Executive summary
A regional Asian Workshop on Engaging the Private Sector to contribute to Climate Change Mitigation was held in Beijing, China on 19-21 May 2015. The meeting was co-hosted by the National Development and Reform Commission of the People's Republic of China (NDRC) and the United Nations Development Programme (UNDP) Low Emission Capacity Building (LECB) Programme.

The workshop objectives were to:

- Initiate a public-private dialogue on stimulating involvement of the private sector in climate change mitigation;
- Discuss experiences in private sector participation on mitigation activities and NAMAs;
- Engage various actors in a discussion on policy objectives and innovative approaches to support mitigation activities and NAMAs;
- Exchange lessons learned on improving market conditions to enhance private investment.

The participants of the workshop included representatives from the public and private sectors, non-government organisations and think tanks, in combination with LECB project managers and government implementing partners from Bhutan, Chile, China, Ecuador, Ghana, Indonesia, Malaysia, Moldova, Philippines, Thailand and Vietnam as well as representatives of the international organisations and donor agencies.

Key takeaways included the importance of transparent and credible policy frameworks and need for strengthening the dialogue and ongoing engagement with the private sector for mobilising investment from the private sector at scale necessary to meet the low carbon transition challenge. The workshop highlighted experiences of the on-going policy initiatives and key incentive schemes to address climate change taking place in the participating LECB countries. Experts from China have shared their valuable experiences in piloting the domestic GHG emission trading scheme, as well as other policy initiatives underway to tackle the challenges of energy supply, air quality and climate change. Representatives from the private sector shared information on various climate change initiatives and provided perspectives on the ways to scale-up these efforts through participation in Low Emission Development Strategies (LEDS) and NAMAs by greater engagement in Public-Private Partnerships.

This regional workshop was the second in a series of workshops facilitated by the LECB Programme on the topic of private sector engagement in mitigation actions. The third in the series will take place in Africa in November 2015. The workshop agenda and presentations can be downloaded here.
Workshop report:

Day 1: Brief summary
The first day of the workshop focused on outlining the fundamentals of the mitigation actions and strategies, through LEDS, NAMAs and other initiatives and the role the private sector for achieving national climate change objectives. After welcoming remarks from NDRC, CQC and UNDP China, the day was initiated with a presentation about China’s experiences in formulating greenhouse gas emission reduction objectives and experiences centred the implementation of main national mitigation programmes. Subsequently, the agenda progressed to focus on the principles and specific experiences of engaging private sector in mitigation actions by the LECB programme and the Asia LEDS Partnership. Emphasis was given on how to remove barriers for the private sector and appropriate modalities of engagement in the context of the LEDs and NAMAs.

The discussion advanced to more detailed considerations of the ways to create incentives and the practical tools to remove barriers to low carbon investment through lowering cost of capital, de-risking investments and other ways to leverage national policies and investments. Experts from China, Thailand and Indonesia shared their specific experiences in addressing the barriers to low carbon investment and ways of engaging with the private sector.

Finally, a panel discussion with selected public and private sector representatives delivered insights on decisive drives for the private sector in undertaking mitigation actions, how to improve outreach and communication between public and private entities, as well as the importance of considering the full value chain of production and related industries, and in particular small and medium enterprises when designing mitigation programmes.

Opening session:

The workshop was opened by senior officials from the Government of China and UNDP. The speakers outlined the importance of urgently addressing climate change and the importance of public and private sector working together to accelerate transition to low emission development. The session also highlighted the value of countries coming together under the UN umbrella to discuss, share insights and learn about climate change mitigation as a global issue which needs to be addressed. The speakers included:

- Mr. Jiang Zhaoli, Deputy Director General, Department of Climate Change, National Development and Reform Commission
- Mr. Patrick Haverman, Deputy Country Director, UNDP China
- Mr. Liu Weijun, Deputy Director General, Certification and Accreditation Administration (CNCA)

After the opening remarks, Mr. Yamil Bonduki, Programme Manager of UNDP LECB programme, disseminated the principles and key features of the regional workshop.
Day 1, session 1: Introduction to national climate change mitigation actions and strategies (LEDS and NAMAs) and the role of the private sector

The session was launched by Professor He Jiankun from Tsinghua University of China who made a presentation on national targets and measures for climate change mitigation in China and how enterprises are engaged in reaching the national priorities and targets. The presentation was centred on China’s recently post-2020 mitigation target, energy and intensity specific targets and how the private sector plays a decisive role in achieving the targets. Professor He Jiankun presented on the enabling regulatory and policy frameworks which will define and materialize a number of regulatory and financial drivers for the private sector to be engaged and actively contribute to the achievement of the mitigation targets.

In the second presentation Alina Averchenkova, Grantham Research Institute, gave an overview of the current international context on climate change mitigation, including an outlook on the global emission pathways in the context of the pledges being made for the Conference of Parties meeting in Paris. She outlined the emerging opportunities to engage the private sector in leveraging public sector funding for Green, Low-Emission and Climate-Resilient Development in the context of the LEDS and NAMAs. The presentation was underpinned by a number of key lessons learnt from the UNDP LECB programme on outreach to the private sector, modalities and processes for private sector consultation, identification of regulatory and financial drivers for to the designs of LEDS and NAMAs to achieve national mitigation targets. Finally, the presentation outlined the pre-conditions for private sector engagement and gave practical suggestions on how to approach private sector engagement.

The session was completed with a presentation by Mr. John Bruce Wells from Asia LEDS Partnership Secretariat who presented on the ASIA LEDS activities with a particular focus on the LEDS GP Finance Working Group (FWG). The FWG is embedded into the LEDS GP regional platforms with the objective to support the development of national and subnational finance and funding strategies including outreach and engagement of the private sector. The FWG has identified a number of critical factors for enhanced private sector engagement and investment in mitigation actions which need to be addressed in order to accelerate the public private collaboration, such as front loaded costs; managing and mitigating financial risks; and the need to integrate low carbon development and climate change resilience into national development and planning processes.

Day 1, session 2: Studies on attracting finance for low emission development

This session focused on some very comprehensive yet still tangible studies and methodologies for attracting finance for low carbon development. A presentation by Matthew Savage, Oxford Consulting Partners, included an introduction to Tracking Private Climate Finance Flows and how the results from tracking financial flows can be utilized to leverage national policies and investments towards low carbon development. The presentation emphasised that public budgets are constrained whereby it’s important for governments and other stakeholders to gain further understanding on the leveraging effects, among others via tracking assessments, and how these effects can support national priorities. Mr. Savage also briefly introduced the recently launched LECB innovation and assessment for tracking of private sector climate finance which will include Thailand, Vietnam, Indonesia, Chile and Ecuador. The studies are currently being launched with the objective to track and classify climate related private sector
investments within a defined sectoral scope in order to get better clarity of the key characteristic of private sector finance flows. In addition, pilot systems for continuously tracking private sector financial flows for selected sectors will be crafted and integrated into existing national systems. The expected duration of the pilot assessment is 1.5 years.

The session was continued by Ms. Rakshya Thapa, UNDP Regional Technical Specialist, who did a presentation on how to de-risk investments and attract private sector investment through the application of UNDP studies and tools for Derisking Renewable Energy Investment (DREI). The presentation included a key emphasizes on how to interpret and potentially improve the risk-return profile of an investment opportunity in renewable energy production whereby making it more attractive for private sector to invest. Similar, Ms. Thapa also shared information on a Generic Derisking Instrument Package for policy makers which can be actively applied to address and mitigate risks thereby enhancing the attractiveness of investments in renewable energy.

Day 1, session 3: Addressing barriers to low-emission development to attract private sector participation

The workshop continued with an in-depth presentation by Professor Duan Maosheng, Tsinghua University of China, on the national pilot Emissions Trading Systems (ETS) which are constructed to provide market driven incentives for private sector engagement and investments. As elaborated by Professor Duan Maosheng, the ETS schemes are a new regulatory approach initiated by the Government of China and currently piloted in seven provinces. He noted that the pilot phase of this new, and in a national context, innovative regulatory framework, is entrenched in Chinese philosophy and tradition with the saying “Crossing the river by feeling the stones” where the seven pilot provinces act as stones. The presentation included the operational fundamentals of the ETS in terms of entity thresholds for entering, MRV and audits, institutional setup for the managing provincial authorities, etc. Professor Duan Maosheng noted that the private sector had reacted positively to the pilot ETS and that prices for GHG allowances have been stable over a reasonable period of time. Finally, the vision of expanding the ETS to a national coverage was elaborated together with a main and overall roadmap for the expansion.

The session progressed with a number of national LECB project presentations on main activities and results in terms of engaging the private sector. Ms. Prangvalai Buasan, Technical Official from Thailand Greenhouse Gas Management Organization, elaborated on the project’s approach to engage with a number of key industrial entities within the iron/steel and cement sector. The project has actively engaged the two selected sectors to ensure dialogue and agreements with key producers in order to pilot NAMA concepts. Siam Cement Group is a potential partner for further elaboration, development and integration of NAMA related measures to support GHG reductions. In this context, Ms. Prangvalai Buasan also presented on the main challenges for setting up NAMA partnerships which include difficulties in completing confidentiality agreements among producers and the government, consolidation of data collection units and how to create the linkage between national strategies and commercial interests.

Ms. Syamsidar Thamrin from Ministry of National Development Planning / BAPPENAS in Indonesia presented on the country’s impressive portfolio of NAMAs and related institutional arrangements and
processes for developing NAMAs. The Indonesian Climate Change Trust Fund (ICCTF), that blends state finance with the donor finance, is designed to leverage private sector finance and participation through loans to the private sector. The presentation shared several examples of NAMAs under development with strong linkages to the private sector, in particular the SUTRI (Sustainable Transportation, supported by NAMA Facility) and Bus Rapid Transit (Trans Jabodetabek) supported by UNDP LECB were highlighted.

The session was completed by a presentation by Mr. Yang Hongwei, Director/Researcher, Energy Research Institute in China on innovative policies stimulating NAMAs and private sector. Mr. Yang Hongwei highlighted the key drivers and incentives for the private sector to engage in mitigation actions. Beside the GHG ETS, the main incentives schemes in China include an Energy Conservation Reward Fund, Renewable energy development fund and favourable tax schemes for vehicles and vessels if classified as energy efficient. These schemes are designed to attract and incentivize private sector engagement and investments.

**Day 1, session 4 – Private Sector Perspectives on Mitigation Actions and National Support Frameworks**

To complete the first day of the workshop, a panel discussion was held with key select private sector representatives, including Mr. Francisco Benito, Chief Technical Adviser, LECB Philippines project and Climate Change Commission, Mr. Budi Santosa Sukarno, Production Planning & Energy Conservation Manager, Badak LNG, Indonesia, and Mr. Sandrup, Head of Quality Control at the Dungsam Cement Corporation in Bhutan.

The objective of the session was to engage in an open discussion with private and public sector representatives on mitigation actions and enabling frameworks that encourage and attract private sector participation. The session was chaired by Dr. Alina Averchenkova of the Grantham Research Institute for Climate Change and the Environment.

Panellists began the session by sharing success stories, lessons learned and key entry points. For example, Mr. Benito from the Philippines underscored the fact that the highest level of support – the President of the Philippines who chairs the national Climate Change Commission (CCC) – has resulted in a large number of institutional frameworks and laws that support low carbon development. This enabling environment has resulted in a growing number of private businesses looking to become involved in low carbon pathways.

An example of this increasing number of private sector colleagues engaged in mitigation actions was reflected during a newly established annual Business Summit hosted by the CCC. The annual Business Summit provides a forum for companies to present best practices and a platform to promote various opportunities for private companies to get involved in mitigation actions. The high-level political support results in continued momentum and real results.

Mr. Sukarno from Badak LNG (private natural gas company in Indonesia) demonstrated theory placed into action when he shared their experience of receiving the highest type of award for environmental
friendly business models. He spoke to the point that business’ reputation and Corporate Social Responsibility (CSR) can be key and decisive factors for corporate decision. Government led certificate programme can provide the needed incentive to bring private sector leaders on board.

Mr. Sukarno raised the example of the PROPER Programme in Indonesia - a certification programme that is used to evaluate industry and private sector companies based on low emission approaches to business. Through the PROPER Programme there are no stringent requirements, rather, companies participate in order to gain recognition. Since its inception in 1995, participation has increased significantly. Mr. Sukarno noted that peer pressure can encourage other participants to seek higher recognition and thus provide even more incentive.

Mr. Sandrup of the Dungsam Cement Corporation suggested that governments can establish task forces or use existing business associations to engage with the private sector in order to comprehend the needs and demands from the private sector, and to learn more about “mitigation actions” that are already underway but not recognized. For example, at the Dungsam Cement Corporation they have independently employed mitigation measures, such as changing the composition of the cement to make it less carbon intensive and toxic.

The panel discussion produced a few main take-away points, which included:

- The importance of knowing what the private sector is already doing and take advantage of the good practices already in place.
- It is not just financial returns that counts as business reputation, CSR and environmental values can translate into a business profile. If one entity can improve the reputation or commit to core values that are equally valued by their clients, this can produce higher profits and a win-win scenario.
- Language is important. Business and government tend to speak a different ‘language’. There is a need to find a common language that captures the full spectrum of stakeholders’ needs and priorities.
- The importance of engaging beyond large companies. Turning to Small and Medium Enterprises (SMEs) and looking at supply chain can also result in a great impact in involving the private in mitigation actions.

Day 2: Brief summary
The second day of the workshop started with presentations of the various examples of the LECB programmes on how to engage private sector in mitigation actions through certification an accreditation in China and Chile, and through investor awareness building in Ghana and financial incentives to the private sector in the context of Green Growth Strategy implementation in Vietnam. While the programmes differ in their specifics and objectives, all have emphasized the importance of making available clear and comprehensive information, as well as building capacity of the private sector.
The above messages on the importance of sharing knowledge, disclosing information and educating the players both in the public and private sector and building their capacity were also echoed in the subsequent presentations on several sectoral initiatives to engage private sector in climate change mitigation in the freight industry and financial sector in China, and in several projects in Pakistan and Mozambique.

In the second half of the day, donor agencies and finance providers from Japan, Germany and China demonstrated through examples the potential of various instruments, such as seed funding, subsidised/soft loans, de-risking, etc. to leverage private sector investment. The panel discussion among the donors further highlighted the growing focus of Public Private Partnerships, co-benefits of mitigation actions and strong MRV. All speakers emphasised the great potential of de-risking instruments and importance of comprehensive policy frameworks that incentivise low-carbon investments or at least create a level playing field with other technologies.

Day 2, Session 1 - Proposed national mitigation actions on climate change: potential for the private sector to engage

In the first session of the day, Mr. Li Guozhen, China Qualification Certification (CQC) Center, provided a broad overview of CQC operations. He noted CQC is a 3rd party certifying organization with 10 laboratories and over 230 contracted laboratories, 11 certification organizations, and 25 business platforms. In addition, CQC was responsible for developing low carbon Product Certification Implementation Rules, the Low Carbon Product Certification Standards and GHG Accounting Methodologies for motorcycle, wrought aluminum alloy extruded profiles, flat-panel TVs, air-conditioners, among others, including low carbon product certification pilots in Chongqing and Guangdong under the LECB Programme in China.

CQC operations include:
- Conducting product and good practice accreditations, quality control, and clinical diagnosis;
- CQC acted as designated operational entity (DOE) for Clean Development Mechanism projects with 30 experts and a portfolio of about 300 CDM projects;
- Performing services for voluntary GHG emissions control since 2012. For voluntary emissions control and documentation, CQC developed an emissions management methodology and has issued certification to various entities.
- Performing carbon footprint verification for vehicles, industries, carbon labelling, etc., and low carbon product certifications, including standards and rules for accreditation.

During the next session, Ms. Angela Reinoso Navarro, Project Coordinator, Ministry of Environment in Chile, discussed the Ministry’s HuellaChile programme that was developed under the LECB programme. HuellaChile consists of an online-based standardised calculation tool for the quantification, reporting, and management of corporate carbon footprints. The objectives of organisations or companies to participate in the programme are to receive registration, carbon emission quantification, recognition for
their efforts, and to receive various streams of technical support. The HuellaChile programme is free and voluntary for companies to participate in.

To pilot the programme, the Ministry of Environment invited organizations from different sectors to test the functionality of the calculation tool, collect feedback from potential users of the tool, and to develop a database. HuellaChile recognises achievement by the organisations or companies involved in GHG management through presenting logos in a ranked system and presenting the rankings annually. User manuals and guidance tools for managing GHG are available for participating organisations. Technical and computer support is available, and news and announcements of trainings may be found on the website, www.huellachile.cl.

Dr. Richard Adjei, Principal Investment Promotion Officer, Ghana Investment Promotion Centre (GIPC) presented the Ghana Investment Promotion Centre’s (GIPC) efforts to engage the private sector and develop a NAMA investor guide. GIPC is a government agency responsible for encouraging, facilitating, and promoting investments in Ghana, and provides for the creation of an attractive incentive framework and transparent, predictable, and facilitating environment for investments. Dr. Adjei provided an overview on the policy-level direction the Government of Ghana has taken on climate change mitigation. This includes a National Policy for promoting Public Private Partnerships, Environmental Fiscal Reform Program including Ghana Green Funds, National Climate Change Policy, Akoben – a performance and disclosure rating system for industry, mining, and oil marketing companies, and several elements of energy policy including a Feed-in Tariff scheme.

Through the LECB Programme in Ghana, two energy NAMAs have been prioritised and their governance structure developed for efficient and improved clean cooking stoves and renewable energy for households. Both are currently under development. In addition, Ghana has developed a NAMA Investor Guide which aims to identify a project pipeline of NAMAs; invite partners to open a dialogue with the government regarding NAMA design, implementation, and financing; provide step-by-step instructions on the NAMA development procedures; and facilitate information sharing.

As the last presenter in the sessions, Mr. Nguyen Tuan Anh, Deputy Director General, Department of Science, Education, Natural Resources and Environment (DSENRE), Vietnam Ministry of Planning and Investment (MPI) presented the background of the Vietnam Green Growth Strategy (VGGS), developed in 2012, that highlights climate change and green growth as important drivers of investment, planning, and development.

The challenges and opportunities in leveraging participation by the private sector were discussed - notably, reform of fossil fuel subsidies, accelerating public private partnerships and better tracking and mobilizing financial sources (particularly international climate funds).
In support of scaling up private sector investment, Vietnam passed the 2015 Law on Public Investment to catalyse investment through PPPs for green growth, recently launched the CPEIR (Climate Public Expenditure and Investment Review) and will shortly start a pilot assessment for tracking private sector finance with support from the LECB Programme. Further actions to support low carbon development include released Directive No. 3 by State Bank of Vietnam (March 2015) which aims to expand green credit programs and policies. The Directive prioritises projects that conserve, develop, and utilise natural resources and energy in an efficient manner, that manufacture environmentally friendly products, develop clean and renewable energy, and that apply green science and technology.

Other examples provided by Mr. Anh included the Ministry of Industry and Trade and Ministry of Construction Green Investment Fund (GIF) with loan rebates depending on verified energy savings, and the Vietnam Climate Innovation Centre (VCIC) that provides advisory services to clean energy and climate technology ventures.

Day 2, Session 2 - Proposed national mitigation actions on climate change: potential for the private sector to engage

Ms. Fu Lu, China Director of Clean Air Asia presented Clean Air Asia’s history and foundations as an international NGO that was established in 2001 with support from Asian Development Bank, World Bank, and USAID. Its mission is to promote better air quality and liveable cities by translating knowledge to policies and actions that reduce air pollution and greenhouse gas emissions from transport, energy, and other sectors.

Ms. Lu discussed Clean Air Asia’s experiences with private sector engagement for the Green Freight and Logistics Program, and how an original city pilot program was expanded into the nationwide Green Freight Initiative. Road transport of freight makes up 70% of total freight in China and, although trucks make up 9% of the vehicle population in Asia, they emit 54% of road transport CO2 emissions. The Clean Air Asia program was developed to focus on energy efficiency and reduced GHG and air pollutant emissions.

To prove the concept on engaging the private sector in green freight, a city pilot was conducted in 2008-2009. The city pilot expanded in scale and a 5-year project targeting provincial demonstration was launched in 2011 (about USD 14 million in funding). The provincial demonstration developed into the China Green Freight Initiative in 2012. Ms. Lu emphasised the early stage of this type of program requires extensive outreach and education of key partners such as government officials and companies. As part of the national program on green freight, the China Green Freight Initiative supports development of standards for trucks and carriers.

Based on Clean Air Asia’s experience, the emphasis for this kind of program should be on demonstrating the associated economic implications, such as clearly indicating proof of fuel savings, the required upfront costs and related payback period. Ms. Lu also noted that there are no advanced and easy-to-use emission data monitoring and reporting systems, which is a potential bottleneck.
Moving to the next presentation, Mr. Shouqing Zhu, Head of China Sustainable Finance Program at World Resource Institute China, is supporting China Council for International Cooperation on Environment and Development (CCICED) Green Finance Task Force highlighted WRI’s experiences in developing GHG protocols as well as China’s emission reduction target and current challenges in major cities meeting international air standards. The CCICED Green Finance Task Force examines the roles of government in the provision of green finance. Mr. Zhu indicated that green investment demand from 2014-2020 will be mostly focused on infrastructure, environmental remediation, clean energy, and industrial pollution control, all totalling ¥19.2 trillion. Barriers to green investment were noted to be related to green business (policy and technology uncertainty, transaction costs, green financial models and a long payback period) and banking (capacity building, competition and lack of a level playing field, and lack of experience).

Green finance initiatives in China include the Peoples Bank of China (PBC) Green Task Force and CCICED Green Finance Task Force. Green Finance Task Force focuses on specialized institutions like green funds and green development banks, fiscal measures such as discounted green loans, financial infrastructure such as emissions and pollutant trading schemes, and legal measures (e.g., mandatory disclosure).

Regarding the green finance business model, Mr. Zhu highlighted the following key features: operating on commercial terms; not crowding out private investment but rather crowding-in; providing tailored financial solutions; and serving as a role model and educating the private sector. In China, green credit guidelines were drafted to make loans in green credit. Benefits include the public’s right to know, to inform on decision-making, and enhance industry competitiveness.

Completing the sessions Mr. Ali Tauqeer Sheikh, Regional Director, CDKN Asia and CEO of LEAD Pakistan, gave a presentation centred climate finance which he stated is available but fragmented and not predictable, and it needs to address risk reduction and risk transfer. Asia is particularly vulnerable to disasters related to climate change and disaster resilient infrastructure is thereby significant financial opportunity and challenge.

Mr. Sheikh discussed a couple of case study examples on public-private collaborations: (i) In Pakistan, an effort to support public private partnership development included options that addressed key vulnerabilities, performing technical studies, demand studies, and de-risking investment instruments; and (ii) PepsiCo India launched a campaign in 2009 using a seeding system that reduces water usage by 30%; and (iii) a CDKN project in Maputo, Mozambique, created opportunities for dialogue and collaboration between government institutions, businesses and communities on climate change mitigation, and the dialogue showed that municipalities could speed up policy development by inviting local communities to share their experiences and knowledge.

Overall, Mr. Sheikh indicated such collaborations need to build on a foundation of local engagement and trust, and to start small and local, but be positioned for scale and replicability. Skills building should be integrated to maximize community ownership, and adaptive capacity can be strengthening business and
livelihoods. He closed by noting it is important to create partnerships along or across value chains and to search for innovative alternatives to traditional infrastructure.

Day 2, Session 3 - Insight on the supply side – presentations from finance providers’ perspectives for investments in mitigation activities

Mr. Ichiro Sato, Office for Climate Change, Global Environment Department, JICA, discussed JICA’s experience in India on the Micro, Small and Medium size Enterprises (MSME) Energy Saving Project in India. He noted typically MSMEs do not engage in energy efficiency due to insufficient resources for investments, technical feasibility skills and awareness about potential returns from energy efficiency. In order to promote further investments capturing energy efficiency, the JICA funded MSME project in India offers concessional loans to the Small Industries Development Bank of India (SIDBI), and SIDBI then provides favourable on-lending loans to MSMEs for a number of energy improvements.

As part of the program, JICA developed an ‘Energy Saving Equipment List’ that gives a clear indication for potential borrowers on what energy efficiency investments are eligible. This equipment list serves as a simpler and more standardised resource that reduces transactions costs and time for loan appraisals. In Phase 1, 3539 loans were extended. To maximize ownership and to promote private sector investments, MSMEs are required to contribute at least 25% of total investment costs for existing borrowers and 33% for new borrowers.

Loans were extended by SIDBI or intermediaries due to the large size of the territory. Mr. Sato emphasised a number of key lessons learnt from the MSME project where awareness-raising and knowledge sharing concerning technical opportunities for energy efficiency and finance options have proven to be decisive for the project’s outreach. He further noted that the ‘Industry Cluster’ approach was effective for awareness raising that could focus within sectors – industry associations, accountants, and energy auditors who help MSMEs – on relevant issues such as energy saving potential.

Ms. Janka Clauder, GIZ Advisor on behalf of BMUB, provided an overview of International Climate Initiative (ICI) support and noted there is a call for projects through June 1, 2015. ICI priorities for partner projects consist of climate policy, sectoral mitigation (NAMAs), financial instruments, and sustainable urban development. A strong focus is placed on NAMA bankability and readiness to be able to immediately start implementation and receiving finance.

Regarding the NAMA-Facility, Ms. Clauder noted the three calls for projects in 2013 (EUR 70M), 2014 (EUR 50M), and 2015 (as much as EUR 85M) have grown in size and that the NAMA-Facility is supported by two additional donors in the form of EU and the Government of Denmark. There is no pre-set country or sector focus, and it is designed to be a competitive process. Eligibility is determined in terms of two sets of criteria: Ambition Criteria (transformative capacity, mitigation ambition, financial ambition, and sustainable development co-benefits) and Feasibility Criteria (project finance and project structure). Links and outreach to the private sector are embedded under financial ambition where the NAMA funding is envisioned to leverage private sector investments.
To date, about 50% of NAMA-Facility applicants fail to meet eligibility criteria. Ms. Clauder noted re-submission is encouraged for all projects taken into account the two main sets of criteria. Two changes for the 3rd Call for Projects are: regional project proposals are now allowable; and whereas projects have thus far received EUR 7-15M each, this was changed to a range of EUR 5-20M per project.

Mr. Qian Guoqiang, Sino-Carbon Innovation and Investment Company presented and discussed the characteristics of domestic and international funding sources and investors for climate change activities in China. The domestic banking system constitutes the biggest source of climate finance in China where China Development Bank, Import Bank of China and China Agricultural Development Bank are the dominant actors. Despite evolving and increasing focus and activities from the banking sector towards mitigation actions, the investment portfolio and track records for considering climate activities as a business case are still at an early stage. Mr. Guoqiang also elaborated on the China Clean Development Mechanism Fund which supports dedicated climate change activities under the Energy Foundation and Environmental Defence Fund (EDF). From international sources, the World Bank and Asian Development Bank are currently the biggest investors and finance suppliers for climate activities, and Mr. Guoqiang envision the Green Climate Fund to become a valuable partner for future investments and lending schemes.

Various tools, policy mechanisms and financing instruments promoting climate change mitigation activities were presented and elaborated in the Chinese context together with an assessment of private sector engagement under the operational mechanisms. It was recommended to use government finance as seed finance to leverage and attract greater private sector finance as a strong financing environment is critical to mobilize the private sector.

Day 2, Session 4 Panel Discussion – Insight on the supply side continued – discussion on climate finance.
The panel discussion covered a wide range of areas related to climate finance opportunities and trends to mobilize private sector finance for mitigation. Overarching themes included future characteristics and conditions of climate finance and what governments have done or can do create an attractive investment environment.

Emerging trends and expected future conditions for climate finance were discussed in the context of creating tangible public-private partnerships with clearly defined business cases supporting transformational and multiple-sectoral change. Mr. Byron Fay (Climate Policy Officer, Government of Australia, Department of Foreign Affairs and Trade) compared Overseas Direct Investment (ODI) to private sector flows, and highlighted that private sector investments is significantly greater than ODI hence the private sector needs to be included as a partner for meeting the challenges of climate change. The private sector also plays a prominent role for future Green Climate Fund (GCF) financial support as the GCF will have a private sector facility attached to it, although this is not yet elaborated. Mr. Fay noted that the Australian Government policy changes effectively ended a sizeable portion of the
renewable energy program and emphasized that long term consistency and confidence play a key role in market development.

Mr. Ichiro Satu (JICA) emphasised the growing attention to Low-Carbon Cities that are ‘Climate Smart since up to 70% of all carbon emissions can be attributed to urban consumption. In urban areas, a holistic view is required (e.g., considering transport and infrastructure) rather than being too focused on narrow sectors.

Mr. Qian Guoqiang re-emphasised that government needs to pave the way before engaging the private sector and for transformation to a low-carbon future. Establishment of carbon markets can be an effective policy mechanism because of the wide scope and depth of stakeholder involvement in the market (banks, third parties, developers). The primary focus and decisive factor for private businesses is the financial conditions where there need to be certainty and a clear price signal.

Ms. Janka Clauder indicated that it is crucial to have long-term agreements and systems in place, because otherwise, markets respond instantly to signals and do not lend towards stability. Similar to Ms. Clauder, Mr. Qian Guoqiang indicated the biggest regulatory barrier towards investment is volatility and lack of market transparency, and these two factors raises the risks profile of long term investments. As an example of best practice, Mr. Guoqiang emphasised the required transmission period for solar manufacturers to adjust the production to domestic markets and related demand, and the government has established long term regulatory frameworks to raise, support and stabilise the domestic demand.

Day 3: Brief summary
The last day of the workshop focused on specific LECB supported initiatives and achievements within selected sectors, namely energy production and energy efficiency. Representatives from Chile, Malaysia and Bhutan shared their insights and experiences on addressing climate mitigation and engaging private sector in energy production. It was noted that governmental programmes should be mindful of the key barriers, such as difficulty in getting access to data, raising finance and limited experience with some low carbon technologies. The speakers expressed that future initiatives need to address these challenges and in doing so it is important to consider aggregating the information as part of the MRV system, outlining clearly incentives and measures to remove barriers to the private sector, and integrating measures to stimulate research and development.

The second session focused on initiatives across energy efficiency in Ecuador Vietnam, Moldova and Bhutan. The session echoed the message on the importance of clear incentives for the industry (or consumers), as well as the need to have legal frameworks for certain issues like waste management in order for the programmes to succeed. Furthermore it was noted that incentives for the private sector should be considered not only from the side of financial gains, but also in terms of access to information, new practices and technologies, recognition of their efforts, etc.
Day 3, Session 1 – Mitigation finance and approaches in the key sectors: Scaling up actions in the key sectors: Energy Production

Ms. Jillian van der Gaag, Finance and Mitigation Officer at the Ministry of the Environment in Chile, provided an overview of the Chilean NAMA on Self-Supply Renewable Energy (SSRE), which aims to create adequate financial and technical conditions to develop a renewable energy market (e.g., biogas digesters in the agroindustry, solar water heaters in hotels, solar PV for irrigation). The main financial barriers to scaling up the renewable energy market have been the relative high incremental cost of the technologies, access to loans from commercial banks, and the lack of a bankable project pipeline. Technical capacities also serve as a bottleneck with a lack of qualified installers and technicians as well as lack of familiarity with the required technologies. To fill these gaps, the NAMA support includes: grants for investment, soft loans and guarantee fund, grants for pre-feasibility study, training and capacity building modules, a technical help desk, knowledge exchange program, and extensive outreach activities.

The institutional structure was also discussed as well as expected outputs (i.e., leverage of around USD 100 million, GHG reductions of 1.5 million tons of CO2e, and facilitation of about 112 projects). Lessons learned during the design and implementation of the NAMA included hindrances in access to information as data is not aggregated, various timing for the financial and technical components, and continuous improvement required for the MRV platform. In addition, a process incorporated into the management system for identifying barriers provided quite useful as well as borrowing lessons learned from existing national funds (FOGAPEE, FOGAINE, FOGAEE).

Ms. Radin Ahmad, Senior Researcher at TNB Research in Malaysia presented on The Case of Power. Ms. Ahmed discussed the efforts of TNB Research Sdn. Bhd., subsidiary of the Malaysian electrical utility Tenaga Nasional Berhad or TNB. In this context, Ms. Ahmad presented the mitigation activity priorities in Malaysia and a specific feasibility study performed by TNB Research on the development of plant emission factors.

Efforts to reach out to relevant stakeholders and coordinate with key players in the sector were discussed. Various options for NAMAs being considered by TNB were discussed as well: Integrated Gasification Combined Cycle (IGCC), carbon capture via use of microalgae, and carbon Capture via use of solvents.

Important considerations noted for the involvement of the private sector included: clear presentation of the risks and constraints, effective cooperation between ministries and the private sector, clear definition of the objectives of the suggested projects, and greater investment on research and development to demonstrate and deploy CO2 reduction technologies in the long-term. Government interventions are also recommended in the form of policy, guidelines, standards, incentives, and regulatory reforms. Ms. Ahmed reinforced what others had shared that financial support is difficult to mobilise (especially with weak data) and that government interventions are needed in the form of
policy, guidelines, standards, incentives and regulatory reforms. There are opportunities to engage with large emitting private sectors but a multifaceted approach is suggested.

The session also included a presentation by Mr. Sandrup, Head of Quality Control at the Dungsam Cement Corporation, Ltd (DCCL). Through his presentation Mr. Sandrup described the core operations at the DCCL facility and manufacturing process for Dragon Cement. He noted the processes that result in GHG emissions (i.e., chemical processes that include raw material calcination, combustion of fuels during pyro-processing in the kiln, and electricity used for fans, motors, and vehicular transportation for material transport in the mines).

Comparative statistics were provided to illustrate CO₂ emissions per ton of cement produced. Past experiences in updating plant operations that have GHG emission reduction effects were discussed as well (e.g., conserving minerals, altering clinker and additive to cement ratios, and power consumption). The primary measures currently being considered to reduce GHG emissions include the production of blended cement, improving energy efficiency in the cement production, and doing plantation to absorb CO₂. Specifically, opportunities being considered include power cogeneration using waste heat, using alternative fuels, and CO₂ recovery from the flue gas. Suggestions to facilitate private sector investment on emissions reductions in the cement sector included policies to incentivize research and development, on the use of alternative fuels, and to encourage different clinker ratios.

Day 3, Session 2 – Mitigation finance and approaches in the key sectors. Scaling up actions for energy efficiency and energy conservation

In this session, Mr. Christian Parra, LECB Project Coordinator, Ministry Of Environment, Ecuador, presented on the Electric Cooktop Plan NAMA. The innovative NAMA proposal aims to address and replace three million cook stoves using liquefied petroleum gas (LPG) to high efficiency cook stoves using electricity. The use of electricity for cook stoves is more energy efficient, has a lower carbon intensity and includes a number of sustainable co-benefits. Mr. Christian Parra described the key components and drivers behind the NAMA proposal as three folded: 1) support for substitution of fossil fuels with electricity based on hydro power in the residential sector; 2) removal of LPG subsidies; and 3) capacity development of the domestic industry to developed high efficient electrical cook stoves.

In addition to energy efficiency, the NAMA proposal also features a number of sustainable development items, such as higher degree of energy independence, reallocation of funds from subsidies to social development, development of local industries and value chains for improved cook stoves and elimination of illegal gas trade at Ecuador’s borders. The organisational setup has a strong focus on private sector engagement which will be a dominant and driving factor during the implantation and operation of the proposed NAMA.

Mr. Sinh Thanh Pham, Industrial Technical Safety and Environment Agency, Ministry of Industry and Trade, Vietnam presented the LECB supported initiatives for GHG mitigations in the steel sector. The objective of the technical studies is to assess the GHG reductions potentials from the steel industry and
to formulate a number of tangible actions and drivers to materialise the reduction potential. Fifteen on-site consultations and surveys have been completed and the LECB project team has developed a GHG baseline and a marginal abatement cost curve where feasible interventions are calculated and plotted.

Based on the technical and financial findings, the project has initiated outreach to a number of steel plants in order to set up a voluntary GHG reduction action plan managed in collaboration with Ministry of Industry and Trade.

Mr. Tshering Dendup, Assistant Environment Officer, Environment Services Division, National Environment Commission Secretariat of Bhutan presented on the national environmental assessment which includes a key focus on GHG emissions and potential for reductions. The purpose of the environmental assessment process is to assess environment and climate impact of new laws, strategies, policies and programs and to provide measures to regulate the environmental impact. Activities also includes continuous impact monitoring on the various initiatives under assessment in order to verify the environmental and climate related impact and potential improvements.

The session was concluded with a presentation from Mr. Sergiu Ungureanu, LECB Moldova Manager, Ministry of Environment of Moldova, who provided a two folded insight on the project’s NAMA concept focusing on construction of a municipal solid waste gasification plant as well as a presentation on low carbon wine production in Moldova.

According to the national inventory statistics, the waste sector constitutes approximately 11% of national GHG emissions and the sector is characterised by a high degree of decentralisation with limited regulatory or operational procedures for handling the waste and related emissions. As part of the NAMA concept, a waste collection system and a solid waste gasification plant will be established and piloted near the city of Chisinau (second biggest city in Moldova). The gasification plant and related technologies include a number of key sustainable features in addition to GHG reduction as it helps reduce soil and water pollution, provides carbon neutral electricity to the nearby communities and can easily be replicated and scaled up to a greater catchment area. The project has also identified a number of challenges which they try to overcome. The challenges include relatively high front loaded investments in new technologies, technical solutions for waste separation is still under development as well lack of long term national regulatory framework for waste management.

The other part of the presentation focused on low carbon wine production at Castel Mimi Wine Company. Wine production in Moldova can be an energy and resource intensive process. In order to reduce the environmental footprint, Castel Mimi has heavily invested in energy efficient technologies and processes which has led to 18% energy reduction per unit of wine. As a good example of private sector engagement, Castel Mimi is also an active participant and contributor to various forums and discussions concerning energy efficiency, participation in various programs facilitated by the national energy agency as well as round table discussions at national level concerning environmental issues and energy reductions.
The session and overall workshop were successfully completed with an enchanting wine tasting of Castel Mini’s delicious low carbon wines.