money for climate finance, but it is hard for them to deliver on equity and public goods like adaptation. If we set things right in public finance, private money will follow. The carbon market has problems not because private sector isn't forthcoming but because public sector commitment is lacking. We should deliberate on how we should raise public finance, especially given the weak fiscal situation in many national economies.

Question from Peter du Pont, USAID LEAD Program, for Shelagh Whitley, ODI: The data you presented was for four donors for projects approved during 2010-2012. Did you select the projects randomly?

Response from Shelagh Whitley, ODI: No, selection was not random. (Showed slide) This shows all project types we looked for with private investment. We used a wide variety of sources of information, and contacted the donors themselves to ask if there was anything we missed.

Question from Peter du Pont, USAID LEAD Program, for Shelagh Whitley, ODI: Then what do you conclude from that? There was USD 7.6 billion of public money, and USD 900 million of private money— did these projects fail to leverage capital? Were you not able to count it?

Response from Shelagh Whitley, ODI: Data is hard to find. We were also trying to look at private money that had come in, and many projects were still just early stage, so projected amounts have not yet come in.

Comment from Peter du Pont, USAID LEAD Program: As we found in the Fast out of the Gate study, many markets in less-developed countries are not ready for private sector investment.

Question from Noeroso Wahyudi, Ministry of Finance, Indonesia: The ODI data shows Indonesia is one of the bigger recipients – is that in terms of commitments, or disbursements? We should also know the gap and the timeline between commitments and disbursements.

Response from Shelagh Whitley, ODI: That's an important point. Most funds at the moment are still in a pledged or approved stage instead of a disbursed stage. My data is primarily for commitments, so far only a small percentage is disbursed.

Comment from Miles Stump, IFC: There are plenty of private funds – and also plenty of public funds allocated to CTF; but we can't spend it effectively. It's because public institutions don't have any distribution – it's the private financial institutions that can do that. The problem is how to better facilitate and bring in the participation of private sector actors. We need to reorient the conversation around how can we be more efficient in allocating and stimulating private capital.

Comment from Trevor Lewis, ADB: Yes, new public sector pledges is not necessarily the bottleneck. Total new pledges to major funds last year is less than 10 percent of what the UK government spent on their Olympics. Public money is being spent on different priorities. Key points: (1) It is complex and time consuming to design programs that generate real social and environmental benefits. It is difficult to spend these large sums of money. (2) Certainty is key for the public sector to achieve greater participation from the private sector, so that innovation of private capital and private needs can occur.

Concurrent Session B: Access to Finance for Bottom of the Pyramid (BoP) and Micro, Small and Medium Enterprise (MSME) Sectors

Question from Jem Porcaro, USAID LEAD Program: What can be done to focus on fuels rather than electrification, given the development and poverty co-benefits?

Response from Jeffery Dickinson, IndoChina: A lot of NGOs and lenders don't know what it is like to cook with wood over stones, so they don't know how to pitch the product into the market. The solution-providers for cook stoves for example don't necessarily understand the cooking culture and needs of the end-users.

Response from Armin Bauer, ADB: Are we investing too much in electrification, and not enough in fuel? Most of the energy need is for cooking rather than lighting, and fuel for transport seems to have been left untouched – I don't know of any inclusive model in the transport sector.

Response from Sakshi Varma, IFC: I wouldn't say there is no solution, but it is a harder sell. I see that there is more focus coming on cookstoves globally. I have heard of examples of small initiatives, which may take off provided the business viability and demand is proven.

Response from Jeffery Dickinson, IndoChina: In Cambodia, where there is no national grid, there are hundreds of IPPs in each village running diesel generators. A company came in with a biomass gasifier, converting rice husks and other wood products into a fuel for the diesel generators. These had higher investment costs than what we are talking about (tens of thousands of dollars), but similar financing difficulties. I financed about 40 of these over the years. They turned out to be very good loans – they have the ability to pay them back once they're given a technology in a financing and management package.

Comment from Jem Porcaro, USAID LEAD Program: Economic density not high enough to connect to grid. Need to increase economic density/activity in these communities. In designing solutions for the BoP and MSME sectors, we need to think about energy as the services that energy provides to the customer. What productive uses of energy can we couple with technology to bring up the economic level in these communities, so that it makes sense to extend the grid?

Question from Joe B. De La Torre, Philippine Business for the Environment: How do we change the mindset of the people on the ground, to help them transition to a new technology that they don't think they have enough money for?

Response from Sakshi Varma, IFC: Consumer awareness is a key element in both changing attitudes, but also understanding products. Evidence that a product works successfully is a great catalyst for increased demand, particularly through word of mouth. We also work with NGOs who have already built up trust with clients. Cook stoves are tough in the Indian context, partly because the wage earners (i.e., men) aren't aware of the issues around cooking so are harder to convince.

Response from Armin Bauer, ADB: Technical Assistance is a useful catalyst to help prove the market, and get it to the stage where word of mouth will begin to be used.

Questions from Edward Wenceslao, BDO, to Paul Needham, SIMPA Networks: I would like to know more about distribution and collection. It is difficult for me to understand how can this be made affordable on grass roots level. How long does it take before the projects start to show returns? Is it limited recourse financing, or is there strong sponsor support? How much awareness raising is required?

Response from Paul Needham, SIMPA Networks: SIMPA is an early stage company and is not yet profitable. We have big ambitions so it will take a significant amount of capital to break even and reach profitability. But looking on the unit economics, the financials are positive. Because they are switching from kerosene lanterns, candles, and batteries that costs much more than grid electricity, it is economically viable. The economic payback can be less than three years for small scale solar (as opposed to 10-20 years in the west).

Questions from participant: Is there any experience that can be shared on the banking industry allocating their credit lines to renewable energy and energy efficiency for inclusive financial models? There seems to be a lack of awareness. What capacity building should be given to the banking industry to release more money to inclusive business on the renewable energy side?

Question from Saiyid Hassan Sikder, Planning Commission, Bangladesh: There are a few biogas plants in Bangladesh, and the government pays subsidies for households through an institution called BCSIR (Bangladesh Council for Scientific and Industrial Research). I know this system works well for cooking, but I don't know if it works at a community level. Do you have any experience in biogas plants for cooking? Can subsidies trigger more finance?

Response from Sakshi Varma, IFC: I think subsidies can help in some ways, but you need to be careful not to distort the market.

Response from Jeffery Dickinson, IndoChina: Subsidies are very case specific and contextual. If subsidies are not well thought through and not curtailed or contained in some way, they can skew the market. Some countries have government subsidies for solar home systems. The public figures out that once the 40,000 are gone, there are no subsidies, so the market plummets. If the government thinks through it, the sales could be more consistent throughout the year, and the overall level of sales would probably be increased. It may be the case that money poured into a biogas system may be better applied to building roads, which have potentially more economic impact.

Response from Sakshi Varma, IFC: Biogas is fairly new in India. Typically, the problem is that it is not suitable for very poor households because you need sufficient biomass for these. One of our clients has started to use it and the results are good, but we are yet to see how it works. Subsidies have helped to reduce the loan size. However, if the product is good enough, we see that the client is willing to pay. If the smaller biogas cookstoves do work, then it may scale up.

Response from Jeffery Dickinson, IndoChina: Yes, I have experience in biogas. The Dutch group SNV has decades of experience that uses household-level biogas, are a good place to start, and can show tens of thousands of installations that work. There are a lot of commercial opportunities around

community biogas, for example around providing electricity to cellphone towers. In Thailand, every cassava processing plant either has one, or is building one. It has become an industry standard.

Sector Breakout Session: Public and Private Sector Case Studies in Climate Finance – Renewable Energy

Question from participant: How sustainable are the projects in the long-term? How much subsidies can be saved?

Response from Gao Pronove, Eco Market Solutions: Eco Market Solutions' projects are small biomass projects with high margins. They see a 50 percent reduction in subsidies. For off-grid, using renewable energy power like biomass makes a lot of sense because the only alternative is expensive diesel.

Response from Edgare Kerkwijk, Asia Green Capital: Biomass projects can have economic sustainability issues as feedstock is not always certain. Wind and solar, on the other hand, can be more "solid investments" as costs and revenue tend to be more predictable and stable, especially if one has long-term power purchase agreement in place.

Response from Anjali Garg, IFC: Tariffs are likely to come down further.

Response from Nintira Abhisinha, Bangchak Petroleum: Without the 8 Baht "adder" on top of normal tariff of 3-5 Baht per unit, solar projects will not be feasible. That said, solar technology costs are dropping while fossil fuel costs in Thailand (coal, natural gas) are increasing. If oil prices exceed USD 200 per barrel, solar projects may be feasible without an "adder" in Thailand.

Question from participant to Gao Pronove, Eco Market Solutions: How do you address the issue of feedstock supply for biomass projects and the volatility of feedstock prices?

Response from Gao Pronove, Eco Market Solutions: We have a local specific strategy and try to have our own independent supply of feedstock (e.g. plantations). On top of that, we have a community-based buying station (9 per municipality). We own back-up plantations to hedge against price hikes. We also use wood, which is converted to briquettes, which is less perishable than corn for example. This extends the lifetime of the feedstock. This comes at an additional cost but the projects are still variable as the alternative is high priced diesel.

Question from participant to Gao Pronove, Eco Market Solutions: Do you think this biomass model is scalable especially in areas where land is expensive and where there are supply chain issues (e.g. India)?

Response from Gao Pronove, Eco Market Solutions: The model works in specific locations and under specific circumstances. The projects don't rely on the Philippines FiT. The major cost is managing plantations.

Question from Peter du Pont, USAID LEAD Program: How do countries decide on the optimal use of distributed rooftop solar projects?

Response from Anjali Garg, IFC: This is very complex issue and one that should be guided by each country's policy preferences and geographic circumstances. In India, it's a very state specific subject. Gujarat, for example is very progressive and has good grid availability so it can "experiment" with rooftop solar. In general, rooftop projects are very risky and rely on a lot of government support.

Response from Nintira Abhisinha, Bangchak Petroleum: In Thailand, the government wants to get involved in rooftop solar but has yet to announce its scheme. Bangchak is beginning to demo rooftop

solar on top of its service stations. The economic return on rooftop solar projects is still unknown as it will depend heavily on government policies.

Response from Edgare Kerkwijk, Asia Green Capital: In Indonesia, small-scale solar projects struggle as they require bank guarantees and don't yet have the policy support of the government.

Question from Don Purka, ADB to Anjali Garg, IFC: How did you come up with the optimal size for your solar project and how was it financed?

Response from Anjali Garg, IFC: The size of the project was determined by the availability of government buildings. The project was financed by a third-party.

Question from Don Purka, ADB to Nintira Abhisinha, Bangchak Petroleum: How have the floods in Bangkok affected getting insurance for future solar power projects?

Response from Nintira Abhisinha, Bangchak Petroleum: The new solar site was built with a dike that protects the project from future floods. No industrial site can get full flood coverage.

Sector Breakout Session: Public and Private Sector Case Studies in Climate Finance – Transport

Question from Edward Wenceslao, BDO to Wayne Zhou, ADB Consultant: (1) Was an integrated analysis of traffic volumes conducted before the project was started? (2) Why was priority given to a BRT project over a LRT or MRT?

Response from Wayne Zhou, ADB Consultant: In China, for a city to implement LRT or MRT the city has to meet certain criteria determined by the central government such as population, GDP level and fiscal revenue of the city government. For BRT, there are no such criteria. That said, there has been an interest in developing LRTs and MRTs but the government has yet to approve them. This is likely to change in some larger cities. An integrated study was conducted to understand the project's feasibility and environmental impacts. The financial IRR of the project is not great but that's because the project is not meant to make a profit – it's providing a public good. The economic IRR of the project is good.

Question from Randall Freed, ICF International to Wayne Zhou, ADB Consultant: What other types and sources of funding are available for such projects given that the economics of developing a CDM are not always favorable?

Response from Wayne Zhou, ADB Consultant: This is common problem for energy efficiency and renewable energy. Carbon finance can only make a small contribution to the overall climate financing of the urban transport sector. Limiting the benefits to carbon undersells program as there are other benefits that need to be monetized as well such as health benefits by reduction of hospitalizations and reductions in accidents.

Response from Nadir Ehsan, Cities Development Initiative for Asia: Unlike for renewable energy and energy efficiency projects, the contribution of carbon finance to transport projects makes up a small share of the project costs, even when there are relatively high carbon prices. This is why transport projects need to look beyond the CDM.

Comment from Michael Rattinger, ADB: Transport projects in particular need to be viewed holistically such that all of their co-benefits (e.g. health) are valued and hopefully monetized. This has been the limitation of the CDM, which has focused exclusively on carbon savings.

Comment from Randall Freed, ICF International: The key challenge moving forward is to find ways to finance cost effective transport projects within the LEDS framework which may not make much sense from a financial perspective.

Comment from Chhavi Dhingra, EMBARQ India: We need to look beyond climate financing to other untapped sources such as those found at the local and city-level (e.g. land-value capture).

Question from participant to Chhavi Dhingra, EMBARQ India: How long did it take to implement the project?

Response from Chhavi Dhingra, EMBARQ India: They did in a very quick time frame (two to three years). The key success factor was “institutional excellence” – they decided as a city that the project was a priority.

Closing remarks by Glynda Bathan, Clean Air Asia: (1) There is a lot to be desired from the existing climate financing mechanisms – in particular the CDM. (2) Future climate financing mechanisms should capture the broader co-benefits of urban transport projects (in addition to carbon savings). (3) Funding for urban transport is likely to come from public financing and will require strong political commitments. (4) Financing should be accompanied with technical capacity building.

Ensuring Climate Finance Readiness - Concrete Actions and Next Steps

Question from Alex Heikens, UNDP: Will private sector investments in renewable energy also be monitored in terms of GHG and climate finance? Why bother when this could just be seen as a good business opportunity?

Response from Peter du Pont, USAID LEAD Program: Based on 27 interviews under our study, which included a question on MRV requirements of financing mechanisms, it was found that for private sector, MRV is not a factor in investment decisions (except in carbon finance).

Question from Orestes Anastasia, Asia LEDS Partnership: How do we, as a community of practice, move the LEDS agenda forward?

Response from Thomas Baumann, USAID LEAD Program: There is a need for a functioning model that can facilitate actions.

Response from Joyceline Goco, Philippine Climate Change Commission: It is important to deal with how climate change can be built into both public and private sector processes and projects.

Response from Xing Fu-Bertaux, GIZ: We can conduct more technical workshops/meetings on the capacity building priorities/themes that have been identified through the polling exercise.

Response from Peter du Pont, USAID LEAD Program: The Asia LEDS provides an organizing platform. Going forward, we need to figure out ways or mechanisms to collaborate (such as a teleconference every three months, development of portal/database). As suggested, we can follow up on identified capacity building priorities.

Questions from Michael Rattinger, ADB: What steps can we take to make sure that GCF resources flow into countries where they are needed most? How do we help countries with low MRV capacity so they aren't left out?

Response from Peter du Pont, USAID LEAD Program: One of the key findings of our study is that 90 percent of private sector capital goes to Thailand and India where there are strong policy and regulatory frameworks on clean energy. Ironically, Thailand does not need as much donor assistance

as other developing countries. On the other hand, flows of public sources are more evenly distributed, going to countries more or less proportionately with level of GHG emissions.

Response from Xing Fu-Bertaux, GIZ: Such will depend on the results the GCF aims to achieve in adaptation and mitigation windows. GCF resource allocation is being discussed by the GCF Board. Based on the experience of existing funds and keeping in mind the trends – which show that the lion's share of climate finance is flowing into mitigation, especially clean energy, because of an improving risk-return profile – it is important for countries to create enabling conditions and strong institutional capacity (as shown in China, India, and Brazil CDM experience) to be front runners in accessing climate finance.

Response from Shelagh Whitley, ODI: Allocation has to consider country priorities.

Question from Shelagh Whitley, ODI: Do we have examples of what is being done to encourage a shift away from a high-emissions development path (not just a move to clean)?

Response from Robert Schiffer, IndoChina Capital: The best approach is to find pilots for technologies that can do that which can be scaled up replicated.

Response from Peter du Pont, USAID LEAD Program: Obviously, removal of fossil fuel subsidies is one option. As shown in one of the presentations in this workshop, the level of fossil fuel subsidies in 42 countries is 75 times higher than the amount of climate finance they get.

Response from Jeffrey Dickinson, IndoChina Capital: Thailand's cassava processing industry which is one of the largest in the world and has undergone a remarkable transformation over the last ten years or so. By using wastewater to produce biogas, processing plants, which used to be dependent on fossil fuels (for boilers) and electricity from the grid, have become or are becoming energy self-sufficient, can now export energy to the grid, while they clean up their waste stream. There can be similar opportunities in other local industries waiting to be tapped, such as in the palm industry.

Response from Robert Schiffer, IndoChina Capital: One way is to self-impose a cap on their emissions as in the case of Nike which, because of the cap, is reducing emissions throughout their supply chain.

Response from Alexander Ablaza, Development Finance International: In the case of DFIs, they tie their energy policies with investment strategy as in the case of ADB.