ASIA LEDS PARTNERSHIP

PROCEEDINGS

Asia LEDS Partnership Forum 2017
Resource Mobilization for NDC Implementation in Asia

5 - 6 December 2017 | Ho Chi Minh City, Vietnam

LEDS GLOBAL PARTNERSHIP

Government of Vietnam
Ministry of Planning and Investment

ICLEI Local Governments for Sustainability


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ASIA LEDS PARTNERSHIP FORUM 2017
RESOURCE MOBILIZATION FOR NDC IMPLEMENTATION IN ASIA
5 - 6 December 2017 | Ho Chi Minh City, Vietnam
Resilient Cities
Asia-Pacific 2017
THE 3RD ASIA-PACIFIC FORUM ON URBAN RESILIENCE AND ADAPTATION
7 - 8 December 2017 | Ho Chi Minh City, Vietnam


SCHAFT FUR INTERNATIONALE ZUSAMMEARBEIT

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LIST OF ABBREVIATIONS

ADB	Asian Development Bank
AIT	Asian Institute of Technology in Thailand
ALP	Asia LEDS Partnership
APEC	Asia-Pacific Economic Cooperation
ASI	Avoid-Shift-Improve
ATI	Administration of Technical Infrastructure, Vietnam
BMUB	Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety
BPC	Bhutan Power Corporation Limited, Bhutan
BREB	Bangladesh Rural Electrification Board
BRT	Bus Rapid Transit
BTC	Belgian Development Agency
BUR	Biennial Update Report
CapaCITIES	Capacity Building for Low Carbon and Climate Resilient City Development in India
CCA	Climate Change Adaptation
CCC	Climate Change Commission (Philippines)
CCET	Climate Change Expenditure Tagging
CDKN	Climate and Development Knowledge Network
CFTF	Climate Finance Task Force
CGC	Coalition for Green Capital
CIFF	Children Investment Fund Foundation
CII	Confederation of Indian Industry
CoP	Communities of Practice
CPEIR	Climate Public Expenditure and Institutional Review
CSIS	Center for Strategic and International Studies
DBM	Department of Budget and Management
DCC	Department of Climate Change, Vietnam
DREI	De-risking Renewable Energy Investment
DSENRE	Department of Science, Education, Natural Resources and Environment
DWD	German Meteorological Service
EE&C	Energy Efficiency and Conservation
EECO	Energy Efficiency and Conservation Office
ETF	Enhanced Transparency Framework
EWG	Energy Working Group
FWG	Finance Working Group
GAA	General Appropriations Act
GCF	Green Climate Fund
GDE	General Department of Energy
GEF	Global Environment Facility
GGGI	Global Green Growth Institute
GHG	Greenhouse Gas
GIZ	German Federal Enterprise for International Cooperation
HCCB	Ho Chi Minh City Climate Change Bureau
HCMC	Ho Chi Minh City
IAdapt	Integrated Rural Urban Water Management for Climate based Adaptations in Indian Cities
IAIAS	International Adventist Institute of Advance Studied
ICLEI EAS	ICLEI East Asia Secretariat
ICLEI SAS	ICLEI South Asia Secretariat
ICLEI SEAS	ICLEI Southeast Asia Secretariat
ICLEI	ICLEI – Local Governments for Sustainability

IDDRI	Institute for Sustainable Development and International Relations
IKI	International Climate Initiative
ILVP	International Visitor Leadership Programme
INDC	Intended Nationally Determined Contribution
IOT	Internet of Things
ISET	Institute for Social and Environmental Transition
IWRM	Integrated Water Resource Management
JICA	Japan International Cooperation Agency
LED	Light Emitting Diode
LEDS GP	LEDS Global Partnership
LEDS	Low Emission Development Strategies
LG	Local Governance
M&E	Monitoring, and Evaluation
MEF	Ministry of Economy and Finance, Cambodia
MHCCD	Meteorology- Hydrology and Climate Change Division
MOC	Ministry of Construction, Vietnam
MoE	Ministry of Environment
MOIT	Ministry of Industry and Trade, Vietnam
MONRE	Ministry of Natural Resources and Environment (Vietnam)
MPI	Ministry of Planning and Investment (Vietnam)
MRV	Measurement, Reporting, and Verification
NAPA	National Adaptation Programmes of Action
NC	National Communications
NDC	Nationally Determined Contribution
NEP	National Expenditure Program
NGO	Non-Government Organization
NHMS	National Hydro-Meteorological Service
NIUA	National Institute of Urban Affairs
NRE	Natural Resource and Environment
NREL	National Renewable Energy Laboratory (United States)
NUMP	National Urban Mobility Programme
ODA	Official Development Assistance
PATPA	Partnership on Transparency in the Paris Agreement
PCEIR	Private Climate Expenditure and Investment Review
PPP	Private Pubic Partnership
PROMISE	Promotion of Inclusive, Sustainable growth & diversity
RE	Renewable Energy
RE&EE	Renewable Energy and Energy Efficiency
RED-E	Renewable Energy Data Explorer
SD	Sustainable Development
SDC	Swiss Agency for Development and Cooperation
SDG	Sustainable Development Goal
SEAWUN	Southeast Asian Water Utilities Network
SNI-WG	Sub-National Integration Working Group
SPCR	Strategic Program on Climate Resilience
TWG	Transport Working Group
UNCRD	United Nations Centre for Regional Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNISDR	United Nations Office for Disaster Risk Reduction
USAID	United States Agency for International Development
VNEEP	Vietnam National Target Program for Energy Efficiency
WG	Working Group
WRI	World Resources Institute

PROGRAM OVERVIEW

Day 1, Tuesday, December 5, 2017

08:00 - 09:00	Registration		
09:00 - 10:00	Welcome, LEDS GP & ALP - Introduction, Special Address, Keynote Address		
10:00 - 10:45	Plenary 1 : The NDCs - Impact on Accelerating Low Emission Development in Asia		
10:45 - 11:00	Coffee / Tea Break		
11:00 - 13:00	Parallel Session A: Low Emission Development Strategies in Action		
	A1: Transport in NDCs and Low Carbon Transport Actions	A2: The Role of Renewable Energy in Achieving NDC Implementation Across Asia	A3: Multi-level Governance and the NDCs in Asia –Accelerating Sub-national Implementation & Raising National Ambitions
13:00 - 14:00	Lunch		
14:00 - 14:45	Plenary 2 : Climate Budgeting & Expenditure Tracking as a Tool for LEDS and NDC Investment Planning		
14:45 - 15:15	Open Space Session		
15:15 - 15:30	Coffee / Tea Break		
15:30 - 17:30	Parallel Session B: Driving LEDs through NDC Implementation		
	B1: Driving LEDS through NDC Implementation	B2: Building Clean Energy Demand in Asia - The Role of the Private Sector in Driving Clean Energy Deployment	B3: Driving NDC Implementation through Transparency - National Benefits of Transparency Systems
19:00 - 21:00	Official Dinner hosted by GGGI		

Day 2, Wednesday, December 6, 2017

09:00 - 09:15	Welcome Remarks, Recap and Keynote Address		
09:15 - 10:00	Plenary 3: High-Level Panel on Financing Low Emission Development and Green Growth in Asia: Success Stories		
10:00 - 10:15	Coffee / Tea Break		
10:15 - 13:00	Parallel Session C: Tools to Plan for Low Emission Development		
	C1: Urban Planning for Low Emissions Development: Success Stories (Green Cities)	C2: Tracking Progress towards NDCs - Tools and Guidance for Transparency	C3: Tools and Resources: LEDS and NDC Energy Planning
13:00 - 14:00	Lunch		
14:00 - 15:30	Parallel Session D: Low Emission Development Initiatives with Potential for Scale-up		
	D1: Making the most of 2050 Greenhouse Gas Emission Pathways	D2: National Urban Mobility Programme	D3: Adaptation in the Mekong Delta – Shaping the Road from Paris to Implementation in Vietnam
15:30 - 15:45	Coffee / Tea Break		
15:45 - 16:30	Plenary 4 : NDC Finance: Opportunities, Challenges and the Path Forward		
16:30 - 17:15	Feed-back from Participants		
17:15 - 18:00	Closing Plenary: LEDS GP, ALP & Working Groups		
19:00 - 21:00	Official Dinner – Invited by Ministry of Planning and Investment, (funded by GIZ)		

OVERVIEW

The Asia Low Emission Development Strategies (LEDS) Forum serves as the premier gathering of policymakers, donors, practitioners, and other experts involved in enabling low-emission, climate-resilient development in Asia. Addressing the priority topic of "Resource Mobilisation for Nationally Determined Contributions (NDC) Implementation in Asia" the Asia LEDS Forum 2017 was held on the 5th and 6th of December, 2017 in Ho Chi Minh City, Vietnam.

First held in 2012 in Bangkok, Thailand, the Asia LEDS Forum was organized to enhance regional coordination on LEDS and green growth, identify priorities for promoting regional capacity-building and knowledge-sharing, and establish the Asia LEDS Partnership (ALP). Today, the partnership is firmly established as Asia's premier voluntary regional network comprising organizations and individuals working to advance and implement low-carbon, climate-resilient development. At present, the ALP has 739 members (242 member organizations and 497 individual members).

The ALP Secretariat is hosted by ICLEI South Asia (ICLEI SA) along with the regional offices Viz., ICLEI Southeast Asia (ICLEI SEAS), and ICLEI East Asia Secretariat (ICLEI EAS). ICLEI is the world's leading network of over 1,500 cities, towns, and regions committed to building a sustainable future.

The ALP Forum 2017 was organized by the ALP Secretariat and hosted by the Vietnam Ministry of Planning and Investment (MPI), Ministry of Construction (MOC), Ministry of Transport and Ministry of Industry and Trade. More than 200 participants were engaged in the forum. International organizations like the United States Agency for International Development (USAID), United Nations Development Programme (UNDP), German Federal Enterprise for International Cooperation (GIZ), Partnership on Transparency in the Paris Agreement (PATPA), Sweden Sverige, Belgian Development Agency (BTC), Swiss Agency for Development and Cooperation (SDC), Global Green Growth Institute (GGGI), Asia Pacific Economic Cooperation (APEC), 2050 Pathways Platform, and Governance of Climate Change Finance supported the forum and also actively contributed to it.

The two-day forum included several thematic, interactive sessions designed to foster peer-learning and exchange between Asian and international officials and experts. Expert panel discussions focused on the provisions of NDCs in Asian countries, the level of ambition within the NDCs to address the below 1.5 degree goal of the Paris Agreement and the successes, challenges and needs of country governments in Asia, to accelerate

NDC implementation. The workshop touched on a variety of themes, including support for NDC implementation, investment mobilization to achieve NDC targets and development goals, multilevel governance and enabling frameworks for LEDS implementation, strengthening regulatory frameworks and power infrastructure to enable large scale renewable energy deployment, and advancing clean energy based transport solutions.

In conjunction with the forum, on the 4th of December, 2017, the Transport Working Group (TWG) of the LEDS Global Partnership (LEDS GP), in partnership with APEC and GIZ conducted a workshop on improving the efficiency of urban transport projects. The one-day workshop focused on the operational and energy efficiency of urban bus systems, and provided a platform for peer knowledge exchange, with participants and experts sharing experiences on the topic, along with exchanges with experts. Participating countries included Thailand, Philippines, Papua New Guinea, and Vietnam.

Two Communities of Practice (CoPs) were launched at the forum viz., the Clean Energy Finance and Grid Scale Renewable Energy (GRE) in collaboration with the LEDS GPs Energy and Finance working groups. Also, the two existing CoPs on Multilevel Governance and Clean Transport were strengthened with participation of additional countries in the region and delivery of trainings throughout the event. Feedback was received from participants on priority topics, activities, and institutions to join the CoPs. The CoPs are intended to be interactive networks comprised of national and sub-national governments, technical institutions, businesses, non-profits and other organizations addressing real-time policy and technical challenges and solutions. The ongoing collaboration with participants will allow deeper learning and sustained participation, continuous access to tools and expert assistance, and offer solutions to early movers as needs emerge.

KEY MESSAGES

- All participating country government representatives highlighted the focus on Low Emission Development, as stated within their country NDCs/INDCs.
- National governments are focusing on operationalizing NDCs and sought technical support for developing specific action plans, implementation frameworks, policy regimes and financing mechanisms to enable timely implementation and monitoring of NDCs.
- NDC priorities should translate into budget allocations and sectorial, sub-national implementation plans to achieve robust commitments. National governments need assistance in conducting climate expenditure and investment assessments.
- The NDC Action Plan should not be viewed as a stand-alone plan, separate from the overall development planning in each country. It should be integrated and not compete with other sectoral plans. Institutional alignment of SDGs' and NDC implementation is required to leverage maximum benefit.
- Transparent climate reporting is a driving force for NDC implementation, since national governments want to continually assess progress towards achievement of goals and targets and are then able to steer implementation, as needed.
- Institutionalization and systemization of inventory preparation is important for national GHG accounting and forecasting. Knowledge sharing on best practices and training and capacity building on Enhanced Transparency Frameworks/Monitoring Reporting & Verification Frameworks will help accelerate such action.
- Mid-century GHG mitigation pathways help to combine multiple policy goals with climate considerations, inform key infrastructure decisions, identify technology priorities, regulatory and policy interventions and recalibrate near term climate action.
- Technical support is crucial for developing and implementing programs and policies that would result in strong investment incentives for accelerating NDC implementation at the national and sub-national levels.
- Private sector investment for NDC implementation should be enhanced by identifying and enforcing risk mitigation instruments.

- The need for building capacities of national commercial banks to strengthen their clean energy lending capabilities was highlighted several times over. Project developers should also be equipped with an understanding of innovative financing mechanisms and implementation strategies to accelerate large scale deployment.

- A timely analysis and appropriate revisions of existing policies that create market uncertainties for RE deployment, as well as the institutionalization of new RE targets, policies and incentives, are key for scaling up renewable energy across Asia. Policies that allow for tariff modifications, reflecting changing technology and enabling RE to be cost-competitive, are required, as indicated by many countries.

- Blended capital and green banking opportunities are some of the emerging areas in which countries have shown an interest in an effort to overcome barriers to scale up Renewable Energy (RE) investment

- To enable grid-scale renewable energy deployment, comprehensive power sector planning including socio-economic modeling, technical and financial analysis, implementation of enabling policies, regulations and market design, is required.

- 86% of NDCs have identified transport as an important source for GHG emissions. However, only 7% of NDCs have specified transport targets. National governments need support on setting clear mitigation targets for the transport sector, filling policy gaps, strengthening and complementing existing measures and integrated transport and energy planning.

- Several countries and cities are looking to develop policies and investment mechanisms for improving and promoting public transit, be it through bus based systems or rail based transit systems. A shift in public perception, towards public transit, is to be encouraged.

- Improved technologies for public mobility, such as electric mobility solutions, are gaining momentum in the region. There is a need for a framework for coordinating national policy and sub-national implementation of mobility priorities.

- National and sub-national integration plays a crucial role in NDC implementation across each of the thematic areas (energy, transport and finance). This is also reflected in the strong interest expressed by countries to help assess opportunities and effectively manage multi-level governance coordination. National governments also sought guidelines and capacity building for developing and implementing sub-national climate policies and actions.

- With expanding city boundaries, growing urban population and increasing per capita urban emissions, cities play a vital role in mitigating and managing climate change. Local governments have immense potential in achieving ambitious climate targets when working hand-in-hand with national governments.

- Sub-national governments in developing Asian countries recognize the need for green growth and low emission development and are proactively taking actions to implement strategies and actions at the local level.

INAUGURAL SESSION

Speakers

Dr. Pham Hoang Mai, *Director General, Department of Science, Education, Natural Resources and Environment (DSENRE), Ministry of Planning & Investment (MPI), Government of Vietnam*

Mr. Ron Benioff, *Director, LEDS GP*

Mr. Emani Kumar, *Lead Director, Asia LEDS Partnership*

On behalf of Vietnam's MPI, Dr. Mai welcomed everyone to the ALP Forum 2017 which drew more than 200 participants from 28 countries representing different sectors – national and local governments, NGOs, researchers and practitioners in the LEDS sector. Critical questions were posed by Dr. Mai and he encouraged the participants to deliberate on these specific topics.

- How to mobilize different stakeholders to implement NDCs in different sectors/regions/national level?
- How to identify and mobilize different vehicles to implement LEDS?
- How to monitor or keep track of public and private expenditure investment for implementing NDCs?
- What kind of technical support do Asian countries need from LEDS GP and other development partners to support LEDS implementation and how can countries share experiences with each other?

Mr. Benioff indicated that countries from all over the world are facing critical development challenges and there is an urgent need to take action to address climate change.

Inaugural session of the Asia LEDS forum: From L-R: Mr. Ron Benioff, Director, LEDS Global Partnership (LEDS GP); Mr. Emani Kumar, Deputy Secretary General, ICLEI, and Regional Director, ICLEI South Asia & Dr. Pham Hoang Mai, Director General, MPI, Government of Vietnam

He invited participants to provide inputs and give ideas on how the LEDS GP can better serve to advance Low Emission Development. The LEDS GP intends to help countries and different levels of government to succeed in the goals set out in their NDC and LEDS. It also aims to build confidence and ambition.

Mr. Kumar gave a brief overview of the ALP. Launched in September 2012, ALP is a voluntary regional network active in designing, promoting, and/or implementing LEDS in South Asia, Southeast Asia, East Asia, Central Asia and Pacific (including Australia and New Zealand). The goal of ALP is to advance the development of country-led and country-specific strategic plans to promote economic growth while reducing Greenhouse Gas (GHG) emissions - without causing trade-offs to other environmental pressures in the Asia region. It also envisions to foster capacity building of practitioners to make Asia a leader in designing and implementing LEDS and green growth.

The LEDS GP and ALP are platforms for collaboration and learning. Events such as the ALP Forum 2017 should be maximized by identifying the most effective mechanisms to ensure that peer-to-peer learning takes place.

– Dr. Pham Hoang Mai, Director General, MPI, Government of Vietnam

Keep challenging ourselves, work smart, and follow pathways that adhere to decarbonization and sustainable development

– Mr.Ron Benioff, LEDS GP

PLENARY 1:
THE NDCs - IMPACT ON ACCELERATING LOW EMISSION DEVELOPMENT IN ASIA

Moderator

Emani Kumar, Lead Director, ALP

Panelists

Dr. Pham Hoang Mai, Director General, DSENRE, MPI, Government of Vietnam

Mr. Ron Benioff, Director, LEDS GP

Dr. Nurun Nahar, Deputy Chief, Planning Commission, Government of Bangladesh

Mr. Chanthearith OU, Deputy Director, Department of Science and Technology of General Secretariat of National Council for Sustainable, Development, Ministry of Environment (MoE), Cambodia

Mr. Sujith Ratnayake, Assistant Director, Climate Change Secretariat, Ministry of Mahaweli Development and Environment, Sri Lanka

Mr. Syamphone Sengchandala, Deputy Director General Department of Climate Change, Ministry of Natural Resources and Environment, Laos PDR

Ms. Sandee G. Recabar, Planning Officer V and Chief, Implementation Oversight Division, Climate Change Office, Climate Change Commission (CCC), Government of Philippines

In the plenary, country representatives discussed the success factors and challenges in operationalizing LEDS/NDCs, financing NDC implementation, opportunities and experiences in sub-national implementation of NDCs. The NDC Action Plan should not be viewed as a stand-alone plan, separate from the overall development planning in each country. It should be integrated and not compete with other sectoral plans. Most national government representatives highlighted the need to strengthen involvement of sub-national and local actors in NDC implementation.

Dr. Nahar highlighted that climate change is a global issue and involvement of local governments is crucial. She informed that there are avenues to link achievement of Sustainable Development Goals (SDGs) with NDC implementation, specifically goals on climate change, sustainable infrastructure, and energy. She also informed that with the assistance from the United Nations Development Programme (UNDP), a local climate framework was formulated in Bangladesh, which can help development partners and donors to identify key local requirements. Mr. Sengchandala discussed the

process of NDC preparation in Lao PDR. He highlighted that capacity building and finance mobilization are cross-cutting issues for NDC implementation. The government is striving to integrate climate change mitigation options into development planning and approaches through different schemes and projects.

Dr. Mai indicated the importance of dovetailing the NDC plan with other plans given that resources for implementation of several plans are limited. Since funds for implementation are limited, there is a need to combine targets of multiple plans and explore synergies between them (e.g. climate change adaptation and green growth, socio-economic development plan with SDGs) in order to optimise available manpower and financial resources.

Multiple modalities need to be explored to ensure that finance is mobilized.

Mr. Benioff discussed that in order to successfully implement NDC and LEDS, there is a need to unlock private investment – which can serve as primary support for NDC implementation. He stressed that there are multiple pathways that can be employed to ensure robust financing for NDC implementation, such as structured government procurement, donor financing, accessing international technical support for capacity building, direct collaboration with the private sector and technology suppliers and investors, de-risking markets, and improving rates of return.

PARALLEL SESSIONS A:
LOW EMISSION DEVELOPMENT STRATEGIES IN ACTION

LEDS action in Key thematic areas of transport, energy and sub-national integration

A1: NDCS IN TRANSPORT AND LOW CARBON TRANSPORT ACTIONS

Facilitator and Overview

Ms. Angela Enriquez, *World Resource Institute (WRI), LEDS TWG*

Transport and NDCs

Ms. Elena Scherer, *GIZ*

Case Study Presentations on NDC Targets and Mitigation Measures for Transport

Mr. Vu Hai Luu, *Vietnam, Ministry of Transport*

Ms. Areej Riaz, *Bangladesh Country Program Manager, Climate and Development Knowledge Network (CDKN)*

Group Activity and Discussions

Ms. Angela Enriquez, *WRI and* **Ms. Elena Scherer**, *GIZ*

Group1: *Sectorial transport targets in the NDCs*

Group2: *Mitigation measures for transport sector in NDCs*

This session aimed at identifying necessary actions and strategic decisions to be taken by policy makers to meet NDC targets that are stipulated specifically for the transport sector.

Ms. Enriquez introduced the TWG and discussed its work in Avoid-Shift-Improve (ASI) framework to reduce the GHG emissions from transportation. The framework indicates that several aspects including urban planning, regulatory measures, economic considerations, information sharing (awareness) and technology measures are to be considered. These aspects should also be integrated to ensure improved and sustainable transport. TWG support to countries through short term no-cost expert assistance on specific topics was also discussed.

Ms. Scherer noted that the transport sector contributes to 23% of anthropogenic emissions globally out of which 74% come from road transport (2016). Transport emissions are on a rise and in order to achieve the 2˚C target of the Paris Agreement, decarbonizing transport sector is crucial, she added. 86% of NDCs have identified transport as an important source for GHG emissions. However, only 7% of NDCs have specified transport targets. She called for more ambition and action at national level in terms of setting clear targets, filling policy gaps, strengthening and complementing existing measures and linking with energy sector. She also emphasized that transport needs to rank higher on the international agenda and international collaboration needs to expand beyond the G20 countries.

Mr. Luu shared Vietnam's initiatives towards sustainable mobility particularly the roll-out of the local public transport route plans. To encourage the switch to public transport, the government is taking steps to change the perspective of public by making it more convenient and accessible. Mr. Luu also presented the six tasks and solutions outlined in the Green Growth and Climate Response Action Plan (2016-2020) to reduce GHG emissions – develop and manage transport infrastructure towards low emissions, encourage the use of RE and clean energy, implement emission control solutions in motorized vehicles, raise awareness and enhance international co-operation.

Ms. Riaz presented on the NDC targets in transport sector in Bangladesh. As per Business As Usual (BAU), the transport sector emissions are expected to change by 118% by 2030. The percentage reduction of GHG emissions from transport sector in comparison with BAU scenario in 2030 could range from 9% (low ambition) to 24% (high ambition). Given other developmental priorities in the country, undertaking interventions in the transport sector may not be of prime importance to the

government. It is important to seek synergies between mitigation and adaptation in Bangladesh's transport action plans considering the vulnerability of the country to climate change impacts. Capacity building needs for NDC implementation in Bangladesh include access to data and data archiving (particularly related to mitigation); mainstreaming climate change into planning, developing GHG emissions inventory, and engaging the private sector, among others.

Presenters highlighted that in terms of transforming the transportation sector, the focus should not only be on improving technologies but also on shifting the perspective of the public to accept and adopt more sustainable means of transport. National governments need to enable local government actions, thereby enhancing NDC implementation. Private sector support for financing and implementation of government initiatives, is critical.

> *Focus on statistical indicators to promote green transport. Costing is an important component to shift people's behavior to mass transport*
>
> – Mr.Vu Hai Luu, Ministry of Transport, Vietnam

A2: THE ROLE OF RENEWABLE ENERGY IN ACHIEVING NDC IMPLEMENTATION ACROSS ASIA

Facilitator and Overview

Ms. Jennifer Leisch, *USAID*

Renewable Energy Across Asia: Status and Opportunities

Ms. Jennifer Leisch, *USAID*

RE Targets and Pathways to Meeting Energy Demand in Vietnam

Mr. Trinh Quoc Vu, *Deputy Director General, Energy Efficiency and Sustainable Development Department, Ministry of Industry and Trade, Government of Vietnam*

Role of Green Banks in Driving Renewable Energy Investment

Mr. Rob Youngs, *Coalition for Green Capital*

The Utility of the Future: Scaling RE in Bangladesh

Mr. Shah Zulfiqar Haider, *General Manager, Pabna Rural Electric Cooperative of Bangladesh*

Working Session: Analysis of Key Barriers to Scale Across the Energy System

Ms. Alexia Kelly, *Electric Capital Management*

This session focused on RE targets and links to NDCs, public finance strategies, competitive procurement and grid integration. Ms. Leisch provided an overview of the status and opportunities for RE deployment across Asia.

The importance of scaling up RE to meet increasing energy demand across Asia, while also resulting in economic benefits and other co-benefits, was discussed. RE targets will be met only through significant scale-up. Building blocks for scaling up RE were discussed - strategic planning, policies and supporting regulatory framework, competitive procurement processes, access to finance is required. The importance of policies and incentives to attract private investment was discussed. It is important to leverage public funds to attract and de-risk private investments.

Many countries are operating successfully with 20-30% renewables in the energy mix and RE is proven to be cost competitive. However, every market is unique. Institutional solutions that enable markets are often the easiest. Flexibility of grid to accommodate RE deployment and possible variations, good data analysis and paradigm shift in planning and operation of modern day grids are key for RE grid integration.

Mr. Vu focused on RE targets and pathways to meet energy demand in Vietnam. The approach for Vietnam

included strategic planning, regulatory frameworks for promotion and setting long-term ambitious targets (in comparison to current scenario and with huge investment needs). Presently, Vietnam is using feed-in tariffs as incentives and is looking to diversify funds and attract foreign direct investments. Towards energy security, the country is looking to develop energy efficient infrastructure and diversify energy systems with focus on RE.

Mr. Youngs discussed the role of green banks in driving RE investment. There is a huge gap in RE investment, which can potentially be bridged by the private sector. The key to tap private sector investment is the bankability of projects. Green banks is a public financing authority that leverages private capital and offers various schemes for big and small projects all around the globe.

Mr. Haider discussed the current scenario and potential scale-up of RE in Bangladesh. The priority areas for Bangladesh are digitization of grid integration, energy security and climate change mitigation. There are several challenges including upgradation of infrastructure, accessible RE technology and other barriers which are to be surpassed to achieve the RE target of the country.

A3: MULTI-LEVEL GOVERNANCE AND THE NDCS IN ASIA – ACCELERATING SUB-NATIONAL IMPLEMENTATION & RAISING NATIONAL AMBITIONS

Facilitator

Ms. Akiko Urakami, *Japan International Cooperation Agency (JICA), Vietnam*

Overview

Mr. Scott Muller, *LEDS GP Sub-National Integration Working Group (SNI-WG)*

Governance Gaps and Transformative Urban Climate Actions, Vietnam

Dr. Phong Tran, *ISET, Vietnam*

Challenges for Financing Subnational Climate Action. Urban and Governance Experiences from a Multilateral Development Bank

Mr. Michael Rattinger, *Asian Development Bank (ADB)*

How GHG MRV in HCMC Improves Coordination, Collaboration and Informs Decision Making

Mr. Ha Minh Chau, *Ho Chi Minh City Climate Change Bureau Office, Department of Natural Resources and Environment*

Promise of Seoul: Inclusive Governance for Ambitious Urban Climate Action

Ms. Jiwon Lee, *ICLEI - Local Governments for Sustainability, World Secretariat*

The session focused on participant knowledge sharing, with an aim to recognize and overcome challenges in integrated governance to accelerate climate actions. Current trends, new institutional arrangements, effective methods for coordinating and integrating LEDS between cities, regions and national governments were discussed during the session. Dr. Tran emphasized that urban planning should incorporate climate change considerations and sustainability of local initiatives (resilience strategies and city intervention projects). Also, it is important to enhance coordination and align sub-national activities with national goals, adopt appropriate monitoring and evaluation mechanisms and enforce procedures to ensure this integration.

Mr. Chau described how the GHG Measurement, Reporting and Verification (MRV) system in Ho Chi Minh City improves coordination and collaboration between different departments, and informs decision making. At present, there is no GHG emission reduction target for cities. Although, the local government officials are aware of GHG emissions to some extent, there is still a need to make all stakeholders aware of the benefits of GHG emissions estimation and MRV, including private sector, by offering technical support in these areas. He also highlighted that the most efficient way for estimating city level GHG emissions inventory is to set up a joint project/ collaboration between the central and local government.

Mr. Rattinger highlighted that climate change action should be linked more clearly with sustainable development benefits. Less tax base, lack of fiscal instruments at sub-national level, local government decision making driven by local imperatives, shorter political cycle are considered as challenges in financing local governments. For increasing the chances of finance, there is a need to have national and local joint projects, national climate funds, build capacities of national development banks to engage with municipal authorities.

Ms. Lee discussed about "Ambitious City Promises" project, which is being implemented by ICLEI – Local Governments for Sustainability (World Secretariat, South East Asia and East Asia Secretariats) in Seoul city and supported by the International Climate Initiative of the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB). The Promise of Seoul, a citizen-led project aims to reduce 25% of CO_2 emissions or 10 million tons of CO_2 emissions by 2020, and 20 million tons of CO_2 emissions by 2030. Through comprehensive climate change mitigation strategy, the ambitious project intends to help South Korea achieve its NDC while also inspiring other local governments. She highlighted that the project has a very strong horizontal integration, which has enabled departments to have a strong coordination with citizens to work in initiatives to reduce GHG emissions. The Promise of Seoul aims to expand these activities outside of the energy sector as well (including transport and air quality). Through 'Ecomileage' initiative households are engaged to save electricity and water bills and the savings from best performing households are converted into vouchers.

PLENARY 2:
CLIMATE BUDGETING & EXPENDITURE TRACKING AS A TOOL FOR LEDS AND NDC INVESTMENT PLANNING

Facilitator

Mr. Glenn Hodes, *UNDP*

Speakers

Mr. Glenn Hodes, *UNDP*

Dr. Pham Hoang Mai, *DSENRE, MPI, Government of Vietnam*

Ms.Sandee G. Recabar, *Planning Officer V and Chief, Implementation Oversight Division, Climate Change Office, CCC, Goverment of Philippines*

Dr. Tauch Chan Kresna, *Deputy Director, Investment Division, Ministry of Economics and Finance, Royal Cambodian Government*

The panel discussion focussed mainly on linking climate change expenditure tracking and monitoring to implementation of LEDS & NDC Investment Plans and showcasing the example of Mekong Delta, as a case in point. Focus sectors include agriculture, water, energy and sub-national level interventions. Mr. Hodes highlighted that there is a big gap in national plans for LEDS implementation linked to Paris agreement and availability of finance for the same. The implementation of Climate Budgeting & Expenditure Framework promotes informed and effective fiscal management. Climate budget tagging is a tool for monitoring and tracking of climate-related expenditures. NDC priorities should translate into budget allocations and sectorial, sub-national implementation plans to achieve robust commitments. Challenges towards undertaking climate expenditure and investment assessments including capacity limitations, consistency and comparability of data, scope (what can be covered), transparency and access to underlying information, were discussed.

Ms. Recabar presented Philippines' experience in Climate Change Expenditure Tagging (CCET). All ministries are instructed to tag climate budget which involves three levels of analysis – submission of budget request to Department of Budget and Management (DBM), budget decisions at National Expenditure Program (NEP), and review of budget cuts through General Appropriations Act (GAA).

Ms. Recabar indicated that the buy in from key government agencies, falling in line with timing of budget cycle and harmonization with other monitoring systems/ development plans are crucial for climate budget tagging.

Dr. Mai discussed Vietnam's experience in CPEIR. As CPEIR is new and challenging, the existing systems in place, planning, reporting and budgeting processes needed adjustments. However, the climate budgeting tool is very useful to negotiate with financial institutions and international development organizations and to access finance.

Presenters highlighted that climate budgeting frameworks are considered as effective monitoring, prioritization tools to mainstream climate/NDC priorities into budget allocations and sectorial, sub-national implementation plans. CPEIR and Private Climate Expenditure and Investment Review (PCEIR) can be used as tools for planning and budgeting. A number of Asian countries such as Vietnam and Philippines have taken a lead in this regard through innovative approaches that track public as well as private expenditure at national, sub-national and sectorial level.

PARALLEL SESSIONS B:
DRIVING LEDS THROUGH NDC IMPLEMENTATION

B1: DRIVING LEDS THROUGH NDC IMPLEMENTATION

Facilitator

Ms. Usha Rao, *UNDP*

Country Case Study

Mr. Pham Van Tan, *Deputy Director General, Department of Climate Change, Ministry of Natural Resources and Environment (MONRE), Government of Vietnam*

Q & A Session

World Café

Participatory Exercise on Key Aspects of NDC Governance

This session focused on essential elements of governance for NDC implementation through a participant focused exchange of national approaches and implications for long term LEDS planning. The discussion highlighted that governance is a key building block to meet NDC goals. In order to ensure tangible benefits resulting from climate actions, countries need to reconfigure their governance structures by integrating national, sub-national and local level institutions, to foster inclusive and integrated low carbon development. The discussion also put forth the need to institutionally align SDGs and NDC implementation, to leverage maximum benefit. Absence of sub-national NDC targets, lack of awareness and weak monitoring systems remain as challenges. Elaborating climate action plans at local level, providing incentives for implementation and creating a sense of ownership at local level is needed for NDC implementation.

Mr. Tan presented a case study on NDC implementation in Vietnam. He discussed the process of NDC preparation, which included ideas and opinions from a wide range of stakeholders, including sub-national entities.

With an intent to implement the Paris Agreement, Vietnam has identified five key elements in the country's NDC: mitigation, adaptation, transparency system, resource and governance. It was emphasized that countries will need to report more frequently, incorporate long-term vision and map short-term actions against the long-term vision. He described the process adopted in Vietnam for elaborating the NDC, which included a series of dialogues among different stakeholders and a call to sub-national entities to indicate their priorities and contributions, as well as delegation of tasks and their integration into regular activities. As a result, 25 provinces have submitted schemes for integrating NDC based tasks into regular activities.

The Vietnam case throws light on several important aspects such as the necessity and benefits of involving all relevant stakeholders in the process of formulating the NDC, establishing feedback systems to monitor achievement and to receive comments for improvement and the need for institutionalizing NDC targets and integration with other green growth strategies.

B2: BUILDING CLEAN ENERGY DEMAND IN ASIA - THE ROLE OF THE PRIVATE SECTOR IN DRIVING CLEAN ENERGY DEPLOYMENT

Facilitators

Ms. Alexia Kelly, *LEDS GP Finance Working Group &* **Ms. Rachel Posner Ross,** *Allotrope Partners*

Scene-Setting Presentations by Public and Private Sector Leaders - Corporate Clean Energy Procurement and NDC

Mr. Alex Perera, *WRI*
Ms. Anna Gonzales, *Ayala Land Inc.*
Mr. Ngo Quang Trung, *Director General, Swire Cold Storage Vietnam*
Ms. Bethany Speer, *Energy Analyst, National Renewable Energy Laboratory (NREL)*

Group Discussion

Evaluating Renewable Energy Policy Frameworks & Introduction to the Community of Practice

This session focused on mobilizing private investment, especially for clean energy deployment, to achieve LEDS and NDC goals. It provided an insight into clean energy procurement, and also elaborated on policy opportunities and financing tools to accelerate private investment in clean energy. Ms. Gonzales indicated that companies should become aware about national GHG emissions profile, sector emission intensity, climate mitigation opportunities and consider this information in designing projects.

Mr. Quang indicated there is a significant prospect for involvement of private companies in clean energy technologies, which can potentially reduce dependence on fossil fuels. Mr. Perera highlighted that the momentum for renewable demand is scaling to new heights every day. The RE100 campaign, where companies have made a commitment to go '100% renewable', has now reached 117 members. The demand for RE by corporates is substantial and continues to increase. Close to 50% of the Fortune 500 companies have set GHG mitigation targets. Ms. Speer suggested that leveraging corporate interest will help governments achieve their RE goals. Companies are procuring RE power from both on-site and off-site projects. The session discussed actions to be taken by policy makers for enabling RE procurement.

Policy recommendations for RE onsite procurement:

- Developing relevant policies will create an enabling environment for accelerating on-site RE deployment to meet increasing demand. There is also a need for adjusting existing policies, based on the maturity of existing markets (e.g. Revision of Feed-in-Tariff (FiT) rates)
- Develop transparent interconnection procedures
- Streamline permission and inspection procedures
- Policies to incentivise RE generation

Policy recommendations for RE offsite procurement:

- Allowing corporates to purchase RE directly – in vertically integrated markets, governments could allow consumers to purchase electricity directly from power producer.
- Off-site power procurement could be supported by by designing policies for open access of transmission systems. A fee can also be levied for wheeling the power and for using the transmission services.
- Support creation of credible attribute tracking systems – It is important to enable corporates to make clear claims about their use of renewable energy or GHG reduction benefits. This will also allow many RE power producers to come into the market.

B3: DRIVING NDC IMPLEMENTATION THROUGH TRANSPARENCY - NATIONAL BENEFITS OF TRANSPARENCY SYSTEMS

Facilitator

Ms. Anna Schreyoegg, *GIZ*

Welcome and Introduction

Ms. Hanna Reuter, *GIZ and* **Oscar Zarzo,** *Policy Advisor, GIZ*

Transparency in the Context of NDCs

Mr. Oscar Zarzo, *Policy Advisor, GIZ*

National Benefits of Climate Change Reporting

Ms. Hanna Reuter, *GIZ*

Country Cases Philippines

Ms. Sandee G. Recabar, *Planning Officer V and Chief, Implementation Oversight Division*

Q & A Session

National Benefits, Group Discussions on MRV/Monitoring, and Evaluation (M&E) System and Feedback

This session focused on the importance of the transparency regime within the context of the Paris Agreement and on the links between NDC implementation and transparency. The session also highlighted the national benefits of transparent climate reporting, which include, tracking SDGs, securing political buy-in for climate issues, provision of information for national policy formulation and improving capacities for planning and implementation through national data collection and reporting. Transparent reporting is a driving force for NDC implementation, since national governments want to continually assess progress towards achievement of goals and targets and are then able to steer implementation, as needed.

Ms. Recabar discussed the benefits of setting up a domestic M&E system. Philippines is already looking at transparency in reporting, which is driven by the following reasons – tracking progress to formulate policies, promote convergence of different plans and provision of finance. Mr. Zarzo highlighted the need for strengthening capacities of national authorities for preparation of Biennial Update Reports (BURs) and other National Communication (NC) for accurate reporting of climate relevant information to UNFCCC. Presenters identified challenges in aggregating sub-national level reporting at the national level. They discussed that the adoption of transparency frameworks strongly reflects the context of each country and an understanding of this is very crucial (for instance Japan is interested in sharing data publicly to enhance holistic society growth, while other countries share only final results internationally).

PLENARY 3:
HIGH-LEVEL PANEL ON FINANCING LOW EMISSION DEVELOPMENT AND GREEN GROWTH IN ASIA: SUCCESS STORIES

Chair

Mr. Orestes Anastasia, GGGI

Keynote Speaker

Dr. Nguyen Tuong Van, *Director General, Urban Development Agency, Ministry of Construction, Government of Vietnam*

Panel Discussion

Policy and Financing Priorities for Low Emissions Green Development in Asia's Cities

Panelists

Mr. Kinlay Dorjee, *Mayor of Thimpu, Bhutan*
Ms. Nanda Jichkar, *Mayor of Nagpur, India*

This plenary focused on successful approaches to financing green, low emissions urban development and innovative financing instruments and on policies promoting green urban development projects in Asia. Dr. Van discussed that Government of Vietnam is actively undertaking actions to promote sustainable and green urban growth. Vietnam has set criteria and guidelines for Green Urban Growth and has proposed Green Growth Action Plans for cities, which integrate climate adaptation, mitigation and green growth.

Ms. Jichkar discussed the case study of Nagpur. The city is currently implementing the smart city plan and aims to implement climate smart infrastructure. She has highlighted the work currently being done on smart energy, smart lighting, smart mobility, and smart governance. Special incentives in the form of rebate in property tax, development charges, and additional floor area for green buildings are proposed in the city development control regulations. The city has also set up a one of a kind PPP based waste water recycling system,

where sewage treated in the tertiary sewage treatment plant is sold to industries and the income generated is shared between the private party and the local government.

Mr. Dorjee highlighted green initiatives undertaken by national and sub-national authorities in Bhutan. The country is self-sustaining in terms of electricity generation and is exporting excess electricity to India. Thimphu, the capital city of Bhutan is undertaking several energy efficiency measures, promoting public transport and pedestrian paths, adopting efficient solid waste management practices and is promoting a shift from firewood to clean energy to cut down emissions from the city.

Presenters highlighted that sub-national governments in developing Asian countries recognize the need for green growth and low emission development and are pro-actively taking actions to implement strategies and actions at the local level. Success stories exist on application of innovative approaches, enabling incentives and regulatory instruments, and public private partnership models to overcome barriers and successfully implement green infrastructure and policies.

PARALLEL SESSIONS C:
TOOLS TO PLAN FOR LOW EMISSION DEVELOPMENT

C1: URBAN PLANNING FOR LOW EMISSIONS DEVELOPMENT: SUCCESS STORIES (GREEN CITIES)

Moderator

Mr. Adam Ward, *GGGI*

Country Case Study

Case 1: Vietnam – Dr. Nguyen Tuong Van, *Urban Development Agency, MOC*
Case 2: Mongolia – Ms. Zolzaya Enkhtur, *Ulaanbaatar City Environment Department*
Case 3: Vietnam – Mr. Nguyen Hong Tien, *Green Urban Transportation Development*
Case 4: Myanmar – Mr. Moe Zaw, *Assistant Director, Forest Department*
Case 5: Vietnam – Dr. Do Tu Lan, *Technical Support Unit Project*

This session facilitated discussion on urban mobility, its unique challenges in Asia, success stories and on the importance of South-South knowledge exchange between countries and participants. Dr. Van showcased the Urban Green Growth Action Plan in Vietnam. The country is undertaking various initiatives towards developing green cities – which include provision of green spaces, promoting green construction and adopting green transport. Also, it was highlighted that the sustainable transport initiatives need to be aligned in the national government's goal. 70% of urban air pollution comes from transportation activities. Mr. Tien presented various solutions for developing green transport in Vietnam – institutional improvements, resource mobilisation for green transport infrastructure investment, encouragement of environment friendly vehicles, optimisation of travel time by reasonable allocation of routes, utilisation of smart transport system, continuous generation of information for effective traffic control and so on.

Mr. Zaw discussed new initiatives for Greening Cities in Myanmar. Less than 10% of urban area is under green cover and Myanmar's deforestation rate is very high. The country has come up with an urban development plan 2040 with the objective of developing green and sustainable cities by 2040. Also, the Green Land Program has been launched with an objective to develop comfortable urban areas with enough green and public space. He further discussed that the Myanmar government has witnessed several challenges such as limited budget to implement innovative clean energy technologies and solutions and weak coordination among related organizations. Ms. Enkhtur highlighted the need for local government leadership in NDC implementation. Climate change is increasing the vulnerability of cities to heat waves, there is an observed change in the ecosystem and infrastructure may be compromised by climate change impacts. The average temperature in Ulaanbaatar city has risen by 2.6°C, which is 0.4°C higher than national

average. The city is taking action in line with Mongolia's NDC commitments. Building energy efficiency, green public buildings and deployment of electric vehicles are some such actions contributing to the achievement of NDC goals. The mitigation projects of the city are expected to reduce its GHG emissions by 6% in 2025 in comparison to the emissions in BAU scenario. The city has prioritized sectors for the implementation of climate change mitigation and adaptation projects and the corresponding investment needs are estimated to be USD 1.6 billion. The PPP mode of implementation is being tried to leverage private sector funding for the city.

Dr. Lan introduced the concept of Integrated Water Resource Management (IWRM) and presented a case study of Hatinh city. She noted that a one meter rise in sea level will affect 143 cities in 29 provinces across Vietnam. She urged cities to adopt climate resilient urban development strategies and plans. She discussed IWRM and urban development in relation to climate change.

Participants highlighted the need for integrating transport planning with larger urban planning and highlighted the importance of identifying local climate change vulnerabilities before climate change adaptation action is defined.

C2: TRACKING PROGRESS TOWARDS NDCS – TOOLS AND GUIDANCE FOR TRANSPARENCY

Facilitator

Ms. Hanna Reuter & **Mr. Oscar Zarzo,** *GIZ*

Welcome and Introduction

CMs. Hanna Reuter, *GIZ*

Input 1: *Enhanced Transparency Framework vs. MRV Framework* – **Mr. Oscar Zarzo,** *GIZ*

Country Case

Preparing for NDC Tracking – Mr. Ngoc Tran, *Ministry of Natural Resources and Environment, Government of Vietnam*
Experience from GIZ Support Activities for MRV and NDC in Vietnam – Dr. Kien Tran Mai, *GIZ*

Input 2: *Tools and Guidance for Transparency Systems:* **Ms. Derina Man,** *ICF and* **Mr. Oscar Zarzo,** *GIZ*

Group Work and Feedback to MRV Tools

This session aimed to increase an understanding of the similarities and differences between the Enhanced Transparency Framework (ETF) and the MRV framework under the UNFCCC.

Dr. Mai, discussed experiences of defining MRV frameworks for NDC implementation in Vietnam. He highlighted activities carried out in Vietnam to support NDC implementation tracking through MRV processes – technical support for NDC development and implementation, development of the MRV portal (also linking with the Climate Change and NRE database of MoNRE), effecting requisite changes in institutional arrangements and so on.

Ms. Ngoc presented the MRV system prepared in Vietnam for monitoring GHG emissions and implementation of NAMAs. The national MRV system is under development under which the roles and responsibility of various stakeholders (includes national authorised agency, line ministries, people committee of provinces/cities and participants of projects/programs) are defined.

A sectorial level MRV system involving several line ministries is planned to be implemented by 2018 with the support from state budget and international funding.

Mr. Zarzo compared the ETF and the MRV framework.. The ETF builds upon the current MRV arrangements of the UNFCCC. The countries that are meeting current MRV requirements are in a better position to implement ETF. Under the ETF the submitted GHG inventory

information would be reviewed by technical experts and NDC implementation will be tracked. The learning from MRV systems for monitoring NAMAs has proved to be valuable in defining the ETF and in collating information for international reporting.

The session stressed the need for strengthening the currently implemented MRV systems in countries in order to build a strong basis for monitoring GHG emission reductions from NDC implementation. The session also discussed GIZ's BUR template and guideline that was built on the experiences and lessons learnt from previous efforts. For more information on the BUR please refer to http://mitigationpartnership.net/information-matters.

The Clean Energy Emission Reduction (CLEER) Web tool developed by USAID was demonstrated in the session. The tool quantifies the GHG impacts of clean energy activities which can be used in the mitigation action section of BUR template. Additional information on the CLEER web tool can be found here www.CLEERtool.org.

The core message from the session was the need to have improved data collection and reporting for national GHG accounting and forecasting. Limited access to data and information has been the primary challenge in Asian countries. Institutionalization and systemization of inventory preparation is important. The participants also noted the need for knowledge sharing on best practices and for training and capacity building on ETF, progress tracking and reporting.

C3: TOOLS AND RESOURCES: LEDS AND NDC ENERGY PLANNING

Facilitator

Mr. Alexander Ochs, *Sustainable Development (SD) Strategies, LEDS GP Energy Working Group (EWG)*

Energy Toolkit 2.0: Leading Instruments and Methodologies for Sustainable Energy Planning – **Mr. Alexander Ochs,** LEDS GP EWG

Tool 1: *Renewable Energy Data Explorer (RED-E)* – **Ms. Jennifer Leisch,** *USAID*

Tool 2: *De-risking Renewable Energy Investment Framework (DREI)* – **Ms. Usha Rao,** *UNDP*

Tool 3: *Energy-efficient Street Lighting Models and Technologies* – **Mr. Nikhil Kolsepatil,** *ICLEI – Local Governments for Sustainability, South Asia &* **Mr. Antonio Espada,** *Philips Lighting*

This session focused on the energy toolkit reference guide developed by LEDS GP Energy Working Group (EWG). The guide provides information on energy tools and methodologies that are available at low or no cost to support structured NDC/LEDS/Energy planning. The Energy Toolkit currently covers 26 tools and is being updated and extended regularly. The experiences on the use of RED-E and DREI tools were also shared during the session. Mr. Ochs explained the LEDS energy toolkit 2.0 and briefed the audience on the various energy toolkits

that could be used by local governments. Some tools that could be used by local governments are as follows:

- **The Tool for Rapid assessment of City Energy (TRACE)** is a decision-support system designed to help cities quickly identify and harness EE opportunities. It focuses municipal sectors and evaluates improvement and cost-saving potential, and helps prioritize actions for EE interventions.
- **Harmonized Emissions Analysis Tool Plus (HEAT+):** It is an online GHG emissions inventory tool that also helps local governments to make informed decisions in formulating targeted climate action plans.
- **The Integrated MARKAL-EFOM System (TIMES):** It is a bottom-up optimization model generator that allows accurate energy and environmental policy analysis at the local, national or multi-regional level. This tool combines a technical engineering approach and an economic approach to represent technologies, fuels, emissions and their effect on all economic sectors.

Ms. Leisch described the RED-E tool, which is a geospatial analytical tool that enables data driven clean energy decisions including goal setting, policy making and grid integration. The tool also looks at technical and economic potential by considering real constraints. The tool also facilitates decision making process by analyzing data on the availability of resources, location and distances to transmission lines, protected areas, trade-offs between renewable energy and other land uses. The no-cost web based tool can be accessed here https://www.re-explorer.org/

Ms. Rao, described the DREI tool that assesses financial and policy instruments used to de-risk renewable energy investment to implement cost-efficient interventions. The tool was developed for utility-scale renewable energy with experiences from GEF funded projects. The features of the DREI tool were illustrated with a case study of Kazakhstan. The tool helps to analyze the cost of technologies in different scenarios, analyze critical risk factors and policy or financial instruments to overcome them and GHG emission reductions. The tool can also be used to analyze the cost of financing and de-risking instruments for unlocking investment from private sector. For more information on the DREI tool please refer to www.undp.org/DREI

The session also focused on one example of implementing energy efficiency projects, seeking to address several challenges that such projects entail and offering some solutions. Mr. Kolsepatil presented the case study of Melaka, Malaysia, where high pressure sodium lamps are being replaced by energy efficient LED street lighting. Local governments need a robust baseline to engage the private sector for financing. He stressed the need for a comprehensive approach for assessing baselines and designing energy efficiency measures. He noted the importance of holistically looking at electrical, structural and optical components in street lighting assessments. Strong multi-stakeholder involvement is key to the success of such projects which require significant vertical and horizontal collaboration in the government.

Mr. Espada presented the smart road lighting options from Philips. Local governments typically spend 70% of their budgets on electricity bills and public lighting is a significant consumer. There is a varied spectrum of technologies available for energy efficient street lighting and the financial status of cities defines the level of investment. He highlighted the elements of smart lighting management systems which include – software based workflow management and continuous status monitoring, tailored dimming and scene setting, billing based on metered data, on demand scaling infrastructure and auto fault notification through remote performance monitoring.

Several tools that can support NDC implementation in the areas of renewable energy, energy efficiency, finance and investment are available from different organizations, complemented by technical assistance and other knowledge building resources. Energy efficiency improvement has several benefits and co-benefits as illustrated by the successful case on energy efficient street lighting systems, which resulted in not only GHG emission reductions but also in other co-benefits like monetary saving, enhanced transparency of operation and increased safety, among others.

PARALLEL SESSIONS D:
LOW EMISSION DEVELOPMENT INITIATIVES WITH POTENTIAL FOR SCALE UP

D1: MAKING THE MOST OF 2050 GHG EMISSION PATHWAYS

Moderator

Mr. Richard Baron, *2050 Pathways Platform*

Welcome and Presentation of the Session

Mr. Emmanuel Guérin, *European Climate Foundation*

Introduction

Building Blocks for Mid-Century Emission Pathways: **Mr. Richard Baron,** *2050 Pathways Platform*

Group Discussion and Feedback

Addressing questions on the elaboration of 2050 emission pathways to ensure relevance to national and regional contexts

This session focused on building blocks for long-term strategies that look beyond NDCs, taking into account countries' SDGs and envisioning deep decarbonization objectives. The 2050 GHG emission pathways is a process to elaborate quantitative and qualitative back-casting projections of socio-economic development towards net zero GHG emissions (and SDGs). Mr. Guerin called on the countries to create a long-term LED strategy by 2020. It is crucial to implement time bound short-term actions to prevent dead lock of carbon emissions in the long run, he added.

Mr. Baron presented a case study from Mexico, focusing on deep decarbonization scenarios. It is important to define long-term objectives in order to realize the SDGs by 2050. He also stressed on the importance of back casting projections of socio-economic development in order to achieve net zero emissions and SDGs.

Mr. Pathak echoed the reasons for developing 2050 pathways. The mid-century pathway helps to combine multiple policy goals with climate considerations, inform key infrastructure decisions, identify technology priorities, regulatory and policy interventions and recalibrate near-term climate action. Some leading financial institutions are shifting focus from short-term climate focus projects to long-term future oriented policies, he added.

Mr. Argyriou said that the 2050 pathway platform is also supporting sub-national governments in long-term planning and prioritization of implementation. The platform is starting to work regionally in pacific islands and South East Asia to align SDGs and the long-term pathways; to design long-term pathways. More information on 2050 pathways platform is available at http://2050pathways.org

The main discussion was centered on the ways to achieve Paris Agreement goals through long-term pathways. The presenters stressed the need for thinking in a transformational way to integrate different sectors and policies. Challenges in convincing national and sub-national governments to consider long-term pathways were also discussed. Carbon neutrality is being considered at the national level and long-term pathways would be feasible and considered in the coming years.

Back-casting is an important exercise to avoid incrementalism from NDCs

– Mr. Richard Baron, 2050 Pathways Platform

D2: NATIONAL URBAN MOBILITY PROGRAMME

Facilitator

Ms. Angela Enriquez, *WRI*

Basic Principles and Elements of NUMP

Dr. Christian Mettke, *GIZ*

Country Case Study

Brazil: Mr. David Escalante, *WRI*
United Kingdom: Mr. Robin Kaenzig, *Integrated Transport Planning*

Group Activity, Discussion

This session focused on enhancing capabilities of decision makers to implement sub-national urban mobility projects within the national policy and regulatory framework. Dr. Mettke indicated that the national governments have urban mobility goals but require support for design and implementation of projects. To achieve the 2˚C target of Paris Agreement, it is imperative to decarbonise the transport sector. National governments should provide policy, financing, technical and regulatory guidance while the local level implements policies, infrastructure, projects and mobilises local funding.

Mr. Kaenzig discussed the urban mobility case study of United Kingdom. He explained the role of the central and local governments in achieving ambitious GHG emission reduction targets; the transport sector has a substantive role to play in the proposed reductions.

In UK, the national government sets the policy framework, provides funding and defines strategy. Local governments are also given the flexibility to define their role and manage their own funds. This allows local governments to craft their own local plans and set their own targets. He added that the national government is also providing tools and resources to support local authorities. Some examples are:

Webtag: The tool provides information on the role of transport modelling and appraisal in terms of cost benefit, economic, environment, social and other impacts.

Speed limit appraisal tool: Helps to assess the costs and benefits (including casualties and other traffic effects) of local speed limit schemes.

Concessionary reimbursement tool: Assists travel concession authorities to calculate bus travel reimbursement (to pay to contractors) for carrying concession permit holders for free.

Mr. Escalante presented the National Urban Mobility Plan of Brazil. Cities with more than 20,000 inhabitants are obligated to implement the mobility plan and the federal funds would be stopped to those cities that do not oblige. Ministry of cities had developed a guideline to help cities implement mobility plans. 5% of the Brazilian cities, home to 23% of national population, have implemented city level mobility plans. He added that it has been challenging for smaller municipalities to prepare urban mobility plans due to lack of in-house technical capacity and high costs of external technical resources. As part of the 'Mass Transit Federal Financing Program' it is aimed to

promote sustainable urban mobility based on mass transit projects for cities with more than 500,000 population. The program offers a 50% grant each for urban studies and infrastructure development. To participate in the program, Brazilian cities must have an urban mobility plan, a comprehensive feasibility study and a viable public private partnership model.

It was concluded that the national government's support is crucial for implementing local action mobility plans. The national government should provide strategic policy guidance, regulation, institutional framework recommendations and access to finance. It is important to understand the challenges that are faced at the local level to transform the transport sector.

D3: ADAPTATION IN THE MEKONG DELTA – SHAPING THE ROAD FROM PARIS TO IMPLEMENTATION IN VIETNAM

Chair

Dr. Pham Hoang Mai, DSENRE, *MPI, Government of Vietnam & Dr. Christian Henckes, GIZ*

Facilitator

Mr. Benjamin Hodick, *GIZ*

Panel Discussion

NDC tasks Implementation in the Mekong Delta
Dr. Pham Hoang Mai, *MPI, Government of Vietnam*

Climate services: What is their potential for sectoral planning?
Dr. Dinh Thai Hung, Science, *Technology and International Cooperation Department - National Hydro-Meteorological Service of Vietnam*
Dr. Pierre Fritzsche, *German Meteorological Service*

Linking evidence-based planning with decision making: Coastal Protection Plan and its Linkage to Climate Services
Dr. Do Duc Dung, *Southern Institute for Water Resources and Planning*
Dr. Stefan A. *Groenewold, GIZ*

Other Panelists
Mr. Dao Tuyet Nga, *Department of Technology and International Cooperation, Vietnam Disaster Management Authority, Government of Vietnam*
Dr. Christian Henckes, *GIZ*

This session focused on the various aspects of implementing adaptation measures in the Mekong Delta, with a specific focus on the Climate Change Services of the National Hydro-Meteorological Service (NHMS) and their role in coastal protection planning. The linkage between these actions and Vietnam's NDC goals was also explained.

Dr. Mai presented the governance structure for adaptation actions in the Mekong Delta. The demand and availability of financial sources for implementing climate change projects for the period between 2016-20 and 2012-25 were presented. 3.5% of the projects proposed in 2016-20 period are considered very high priority, but there is a shortfall of 86.5% in finance to implement them. Lack of mechanisms to attract private investment remains a big challenge. Climate change is an unavoidable challenge that also provides opportunities. The 'Integrated Master Plan on Sustainable Development of Mekong Delta' will form the basis for sectorial and provincial planning. Zoning of agriculture, developing green industries, deployment of renewable energy and developing the tourism industry without harming the natural ecosystems are some of the climate change adaptation and mitigation measures considered in the Mekong Delta.

Dr. Hung presented the processes and challenges of National Hydro-Meteorological Service (NHMS) to provide 'Climate Services'[1] Vietnam which includes monitoring and recording parameters related to the air and water

1. Climate Services provide climate information in a way that assists decision making by individuals and organizations.

environment, and monitoring other weather parameters to provide information for disaster prevention and preparedness. He also detailed the data collection, warning and forecasting systems adopted in Vietnam. The climate data is analyzed and interpreted to find out the type of natural disaster and the vulnerable sector. The data is also downscaled to find which province is likely to be affected and the climate information is disseminated to the end users to prepare for the weather event. He also discussed the steps to be taken to enhance the climate services in Vietnam which are, analyzing climate service value chain (structure and processes), developing better knowledge of the sector specific climate information needs and analyzing the discrepancies of supply and demand of climate information.

Dr. Groenewold discussed the four key elements of coastal protection systems which include the foreshore with mudflats, mangrove forest belt, sea-dyke for flood protection and hinterland behind the sea-dyke. He also discussed in detail about the Coastal Protection Plan (CPP) of Mekong Delta developed using Web-Map. The Coastal Protection Web-Map is developed based on a number of surveys conducted from 2011-2016 and it offers technical assessment of integrated coastal protection, divides Mekong Delta into several coastal protection segments and provides information on the urgently needed coastal protection measures. The map also has videos, pictures and other information of the coast for the last 100 years; it also provides information on land use patterns, erosion rates, state of dyke system and forests. Thus, the CPP is offering knowledge for evidence based decisions and helps in better preparedness for challenges. The session also discussed how climate services can improve the planning of coastal protection. For instance, climate services can help in long-term planning (100 years lifespan), strategic planning of coastal protection infrastructures (second sea-dyke lines, road, breakwater, port development, etc.).

PLENARY 4:
NDC FINANCE: OPPORTUNITIES, CHALLENGES AND THE PATH FORWARD

Facilitator

Ms. Alexia Kelly, *LEDS GP Finance Working Group and*
Dr. Pham Hoang Mai, *Director General, DSENRE, MPI, Government of Vietnam*

Country Case Study: Vietnam's Process and Tools for Climate Finance Readiness

Mr. Jan Pavlik, *CF Ready*

Policies for Energy Sector in Vietnam

Mr. Trinh Quoc Vu, *Deputy Director, Department of Energy Efficiency and Sustainable Development, Vietnam Ministry of Industry and Trade, Government of Vietnam*

Opportunities for Private Investors in RE&EE Projects

Mr. Gavin Smith, *Director, Dragon Capital Clean Development*

Overview of Energy Finance Track at the Conference

Developing Country Participants from Each Session OR WG Leads

Energy Finance Community of Practice & NDC Finance Fellows

Ms. Alexia Kelly, *Electric Capital Management*

Identification of Priorities for 2018-2019

Ms. Alexia Kelly, *Electric Capital Management*

Group Discussion

Barriers in Energy Scaling: Policy and Regulatory and Finance.

This plenary focused on the launch of two new CoPs namely Clean Energy Finance and GRE. The LEDS GP membership presented key challenges and priorities for 2018 engagements. Ms. Kelly put forward that transitioning to low-emission development actually opens up a lot of opportunities for investment. She also noted that private sector is looking forward to be involved in LEDS as they are not only concerned about profit but also to create a positive impact. "Attracting the private sector to finance NDCs requires returns that are risk adjusted," she said.

Mr. Pavlik talked about the development of Vietnam's GCF profile. He provided insights on the key criteria of GCF proposals which include – direct impact of mitigation and adaptation measures, potential for paradigm shift and sustainable development and proposals in line with national objectives that are economical sound. GCF generally finances large investment projects and it is to be noted that mitigation projects funded by GCF are co-financed by at least 50% from other sources.

The knowledge on GCF in the private sector is low. He recommended the following measures for engaging with the private sector in developing GCF proposals – conduct trainings, start information campaigns on GCF proposal, identify projects that are in line with company priorities and at the same time meeting GCF criteria, merging small projects into a large GCF proposal and work closely with industry associations and financial institutions.

Signifying the importance of policy for the energy sector, Mr. Vu shared policy development efforts that Vietnam is making in terms of renewable energy. He mentioned several policies that are in place to promote clean energy which include the law on energy efficiency and conservation, Vietnam Green Growth Strategy, and the National Renewable Energy Development Strategy. To promote renewable energy, Vietnam is considering the following measures - Direct power purchase agreements, revising FiT mechanisms for wind projects, solar net metering and reverse auction for renewable energy.

CLOSING PLENARY:
LEDS GP, ALP & WORKING GROUPS

Facilitator

Mr. Emani Kumar, *Lead Director, ALP*

Outcomes of Working Group Sessions at Asia LEDS Forum 2017

LEDS GP Transport Working Group – Mr. Angela Enriquez, *WRI*
LEDS GP Energy Working Group – Mr. Alexander Ochs, *SD Strategies*
LEDS GP Finance Working Group – Ms. Alexia Kelly, *Electric Capital Management*
LEDS GP Sub-national Integration Working Group, Mr. Scott Muller

Sharing Opportunities and ICLEI's Experiences in Sub-national Actions for NDC implementation

Mr. Gino Van Begin, *Secretary General, ICLEI - Local Governments for Sustainability*

Response to Working Group Outcomes by LEDS GP

Mr. Ron Benioff, *Director, LEDS GP*

Response to Working Group Outcomes by ALP

Ms. Soumya Chaturvedula, *ALP*

Concluding Remarks and Way Forward

Dr. Pham Hoang Mai, *Director General, DSENRE, MPI, Vietnam*
Mr. Emani Kumar, *Asia LEDS Partnership*

The closing plenary focused on the key highlights of the Asia LEDS Forum 2017 and discussed the way forward for the ALP/LEDS GP to support NDC implementation. The four working groups of the LEDS GP focusing on energy, transport, finance, and sub-national integration, shared their main takeaways.

LEDS GP Energy Working Group
Mr. Ochs presented the needs identified during the sessions and the discussions on analysis of barriers and enablers of RE deployment to achieve NDCs. There is a need for training on energy tools, case studies on using best tools, comprehensive planning and analysis including technical assessments, socio-economic modelling, financial analysis and enabling policies.

The CoP on 'Renewable Energy Grid Integration' launched during the ALP forum would tentatively cover the following topics:

- Power sector planning for RE development at all levels
- Competitive procurement/auctions
- Analysis of clean energy benefits
- Energy storage for variable RE
- Data and analytical tools such as RE resource data and grid integration studies
- Policy, regulations and market design
- Grid management, operations and infrastructure investment

In 2018, virtual sessions and in-person workshops would be organized to enable peer to peer learning on the priority areas chosen by CoP participants. Technical assistances on energy topics would be provided by Energy Working Group.

LEDS GP Transport Working Group
Ms. Enriquez emphasized the need for a framework to coordinate national and sub-national mobility efforts. "Urban transport is a priority in the region and there is strong interest in improved technologies for transport," she noted.

Peer to peer knowledge sharing between countries would be enabled through the transport CoP. Participants have requested support to review urban mobility planning at the national and sub-national level, share resource

materials and provide capacity building support. The requirements and priorities would feed into the transport working group activities in 2018.

LEDS GP Finance Working Group

There was a strong interest to explore blended capital and green banking according to Ms. Kelly. Special requests came from participants for technical assistance to overcome barriers to scaling RE investment and deployment; policy and regulatory enabling environmental reforms. She echoed the need to accelerate private sector investment as well as risk mitigation instruments that will allow suitable financing mechanisms to implement the NDCs.

The CoP on 'NDC Clean Energy Finance' launched during the ALP forum would tentatively cover the following topics:

- Policies and Programs to Create Strong Investment Incentives at the National and Sub-national Levels
- Specific Investment and Risk Mitigation Instruments
- Private sector RE purchasing strategies
- Market-Specific NDC Investment Readiness Analysis

LEDS GP Sub-national Integration Working Group

Mr. Muller cited, 'The emissions per capita are shooting up and there is a lot happening at the local level' and called for more coordination and collaboration among different actors in order to redirect trajectories of GHG emissions.

Some of the key takeaways for SNI WG are:

- Political leadership and stakeholder participation are both critical characteristics in most of the steps of the Climate Policy and Action Pathway.
- Associations of sub-national governments can be instrumental in rapidly scaling and raising national ambitions.

SNI WG would provide long-term technical assistance to countries and strengthen the SNI CoP for effective multi-level governance, national and sub-national integration to achieve NDCs. Also, it would disseminate lessons learned on Multi-Level Governance (MLG) climate actions via global CoPs.

Following this, country representatives provided feedback on their LEDS priority areas in order to further shape the work plans of the ALP and LEDS GP.

Mr. Begin indicated the recently concluded COP23 in Bonn served as an impetus to show that there is no stopping the Paris Agreement. He also recognized the immense potential of local governments working hand in hand with the national government to create more ambitious targets. At the closing ceremony, Mr. Benioff expressed hope that the network can 'interact in a sustained way that adds value to each one's program.

ALP through the energy, transport, SNI and finance CoPs would create interactive networks on the demand driven topics, enable peer to peer learning through virtual sessions and in-country workshops. ALP would also provide continuous access to tools and resources, offer support to early mover countries, render technical assistance and develop knowledge material.

COMMUNITIES OF PRACTICE

The The Asia LEDS Partnership will continue to offer support to its member countries in the priority areas identified at the ALP Forum 2017. The two CoPs on Clean Energy Finance and GRE along with the existing CoPs on Multilevel Governance and Clean Transport will expand activities to continue to cater to the needs of countries to advance LEDS.

The CoPs are designed to be demand driven to meet members' needs and will offer support and solutions to early movers as needs emerge. Each CoP is envisaged to be a fluid transnational and regional communities of practitioners (broadly formalized under the LEDS framework) to learn from each other and provide expertize and inputs to interested country governments. The CoP will offer advice, trainings, and inputs on priority need basis to interested national/regional governments for joint learning.

- **Clean Mobility Community of Practice:** Decarbonizing transport sector which contributes to 23% of global emissions is crucial to achieve NDC targets. The CoP launched by LEDS GP Transport working group and ALP will facilitate peer learning and help countries in, 'Moving towards clean mobility by strengthening the operational and energy efficiency of public transport policies and systems'.

- **Clean Energy Finance Community of Practice:** Fund mobilization is identified as a key factor to scale up RE. The participant countries were keen to know more about clean energy finance. To cater to their specific needs the finance CoP was launched. The CoP would provide learning and technical collaboration on two broad categories namely, lowering the cost and risk of capital and attracting private finance through smart policy and enabling environments.

- **Grid Scale Renewable Energy Community of Practice (GRE CoP):** Engaging large scale renewable energy deployment is central to achieving the NDC and LEDS targets of countries. This calls for the need of grid scale renewable integration. The interactive network launched by ALP and Energy Working Group to enable the peer learning has representation from nine Asian countries. The GRE CoP would focus on the following topics that are selected based on the priorities of CoP members,
  - Strategic energy planning – to introduce building blocks of energy planning to achieve large scale RE deployment
  - Smart Incentives and Enabling Environment for Renewable Energy Development
  - RE grid integration - focus on providing a basic understanding of how grids operate, and the challenges and solutions that come with integrating high levels of renewables sources to the grid.

- **Multi-level Governance (MLG) Community of Practice:** The relationship between the different levels of authority in a country is critical to shaping the global capacity to govern climate change. The countries at the forum strongly reflected the need for multi-level governance which is the foundation for building a common architecture for NDC implementation. The MLG CoP aims to provide learning and technical collaboration on effective multi-level governance and national, sub-national integration to achieve NDCs.

  Capacity building on selected topics will also be provided through the development of resource materials, offering remote technical assistance, deep dive country support and virtual sessions. The learning and experiences from these activities will be widely disseminated through various ALP communication channels for the benefit of the ALP members.

COUNTRY PRIORITIES

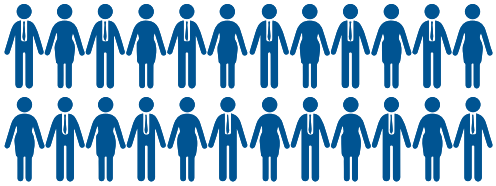
Country level group discussions were held. As a group, representatives from individual countries identified priority topics for learning and technical support and to inform ongoing ALP and LEDS GP activities.

Countries	Priority topics on specific thematic areas for learning and technical support
Indonesia	
Finance	■ Policies and programs to create strong investment incentives at national and sub-national levels ■ Specific investment and risk mitigation instruments
Sub-National Integration	■ Guidelines and capacity building for sub-national climate policies and actions (e.g. agenda setting, GHG MRV, mitigation options analysis, dissemination through domestic networks) ■ Joint national and sub-national leds and ndc planning processes (with linkage to national planning, inter-sectoral collaboration – such as urban and rural linkages)
Transport	■ Identifying priorities for coordinated urban mobility planning at the national and sub-national level ■ Technologies and business models for electric mobility solutions
Grid Scale Renewable Energy	■ Policies, regulations, and market design ■ Power sector planning for renewable energy development at all levels
Other Priority Areas	■ Capacity building for reducing CO_2 emissions from industrial activities
Pacific Islands	
Finance	■ Project pipeline development (investment ready projects) and support ■ Policies and programs to create strong investment incentives at national and sub-national levels
Sub-National Integration	■ Guidelines and capacity building for sub-national climate policies and actions (e.g. Agenda setting, GHG MRV, mitigation options analysis, dissemination through domestic networks) ■ Regional peer learning and training workshops
Transport	■ Identifying priorities for coordinated urban mobility planning at the national and sub-national level ■ Technologies and business models for electric mobility solutions
Grid Scale Renewable Energy	■ Power sector planning for renewable energy development at all levels ■ Data and analytical tools
Cambodia	
Finance	■ Project pipeline development (investment ready projects) and support ■ Specific investment and risk mitigation instruments
Sub-National Integration	■ Guidelines and capacity building for subnational climate policies and actions (e.g. Agenda setting, GHG MRV, mitigation options analysis, dissemination through domestic networks) ■ Joint national and sub-national LEDS and NDC planning processes (with linkage to national planning, inter-sectoral collaboration – such as urban and rural linkages)
Transport	■ Financing for improved transportation technologies (e.g. Unlocking private capital, concessions, subsidies) ■ Technologies and business models for electric mobility solutions
Grid Scale Renewable Energy	■ Power sector planning for renewable energy development at all levels ■ Grid management, operations, and infrastructure investment

Countries	Priority topics on specific thematic areas for learning and technical support
Nepal	
Finance	▪ Policies and programs to create strong investment incentives at national and sub-national levels ▪ Private sector re purchasing strategies
Sub-National Integration	▪ Joint national and sub-national LEDS and NDC planning processes (with linkage to national planning, inter-sectoral collaboration – such as urban and rural linkages) ▪ Guidelines and capacity building for sub-national climate policies and actions (e.g. Agenda setting, GHG MRV, mitigation options analysis, dissemination through domestic networks)
Transport	▪ Identifying priorities for coordinated urban mobility planning at the national and sub-national level ▪ Technologies and business models for electric mobility solutions
Grid Scale Renewable Energy	▪ Energy storage for variable renewable energy ▪ Analysis of clean energy benefits
Other Priority Areas	▪ Waste management, solar electrification for municipalities
Bhutan	
Finance	▪ Specific investment and risk mitigation instruments ▪ Market specific NDC investment readiness analysis
Sub-National Integration	▪ Diagnosing multi-level governance coordination and capacity challenges ▪ Guidelines and capacity building for subnational climate policies and actions (e.g. Agenda setting, GHG MRV, mitigation options analysis, dissemination through domestic networks)
Transport	▪ Financing for improved transportation technologies (e.g. Unlocking private capital, concessions, subsidies ▪ Technologies and business models for electric mobility solutions
Grid Scale Renewable Energy	▪ Energy storage for variable renewable energy ▪ Analysis of clean energy benefits
Laos	
Finance	▪ Policies and programs to create strong investment incentives at national and sub-national levels ▪ Specific investment and risk mitigation instruments
Sub-National Integration	▪ Diagnosing multi-level governance coordination and capacity challenges ▪ Joint national and sub-national LEDS and NDC planning processes (with linkage to national planning, inter-sectoral collaboration – such as urban and rural linkages)
Transport	▪ Identifying priorities for coordinated urban mobility planning at the national and sub-national level ▪ Technologies and business models for electric mobility solutions
Grid Scale Renewable Energy	▪ Data and analytical tools ▪ Power sector planning for renewable energy development at all levels
Malaysia	
Finance	▪ Project pipeline development (investment ready projects) and support ▪ Market specific NDC investment readiness analysis
Sub-National Integration	▪ Diagnosing multi-level governance coordination and capacity challenges ▪ Joint national and sub-national LEDS and NDC planning processes (with linkage to national planning, inter-sectoral collaboration – such as urban and rural linkages)
Transport	▪ Identifying priorities for coordinated urban mobility planning at the national and sub-national level ▪ Technologies and business models for electric mobility solutions
Grid Scale Renewable Energy	▪ Grid management, operations, and infrastructure investment ▪ Policies, regulations, and market design

Countries	Priority topics on specific thematic areas for learning and technical support
India	
Finance	▪ Policies and programs to create strong investment incentives at national and sub-national levels ▪ Private sector re purchasing strategies
Sub-National Integration	▪ Joint national and sub-national LEDS and NDC planning processes (with linkage to national planning, inter-sectoral collaboration – such as urban and rural linkages) ▪ Diagnosing multi-level governance coordination and capacity challenges
Transport	▪ Technologies and business models for electric mobility solutions ▪ Financing for improved transportation technologies (e.g. Unlocking private capital, concessions, subsidies)
Grid Scale Renewable Energy	▪ Energy storage for variable renewable energy ▪ Power sector planning for renewable energy development at all levels
Myanmar	
Finance	▪ Policies and programs to create strong investment incentives at national and sub-national levels ▪ Specific investment and risk mitigation instruments
Transport	▪ Technologies and business models for electric mobility solutions ▪ Financing for improved transportation technologies (e.g. Unlocking private capital, concessions, subsidies)
Grid Scale Renewable Energy	▪ Policies, regulations, and market design ▪ Power sector planning for renewable energy development at all levels
Sri Lanka	
Finance	▪ Policies and programs to create strong investment incentives at national and sub-national levels ▪ Private sector RE purchasing strategies
Sub-National Integration	▪ Diagnosing multi-level governance coordination and capacity challenges ▪ Guidelines and capacity building for sub-national climate policies and actions (e.g. Agenda setting, GHG MRV, mitigation options analysis, dissemination through domestic networks)
Transport	▪ Identifying priorities for coordinated urban mobility planning at the national and sub-national level ▪ Technologies and business models for electric mobility solutions
Grid Scale Renewable Energy	▪ Data and analytical tools ▪ Competitive procurement/auctions
Bangladesh	
Finance	▪ Specific investment and risk mitigation instruments ▪ Private sector RE purchasing strategies
Sub-National Integration	▪ Diagnosing multi-level governance coordination and capacity challenges ▪ Joint national and sub-national LEDS and NDC planning processes (with linkage to national planning, inter-sectoral collaboration – such as urban and rural linkages)
Transport	▪ Identifying priorities for coordinated urban mobility planning at the national and sub-national level ▪ Financing for improved transportation technologies (e.g. unlocking private capital, concessions, subsidies)
Grid Scale Renewable Energy	▪ Power sector planning for renewable energy development at all levels ▪ Data and analytical tools
Other Priority Areas	▪ Case study on smart municipalities, smart cities ▪ Research on Internet of Thing (IOT), cyber security for energy sector

ASIA LEDS FORUM 2017 IN NUMBERS



239
Participants

Australia | Bangladesh | Bhutan | Cambodia | China | Czech Republic | Germany | India
Indonesia | Japan | Lao PDR | Malaysia | Mongolia | Myanmar | Nepal | Pakistan | Philippines
South Korea | Sri Lanka | Taiwan | Thailand | United Kingdom | United States | Vietnam

EVENT EVALUATION RESULTS

79%
of respondents felt that they had suitable opportunities to share their experiences on NDCs/LEDS action from their respective countries

72%
of respondents felt that they learned of innovative LEDS and green growth practices and approaches

39%
of respondents felt they acquired tangible skills on tools to support transparency in national reporting to UNFCCC/LEDs oriented transport & energy planning / planning for green growth in cities/private sector and domestic financial institutions involvement for RE and EE

79%
of respondents plan to apply learning from this event to financing LEDS related activities in their respective organization/country

67%
of respondents reported having a better understanding of ALP/LEDS GP activities and service offerings

74%
of respondents reported that they have fostered new connections or partnerships that will enhance LEDS related activities

65%
of respondents noted that they have improved understanding of ways in which they can engage with the ALP and LEDS GP

58%
felt confident that ALP activities will have an impact in their country/ organization

70%
Participants found all the sessions relevant and useful


Presentations & Other Materials


Photos & Highlights


Videos

http://forum2017.asialeds.org/

SPEAKER PROFILES

Dr. Pham Hoang Mai

Director General, Ministry of Planning and Investment (MPI), Vietnam

Dr. Mai is the technical team leader of Vietnam Delegation to the Earth Sustainable Summit Rio+20 and the formulation of Vietnam National Green Growth Strategy. He had experience in international cooperation for development strategies before involving in strategic green activities. He got his Ph.D. degree in New Zealand focusing on exploiting external resources for Vietnam's development. He is dedicated to green finance as the team leader of Climate Finance Task Force (CFTF) formulated by Ministry of Planning and Investment in 2012 and Co-chair for Asia LEDS Partnership in 2014, 2015 and 2016. He is also part of the Vietnamese delegation's efforts to reach Paris Agreement at COP21. Currently, he serves as the Green Climate Fund NDA focal point.

Mr. Ron Benioff

Director of Multilateral Programs, National Renewable Energy Laboratory (NREL)

Mr. Benioff serves as the Co-Director of the LEDS Global Partnership where he coordinates activities of the partnership across the regional platforms, topical working groups, and more than 300 member institutions.

He also directs the Clean Energy Solutions Center, providing clean energy policy resources, expert advice, and training to countries around the world and manages NREL's work in support of multiple Clean Energy Ministerial initiatives and for the Climate Technology Center and Network. In addition, Mr. Benioff also manages NREL's work to deliver energy services for the UNFCCC Climate Technology Center and Network. He had served as the Director of Green Growth Best Practices Initiative, where he led the engagement of over 75 authors around the world in evaluation of effective practices with green growth analysis, planning, and implementation. Prior to joining NREL in 1997, he worked at the U.S. Environmental Protection Agency for 11 years on climate change and waste management issues.

Mr. Chanthearith OU

Deputy Director, Deputy Director, Department of Science and Technology of General Secretariat of National Council for Sustainable, Development, Ministry of Environment, Cambodia

Mr. Chanthearith is a Deputy Director, Department Science and Technology of General Secretariat of National Council for Sustainable Development, Ministry of Environment, Cambodia. He has been working for Climate Change Department since late 2009 until 2015. He is also a Program Manager for Strategic Program on Climate Resilience (SPCR) Mainstreaming Climate Resilience into Development Planning. He has completed his master's degree in business management at International Adventist Institute of Advance Studies (IAIAS) in Philippines.

SPEAKER PROFILES

Mr. Syamphone Sengchandala

Deputy Director General, Department of Climate Change, Ministry of Natural Resources and Environment

Mr. Sengchandala serves as a National Focal Point for the United Nations Framework Convention on Climate Change (UNFCCC) and Designated National Authority (DNA) or National Focal Point for the Green Climate Fund (GCF). He has past experience of working with Science Technology and Environment Organization from 1996-2011 and Ministry of Natural Resource and Environment from 2011-2017. He has contributed in to the preparation of the National Adaptation Programmes of Action (NAPA) - 2009; National Strategy and Action Plan on Climate Change (2010); National Communication on Climate Change (1st [2000] 2nd [2013] and 3rd [2019]); Intended National Determined Contribution (INDC) 2015; Also was involved in preparing draft Climate Change law, which was scheduled to be submitted to National Assembly for approval in April 2018.

Mr. Sujith Rathnayake

Assistant Director, Climate Change Secretariat, Ministry of Mahaweli Development and Environment, Sri Lanka

Mr. Rathnayake looks after the coordination of NDC implementation at national and sub-national levels. Also, he is involved in the implementation of UNEP/GEF-FAO projects on Agro-biodiversity for Adaptation to Climate Change and Biodiversity for Food and Nutrition. He has experience in working with National Focal Points to the Convention on Biological Diversity and United Nations Convention to Combat Desertification as well. Further, he has served as the National GEF Programme Coordinator during 2015-2016. His academic merits encompasses M.Sc. in forestry and geoinfoamtics. He completed his B.Sc. special degree in agriculture from the University of Peradeniya, Sri Lanka. Mr. Rathnayake is a United Nation University fellow of Biodiversity Conservation in Ghent University, Belgium and a fellow of an International Visitor Leadership Programme (ILVP) for Environment Protection and Biodiversity Conservation, affiliated to the United States State Department, USA.

Ms. Sandee G. Recabar

Planning Officer V and Chief, Implementation Oversight Division, Climate Change Office, Climate Change Commission – Philippines

Ms. Recabar has over 14 years of experience in climate change and is currently the Chief of the Implementation Oversight Division and concurrent Acting Chief of the Policy Research and Development Division of the Climate Change Office, Climate Change Commission. She heads the team working on climate reports (NDC, NCs, BURs and NAP) and spearheads the domestic MRV system development. Her team is currently updating the National Climate Change Action Plan and serves as the help desk for monitoring climate change budget allocation of national and sub-national governments. Ms. Recabar is part of the technical team of the CCC responsible for the preparation of Philippine positions in the negotiations. She handles several foreign assisted projects and conducts capacity building initiatives on issues such as GHGI, climate action plans, climate policy and carbon markets. She started working for the Commission in 2011 and served as its lead technical focal for climate change mitigation issues.

SPEAKER PROFILES

Mr. Emani Kumar

Deputy Secretary General, ICLEI

Mr. Kumar is the Deputy Secretary General of ICLEI since 2013 and also the Executive Director of ICLEI South Asia since its founding in 2005. With degrees in environmental management, environmental planning and civil engineering, he has more than 20 years of professional experience on issues related to climate change policy and planning, local governance, renewable energy and energy efficiency, social accountability, systems management and auditing.

Previously, Mr. Kumar has worked with the Confederation of Indian Industry (CII) and also with the National Institute of Urban Affairs (NIUA). Apart from overseeing the organization's strategic development, he also coordinates various multi-year and small scale projects and research work supported by various donors and UN agencies; state and national governments of India and research organizations. He also liaises for various projects like Capacity Building for Low Carbon and Climate Resilient City Development in India (CapaCITIES), Promotion of Inclusive, Sustainable growth & diversity to Strengthen Local Governments (PROMISE to Strengthen Local Governments), Secretariat Services for the Asia Low Emission Development Strategies Partnership (AsiaLEDS), Integrated Rural Urban Water Management for Climate based Adaptations in Indian Cities (IAdapt) and more.

In his role as ICLEI Deputy Secretary General, Mr. Kumar works with all the offices in Asia-Pacific, to ensure cohesion in implementation of ICLEI's agendas and spearhead advocacy activities in the region; he also supports the Secretary General in representing ICLEI at all international fora.

Ms. Angela Enriquez

Research Analyst, World Resources Institute

Ms. Enriquez is a Researcher and Program Coordinator for the Energy and Climate team at WRI Ross Center for Sustainable Cities. She is currently leading the work focusing on transport and climate such as managing the LEDS GP Transport Working Group. Prior to joining WRI, Ms. Enriquez worked as a Transportation Planner in the public and private sectors. She holds a joint M.Sc. in regional development planning from Technische Universität Dortmund, in Germany, and the University of the Philippines, Diliman.

Ms. Elena Scherer

Advisor, Transport and Climate Change, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)

Ms. Scherer is a Technical Advisor and Project Component Coordinator for the partner country Vietnam in the global GIZ project "Advancing Transport Climate Strategies". After completing her master's degree in urban planning at the Technical University of Berlin (Germany) in 2015, she has worked for GIZ on sustainable urban transport development in Brazil.

SPEAKER PROFILES

Ms. Areej Riaz

Country Program Manager, Climate and Development Knowledge Network

Ms. Riaz is a climate change professional with over 9 years of international experience in climate change, environment and development. She currently consults for various organizations including PricewaterhouseCoopers (UK), SouthSouthNorth (South Africa), Federal Institute for Geosciences and Natural Resources (Germany) and LEAD Pakistan.

With a master's degree in Applied Carbon Management from University of Glasgow, UK, she supports country governments in Asia design and deliver climate compatible development. Two such examples are the Ministries of Environment and Ministries of Finance in Bangladesh and Nepal.

Mr. Vu Hai Luu

Official Environmental Department, Vietnam Ministry of Transport

Mr. Luu works in the Environmental Department for the Vietnam Ministry of Transport. He previously worked on vehicle technology, quality control and registration in the public and private sector. Mr. Luu has a degree in mechanical engineering from the University of Communication & Transport of Vietnam.

Mr. Rob Youngs

Program Director, Coalition for Green Capital (CGC)

Mr. Youngs is the Program Director at CGC, an International Green Finance Consultancy, overseeing Green Bank development opportunities in Latin America and Asia. He is the team lead on the global Green Bank Network, an international platform launched at COP21 for sharing Green Bank best practices. He also supports research on a wide range of topics including electric vehicles, cap & trade policy and carbon finance. Before joining CGC, he worked on research for the Connecticut Green Bank, and spent four years working on technical standards for carbon finance in California and Mexico. Mr. Youngs holds a BA from Willamette University in environmental science and MEM from Yale University focusing on Energy Economics & Policy.

Dr. Jennifer Leisch

Climate and Energy Manager, USAID

Dr. Leisch is a Climate Change and Clean Energy Program Manager with the U.S. Agency for International Development's Office of Global Climate Change. She leads USAID's Greening the Grid program, providing tools, best practices, and pilots approaches to bringing grid-connected renewable energy to scale. Prior to USAID, Dr. Leisch worked in renewable energy technology R&D, focused on solar photovoltaics and fuel cells. She holds a Ph.D. in applied chemistry and materials science from the Colorado School of Mines.

SPEAKER PROFILES

Ms. Alexia Kelly

CEO, Electric Capital Management

Ms. Kelly works across government, philanthropy, and the private sector on clean energy deployment and climate change mitigation finance, strategy, and policy. She is the CEO of Electric Capital Management, a climate finance and advisory firm and the CEO of the Microgrid Investment Accelerator, a first-of- its-kind financing facility that seeks to mobilize private sector investment into clean energy and energy access microgrids. Ms. Kelly holds a B.A. in Planning, Public Policy and Management, a Master of Community and Regional Planning and a Master of Public Administration from the University of Oregon.

Mr. Shah Zulfiqar Haider

General Manager, Pabna Rural Electric Cooperative of Bangladesh

Mr. Haider, PEng, CEA, MBA is a Registered Professional Engineer (PEng) and Certified Energy Auditor. He was the first Director (Energy Efficiency & Conservation) of Sustainable & Renewable Energy Development Authority, Government of Bangladesh. Presently, he serves as the General Manager (CEO) of an Electric Utility under the Bangladesh Rural Electrification Board (BREB). He has 35 years of professional experience in energy sector and Military Engineering Services, with international publications on Energy, TQM, and Sustainable Energy.

Mr. Trinh Quoc Vu

Director General, Ministry of Industry and Trade (MOIT), Vietnam

Mr. Vu is leading the Energy Efficiency and Conservation Office (EECO) of the MOIT to support the Government Steering Committee of Vietnam National Target Program for Energy Efficiency (VNEEP) to promote energy efficiency and conservation (EE&C) in the industrial sector as well as coordinate with other ministries, relevant agencies and organizations to implement specific EE&C tasks. He holds the background in power system engineering and his Master of Industrial Engineering and Management from Asian Institute of Technology in Thailand (AIT). He is in charge of implementing ODA Low Carbon and energy efficiency projects under General Department of Energy (GDE) and he has experience in enhancing bilateral cooperation in energy sector in Vietnam.

Ms. Akiko Urakami

Lead Advisor, JICA Vietnam Office

Since October 2016, Ms. Urakami has served as the Lead Advisor for climate change at the JICA Vietnam Office. She is in charge of managing projects for climate change and disaster prevention in Vietnam. Previously, she worked in Japan's Ministry of the Environment for five years, facilitating capacity development for climate change issues in the Asia-Pacific as well as negotiating several UNFCCC agenda items.

SPEAKER PROFILES

Dr. Phong Tran

Technical Lead, Institute for Social and Environmental Transition, Vietnam

Dr. Tran has more than 15 years working experience as a practitioner and researcher on urban climate resilience, and disaster risk reduction in developing countries in the Asia Pacific, particularly in Vietnam. With ISET, he leads the urban programs that focus on urban climate resilience, urban disaster risk reduction, and housing. Before this, Dr. Tran worked as a researcher for the United Nations Office for Disaster Risk Reduction (UNISDR), and the United Nations Centre for Regional Development (UNCRD). He obtained his doctorate degree in environmental studies from Kyoto University, Japan and his master's degree in urban and regional planning from University of Hawaii, USA.

Mr. Ha Minh Chau

Vice Manager of Ho Chi Minh City Climate Change Bureau Office, Department of Natural Resources and Environment

Mr. Chau has been the Vice Manager of the Ho Chi Minh City Climate Change Bureau (HCCB) since 2012. He is also the Deputy Head of Meteorology- Hydrology and Climate Change Division (MHCCD). He has been working at the HCMC Department of Natural Resources for more than 13 years. He obtained his master's degree in resource use and environmental protection at the Institute of Environment and Natural Resources in Ho Chi Minh City.

Ms. Jiwon Lee

Officer, ICLEI World Secretariat

Ms. Lee joined the ICLEI World Secretariat in 2013 and coordinates International Climate Initiative (IKI) funded projects including Ambitious City Promises, which aims to support local governments in Southeast Asia to develop and implement climate action plans through inclusive and participatory processes. She has worked as an environmental engineer in water treatment projects in South Korea before joining ICLEI. Ms. Lee earned a bachelor's degree in environmental engineering and a master's in environmental governance.

Mr. Scott A. Muller

Sub-national Integration Working Group (SNI-WG) of the LEDS GP

Mr. Muller leads the Sustainable Cities Team at Spatial Informatics Group. Muller has been designing and implementing practical projects for low emission development, urban sustainability and the valuation of ecosystem services for more than 15 years in "social-ecological hotspots" across the globe. He works closely with municipal and national governments, local communities, indigenous groups and the private sector to identify interdisciplinary opportunities, traverse traditional boundaries and coordinate innovative approaches that are backed by strong analysis and planning.

SPEAKER PROFILES

Dr. Chan Kresna

Deputy Director, Investment Division, Ministry of Economics and Finance, Royal Cambodian Government

Dr. Kresna joined the Ministry of Economy and Finance (MEF), Cambodia in 1996. In his capacity as Deputy Director General, General Department of International Cooperation and Debt Management, he has been involved in official development assistance and external finance. He is the member of Climate Change Technical Team of the National Climate Change Committee and also MEF's Focal point for Climate Public Expenditure Review.

Dr. Usha Rao

Regional Technical Specialist, UNDP

Dr. Rao is the Regional Technical Expert for Energy, Infrastructure, Transport and Technology based in the Bangkok Regional Hub, UNDP. She supports UNDP country offices and government partners in the Asia Pacific region for development and management of a portfolio of climate mitigation projects, particularly GEF and GCF. Dr. Rao has 23 years of experience with diverse stakeholders in the areas of energy and environment, particularly, policy and programme coordination, project management and evaluation in renewable energy, energy efficiency, urban transport and international financial mechanisms such as CDM and GEF. Prior to joining UNDP regional office, she was with KfW Development Bank as Senior Sector Specialist managing the acquisition of new projects in energy and urban mobility in India and as Senior Project Manager – KfW Carbon Fund – South Asia acquiring carbon credits for the fund. She has completed her doctoral thesis in renewable energy technology diffusion from TERI School of Advanced Studies and has published articles in peer reviewed international journals and co-authored a book on renewable energy policy analysis for India.

Mr. Pham Van Tan

Deputy Director General, Department of Climate Change (DCC), Ministry of Natural Resources and Environment (MONRE), Vietnam

Mr. Van was the Task Team Leader to develop the country's INDC in 2015, the Plan for Implementation of the Paris Agreement in 2016. Currently, he has been assigned to lead the process of the country to review and update NDC. He is a member of the Steering Committee of the NDC-Partnership. He has extensive experience in coordinating climate change related policies and actions among ministries, provinces and international development partners toward the implementation of the Paris Agreement and UNFCCC in Vietnam.

Mr. Ngo Quang Trung

General Director, Swire Cold Storage, Vietnam

Mr. Trung graduated from Moscow University of Social and Economics in the Soviet Union in 1995 and returned to Vietnam in 1997 to work for Unilever – Walls Vietnam as Distribution manager. He joined Swire Cold Storage Vietnam in 1998 as Warehouse Manager. He was made the General Director in 2012. In addition to the management of all business activities of the company, he is also responsible for Information Technology system, and participates in the design and development of the company software.

SPEAKER PROFILES

Mr. Alex Perera

Global Director of Charge, World Resources Institute (WRI) Electricity Initiative

Mr. Perera has over 20 years of experience in energy policy, finance, and corporate energy strategy. Prior to joining WRI, he helped found a company called Bigbelly Solar, a renewable energy company with a mission of developing innovative new solar energy products that are helping to reduce transportation related emissions. He has worked at the Natural Resources Defense Council. He also served on two advisory committees that invested in over US$ 7 million in renewable energy R&D projects in New York. He was a Financial Analyst at the investment bank Bear, Stearns and Co. Inc. where he helped to structure over US$ 1 billion in municipal financing in the utility sector.

Ms. Anna Maria Gonzales

Sustainability Head, Ayala Land Inc.

Ms. Gonzales serves as Sustainability and Planning Manager of Ayala Land, Inc., which is the real estate arm of the Ayala Corporation, one of the Philippines' largest and well-established business conglomerates. Ayala Land, Inc. is the Philippines' leading developer of sustainable estates, including residential, retail, offices, hotels, and leisure developments. The company currently has 20 sustainable estates and is present in 55 growth areas nationwide. In February 2017, Ayala Land Inc. announced an aggressive plan to reduce GHG emissions in its commercial properties and to be carbon neutral by 2022. To achieve this goal, the company is implementing a range of strategic initiatives including passive cooling design, energy efficiency, renewable energy sourcing, and carbon offset mechanisms such as forest regeneration and protection.

Ms. Bethany Speer

Energy Analyst, National Renewable Energy Laboratory (NREL)

Ms. Speer manages the National Renewable Energy Laboratory's contributions to a variety of international climate development programs and initiatives. She has several years of experience facilitating technical assistance, capacity building, and peer learning. Specifically, she has leadership roles on the Clean Energy Investment Accelerator, International Smart Grid Action Network, and the Climate Technology Centre and Network. She also regularly authors a variety of analyses, most recently on corporate procurement of renewable energy and economic impacts of offshore wind. Her background is in renewable energy policy and market research, having focused on project finance structures and incentives.

Mr. Oscar Zarzo

Policy Advisor, GIZ GmbH

Mr. Zarzo is an Environmental Scientist with over 10 years of experience in the fields of environmental management, sustainable development and climate change. Since 2013, he works for the GIZ, seconded to the German Environment Agency, providing capacity-building support to developing countries for enhanced reporting under the UNFCCC and for the development of sustainable MRV systems.

SPEAKER PROFILES

Ms. Rachel Posner Ross

Director of Partnerships for Energy Policy and Investment, Allotrope Partners

Ms. Ross is an energy policy professional with over 10 years of experience working in think tanks, US government agencies, and consultancies. She currently manages Allotrope's projects to accelerate clean energy investments in key emerging markets. Before joining Allotrope, Rachel lived in Myanmar (Burma), where she conducted sustainable energy market analysis for various clients. Previously, Ms. Ross worked in the US Defense Department, where she developed policies, strategies, and public-private partnerships to improve energy management in US military operations. She is an adjunct fellow (non-resident) with the Center for Strategic and International Studies (CSIS) Energy Program. She graduated from the University of California, Los Angeles, and earned an M.Phil. in modern society and global transformations at the University of Cambridge in the UK.

Ms. Hanna Reuter

Policy Advisor, GIZ GmbH

Ms. Reuter works with GIZ in the 'Support Project for the Implementation of the Paris Agreement' which supports three initiatives (co-)founded by the German Environmental Ministry: the Partnership on Transparency in the Paris Agreement, the NDC Partnership and the NDC Support Cluster. She holds a master's degree in environmental management and a diploma in media science. Her fields of expertise include climate change transparency/MRV, mitigation actions, capacity building and communications.

Dr. Nguyen Tuong Van

Director General, Urban Development Agency, Ministry of Construction, Government of Vietnam

Dr. Van holds a bachelor's degree and a master's degree in economics from National Economic University in Vietnam. He has a doctorate in Economics Studies from Australian National University in Australia (2004-2008). He has an extensive experience in Official Development Assistance (ODA) and development and managed several water supply and sanitation projects financed by multi-lateral development banks and bilateral government. Dr. Van also served as the Director of the Management Board of Technical Infrastructure Development Projects under Administration of Technical Infrastructure (ATI); member of Standing Committee and Vice President of the Vietnam Water Supply and Drainage Association (VWSA); Executive Director of Southeast Asian Water Utilities Network (SEAWUN).

Ms. Katharina Lotzen

Junior Advisor, GIZ

Ms. Lotzen is part of the CSI project team of GIZ. She has a master's degree in economics with special focus on development and environmental economics. Ms. Lotzen has been working for GIZ since 2015 on disaster risk management and climate change adaptation, mainly on risk-informed public investment.

SPEAKER PROFILES

Ms. Nanda Jichkar

Mayor of Nagpur, Maharashtra, India

Ms. Jichkar started working in the social sector since 1987 as an active member of Citizens Forum, an organization to fight for the rights of citizens. She started her professional life as a lecturer in statistics. She is also a founding member of "Palasful" a non-profit organization which has been working for more than 20 years in the field of personality development of young children. She has been supporting multiple NGOs working in the field of child development like Spandan (for special children) and Vimlashram (for children of sex-workers).

As a two-time City Councillor and a Mayor, she is a staunch supporter of public participation. Ms. Jichkar firmly believes in sustainable and inclusive development. Some of the notable works done through Nagpur Municipal Corporation during her tenure are: Solar Panelling of Government Buildings, rain water harvesting, 24X7 water supply, LED street lights, plantation of over 35,000 trees, segregation of waste at source, implementation of recycle and reuse of waste water project and heat action plan. She has also been propagating the use of eco-friendly green buses.

Mr. Kinlay Dorjee

Mayor of Thimpu, Bhutan

Mr. Dorjee holds a bachelor's degree in electrical engineering (1995) from the University of Roorkee in India. He has worked as an Assistant Engineer with the Department of Power, Royal Government of Bhutan. He was involved in practical field works, project management and gained adequate experience to handle higher responsibilities.

He also served as a General Manager in Bhutan Power Corporation Limited (BPCL) and was responsible for improving the service delivery to provide safe and reliable power supply to almost 60% of the population. He is the first elected Mayor of the capital city and determined to alleviate the challenges related to land management, providing basic service deliveries and green initiatives to promote Bhutan as a happy nation.

Mr. Orestes Anastasia

Deputy Head, Office of Thought Leadership, GGGI

Mr. Anastasia is the Deputy Head of GGGI's Office of Thought Leadership and the Head of Knowledge Sharing. In these roles, he manages office operations in support of GGGI's Director-General, and oversees GGGI programs supporting climate diplomacy, GGGI's green growth index and assessment tools, and knowledge sharing, partnerships, and platforms. Mr. Anastasia has worked for more than 22 years promoting initiatives, partnerships, and programs at global and regional levels and in 20 countries, including 11 years in the field. Before joining GGGI, he served as a Senior Regional Climate Change Advisor with the United States Agency for International Development (USAID) based in Bangkok, Thailand, where he oversaw regional programs addressing climate change, clean energy, forest conservation, sustainable cities, and governance. He helped launch and co-chaired the Asia LEDS Partnership during 2012-2015. He has a Juris Doctorate (law) and master's degrees with a focus on environmental law and policy.

SPEAKER PROFILES

Mr. Adam Ward

Country Representative for Vietnam, GGGI

Mr. Ward is the Vietnam Country Representative of GGGI, taking up the post in 2015. He oversees GGGI's program in Vietnam, where GGGI works with the government to deliver green growth in the urban, energy and finance sectors. Between 2015 and 2016, Mr. Ward was also GGGI's Country Representative in Cambodia, establishing the office and program in Phnom Penh. GGGI works with Cambodia to implement their green growth strategy as well as working on urban green growth, partnering with Phnom Penh city as well as a number of secondary cities.

He joined GGGI in 2012, based in Ethiopia, becoming the Country Representative. GGGI works with the Ethiopian government to implement their national green growth strategy within the urban, energy, water and land use sectors and on mainstreaming green growth into macroeconomic planning. Prior to joining GGGI, Mr. Ward worked for the UK Government's Committee on Climate Change as an Adaptation Economist. He holds a B.Sc. in economics and geography from Trinity College Dublin and an M.Sc. in environmental and resource economics from University College London.

Dr. Nguyen Hong Tien

Associate Professor, Hanoi Architectural University (Retd.)

Dr. Tien served as the General Director of Administration of Technical Infrastructure – Ministry of Construction (2010-2017). He studied Bachelor of Technical Infrastructure at Hanoi Architectural University in 1974-1979. He has 14 years of experience working for the government at National Institute for Urban and Rural planning – Ministry of Construction as an engineer. He completed his post-graduation from the University of Dortmund, Germany and proceeded with master's degree at ASEAN Institute of Technology – Thailand during 1993-1995. He was promoted as the Vice Director of National Institute for Urban and Rural planning – MOC at 1999. In 2003, he became the Vice General Director of Administration of Technical Infrastructure – MOC, focusing on developing policies and guidance in technical infrastructure nationwide. He completed his Ph.D. at National University of Civil Engineering in 2004 and received his Associate Professor title at Hanoi Architectural University in 2009. In the same year, he was appointed to be the General Director of Administration of Technical Infrastructure – MOC. He retired from his position in May 2017.

Mr. Sarou Roatcheat

Vice Chief, Office of Planning, Ministry of Interior, Cambodia

Mr. Roatcheat is the Vice Chief Office of Planning, Department of Municipality, General Administration of Ministry of Interior, and is a member of Project Management Unit of Green Urban Development Program. In this capacity, he has been involved in the process of developing plan and investment program of Municipality, District, Commune, Sangkat and coordinating the implementation of Green Urban Development Program at the sub-national level. He started working at provincial administration since 2006 and then moved to Ministry of Interior in 2014, where has been working in his current department since then.

SPEAKER PROFILES

Ms. Zolzaya Enkhtur

Senior Projects and Cooperation Specialist, Ulaanbaatar City Environment Department, Mongolia

Ms. Enkhtur has completed her M.Sc. in environmental science and natural resources management from National Dong Hwa University of Taiwan, and has extensive experience in environment and climate change fields including sustainable finance initiative and green businesses. Her main role in the UB City Environment Department is to expand cooperation opportunities with international organizations to achieve and implement goals and commitments of Green Development Policy and NDC targets of Ulaanbaatar city. Ms. Enkhtur has successfully led the works on formulating Green Development City Strategy and Ulaanbaatar City contribution to the Mongolia's NDCs. She represented UB City's effort and leadership on climate change and NDC implementations at the various international and local events, including UNFCCC COP23 in Bonn and ADB's workshop on Sustainable and Resilient Cities in Tokyo.

Mr. Moe Zaw

Assistant Director, Forest Department, Myanmar

Mr. Zaw is a District Forest Officer who is working in Forest Department of Myanmar since 1994. During these 23 years, he carried out the many activities on conservation of natural forest and replanting not only in forest areas but also urban areas as Township Forest Officer. He has a Bachelor of Science (B. Sc) degree in forestry from the University of Forestry of Myanmar. He graduated in 1994. His working area is Bago Region which is famously known as Home of Teak and his main responsibility is to increase green areas near downtown areas and degraded forest lands in Reserved Forest. Mr. Zaw's presentation involved sharing the new initiatives of Myanmar in green city development, progress that have been achieved, challenges. And, greening activities carried out by city development committees and forest department in major four cities which are selected as the prior green land areas to be established following by the new guidelines of green land.

Mr. Robin Kaenzig

Associate, Integrated Transport Planning

Mr. Kaenzig is a Transport Economist specializing in public transport. His international portfolio of project work includes the development of public transport strategies, network plans and mass transit schemes in Africa and Asia. He has been working in the Philippines since 2008, developing Bus Rapid Transit (BRT) schemes in Cebu and Manila, and providing technical support through GIZ for the PUV modernization program.

SPEAKER PROFILES

Dr. Arch Do Tu Lan

Urban Specialist, Technical Support Unit Project, Vietnam

Dr. Lan serves as the Deputy Director General of Urban Development Agency, Vietnam's Ministry of Construction. In 2004, she got the Ph.D. by the thesis on Urban Ecological Research for Coastal Tourist Urban Sustainable Development in Vietnam. She was promoted as an Assoc. Professor in 2011.

She has over 36 years of working experiences in the field of urban planning and development. Her research interests mainly focus on sustainable urban development, architectural spaces of cities, mega city development, coastal land and urban planning, green cities, green building and national urban network. She was the leader of the project "Urban development adaptation to Climate Change in Vietnam", She has contributed to the Mega Cities Project for Ho Chi Minh city in Vietnam. She was also in charge of management for variety of ODA projects related to urban environment improvement, urban upgrading program, capacity building for urban environmental planning etc. Dr. Lan is a visiting lecturer at Hanoi Architectural University and Construction University in Vietnam. She also serves as a member of the Chair Management Board of Vietnam Urban Planning and Development Association, Member of Green Architect Council under the Vietnam Architect Association, Chair of Academic Council of urban green plant Association and Standing member of the Vietnam Green Building Development Co-ordination Board of the Vietnam Real Estate Association.

Mr. Alexander Ochs

LEDS EWG Chair and Director of Sustainable Development Strategies

Mr. Ochs is the Managing Director of SD Strategies, a Berlin-based consultancy working at the intersection of economic and social development, energy, and the environment. Since 2011, he has been chairing the LEDS GP Energy Working Group. Mr. Ochs is also a Senior Fellow at the Worldwatch Institute as well as Johns Hopkins University in Washington DC. He currently serves in several international advisory boards. In 2011, he received the Sustainable Future Award of the Austrian Academic Forum for Foreign Affairs. In 2015, he was appointed as the Senior Advisor to UNEP's One Gigaton Coalition and in 2016 became Member of the India-EU Renewables Seed Community. In 2017, Alexander joined the Clean Energy Solution Center's Roster of Experts and George Washington University's Board of Advisors. He has developed a Sustainable Energy Roadmaps methodology, which has been successfully applied in several countries, and advanced the LEDS Communities of Practice approach currently used in multiple initiatives.

Dr. Christian Mettke

Transport Policy Advisor, Deutsche Gesellschaft für Internationale Zusammena

Dr. Mettke is a Transport Policy Advisor, Project Manager and Component Lead for GIZ. He has specialized in public transport and climate change policies but also worked on fuel economy standards and national urban mobility programmes. Before working on his Ph.D. thesis on "Public Transport Systems in Global City Regions" (2010-2014), he worked for the GIZ in China. Prior to GIZ, Dr. Mettke worked at various national and international research projects on urban and infrastructure development, focusing on transport systems. He has been working on PUV modernization in the Philippines since 2014.

SPEAKER PROFILES

Dr. Pierre Fritzsche

Advisor, German Meteorological Service

Dr. Fritzsche has a Ph.D. in geography from the University of Bonn, Germany, with special focus on remote sensing and meteorology. He has been working for the German Meteorological Service (DWD) since 2010 on operational satellite meteorology and internal project management. Since April 2017, Mr. Fritzsche is part of the CSI team at DWD in Offenbach.

Mr. Antonio Espada Cid

Country Leader and General Manager, Philips Electronics Vietnam Ltd.

Mr. Cid assumed the position of Country Leader & General Manager for Philips Electronics Vietnam Ltd. with effect from 1st of September, 2017 based in Ho Chi Minh City. In this role, he is responsible for the commercial activities for the business group LED, Lamps, Home, and Professional Lighting Solution in Vietnam. He is given the responsibility to expand the lighting commercial activities in Cambodia. Prior to his current role, Mr. Cid was the Head of Professional Channel Asia Pacific, where he led strategic business initiatives around LED transformation and new business models. He joined Philips in 1998, before working in APAC and Vietnam in June 2015, he worked at Philips Lighting Iberia in Madrid, Spain, in different management positions such as Country Marketing Officer, Director Systems and Services, Sales Director. He was also a member of The Social Committee of AMBILAMP (lamp recycling association) engaging with NGOs to promote environmental programs in Africa and Latin America. He holds a Ph.D. in marketing from Universidad Complutense of Madrid, as well as an MBA from IE Business School of Madrid.

Mr. Emmanuel Guérin

Executive Director for Global Policies, European Climate Foundation (ECF)

Mr. Guérin is the Executive Director for Global Policies at the ECF. In this role, he leads the development and execution of the ECF strategy aiming at creating the political conditions for success in international climate policy. He also serves as the Interim Director for the 2050 Pathway Platform, an initiative working across national and local governments, as well as businesses and investors, to help them develop long-term deep decarbonization strategies. Mr. Guérin brings a decade of experience in climate politics, policies and economics, working in the government, think tank, philanthropy and academia. Before joining the ECF, he worked for the French Foreign Affairs Ministry, as a Special Advisor to the Climate Change Ambassador and now ECF CEO Laurence Tubiana, and led the drafting team for the Paris Agreement. He also worked for the Children Investment Fund Foundation (CIF) and was Associate Director of the UN Sustainable Development Solutions Network, Director of the Deep Decarbonization Pathways Project, and Director of the Energy and Climate Programme at the Institute for Sustainable Development and International Relations (IDDRI).

SPEAKER PROFILES

Mr. Richard Baron

Executive Director, 2050 Pathways Platform

Mr. Baron joined 2050 Pathways Platform as the Executive Director in July 2017. Prior to this position, he was the Climate Policy Advisor at the OECD; he co-authored Aligning Policies for a Low-Carbon Economy (2015), and Investing in Climate, Investing in Growth, a report to the German presidency of the G20 (2017). He also managed the Round Table on Sustainable Development, a high-level forum on strategic environmental questions, including the decarbonization of electricity, stranded assets, public procurement for low-carbon innovation, and corporate reporting. Before joining the OECD, he was the Head of Climate Change at the IEA where his work included international negotiations, carbon market mechanisms, industrial competitiveness and sectorial approaches. He also worked at the IDDRI where he developed the climate policy and competitiveness work stream.

Mr. David Escalante

Transportation Planning and Operations Manager, WRI Mexico

Mr. Escalante is an expert for modeling of urban transport systems, implementation of BRT corridors, evaluation of operational and financial performance of transport systems. He has worked as an urban mobility planning consultant in Mexico, Brazil, Argentina, Colombia, Peru and Panamá. He has also worked as a Deputy Manager at the BRT system planning for Mexico City (Metrobus) and Technical Coordinator at the General Direction at Metrobus. Mr. Escalante has a bachelor´s degree in transportation engineering.

Mr. Benjamin Hodick

Head of CSI Project ,GIZ

Since March 2017, Mr. Hodick is the Project Leader of the global project “Enhancing Climate Services for Infrastructure Investment (CSI)” that is implemented by the GIZ on behalf of the German Federal Ministry for the Environment, Nature Conservation, Construction and Nuclear Safety (BMBU) in the context of the IKI. With a master’s degree (M.Sc.) in public policy, he has 13 years of working experience in international and development cooperation. His focus has been on governance and the improvement of public services, mainly in African and Asian countries. Until February 2017, he worked for six years as the Head of Project and Senior Technical Advisor for a GIZ-implemented project on adaptation and coastal protection in the Mekong Delta, Vietnam. There, the emphasis of his work was on holistic investment planning and its relation to adaptation planning.

SPEAKER PROFILES

Mr. Gino Van Begin

Secretary General, ICLEI, World Secretariat

Mr. Van Begin has been working for ICLEI for more than 15 years. In his roles as Regional Director for Europe (since 2002), Deputy Secretary General (since 2007) and Secretary General (since 2013), he has consistently worked towards ensuring ICLEI's quality as a not-for-profit, responsible and forward-looking local government organization serving its 1,500 members at worldwide. In addition, he ensures that ICLEI takes every opportunity to decisively influence global negotiation processes and increase cities' presence on the global stage in order to promote the sustainability agenda at all levels.

Before joining ICLEI, Mr. Van Begin worked in Russia for seven years as an Advisor and as Team Leader at the EU-funded Environmental Centers for Administration and Technology in Kaliningrad and St. Petersburg. Prior to that, he worked in Brussels for five years at the European Commission, DG Environment.

Ms. Soumya Chaturvedula

Deputy Director, ICLEI South Asia

Ms. Chaturvedula is heading the Energy & Climate team at ICLEI – South Asia. She has professional expertise in the field of energy, climate change mitigation/adaptation, GHG emissions inventories and climate planning, waste management, integrated urban water management, third party monitoring/ audit of EMP/fund standard implementation, sustainable urban development and related initiatives in local governments. Apart from managing projects and teams in allied sectors at ICLEI South Asia, she has also been involved in programme design and business development. She has proven working experience primarily in the South/South-East Asia region countries.

Mr. Nikhil Kolsepatil

Manager, Energy & Climate, ICLEI South Asia

Mr. Kolsepatil works as a Manager - Energy & Climate at ICLEI South Asia. He has been with the organization since 2013 and plays a key role in the implementation of Energy and Climate Mitigation programmes and projects. He has a diverse experience in the areas of Energy, Climate Change, Low Emission Development and Action Planning. He has been involved in energy audits, feasibility assessments, policy analysis and project implementation for energy efficiency and renewable energy technologies, working with international organizations, donor agencies, state and city governments, and research organizations. Mr. Kolsepatil has provided technical support towards implementation of energy efficient street lighting to cities including Thane, Rajkot, Gwalior, Panaji in India and recently to the Melaka province in Malaysia. Kolsepatil is a certified Lead Auditor for ISO 50001 Energy Management System. He has a master's degree in energy technology from the Asian Institute of Technology, Thailand and a bachelor's degree in mechanical engineering.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UNEP

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