



Climate Finance Study Group

**Promoting efficient and transparent provision and
mobilization of climate finance to enhance ambition of
mitigation and adaptation actions**

Report

June, 2016

EXECUTIVE SUMMARY

The Climate Finance Study Group was established by G20 Finance Ministers, in April 2012, and was welcomed by Leaders in the Los Cabos Summit, in June 2012, with a view “to consider ways to effectively mobilize resources taking into account the objectives, provisions and principles of the UNFCCC”. In November 2012, Finance Ministers agreed to continue this work, recognizing that the “UNFCCC is the forum for climate change negotiations and decision making at the international level”. G20 Finance Ministers and Central Bank Governors reiterated in their April 2016 Communiqué “[their] call for timely implementation of the Paris Agreement on Climate Change and the commitments made by developed countries and international organizations and announcements made by other countries on climate finance”, affirmed “the importance of monitoring and transparency of climate finance” and asked the Group to “finalize this year’s work and report back to [them] at [their] July meeting”.

The CFSG work and discussions held in 2016, carried out in accordance with **the principles, provisions and objectives of the United Nations Framework Convention on Climate Change – UNFCCC and the Paris Agreement, focused on sharing national experiences between G20 countries**, in particular on initiatives that countries are undertaking, best practices and lessons learned, **to provide non-exhaustive approaches on climate finance for the consideration of member countries, to take-up on a voluntary basis in accordance to their national circumstances and preferences, recognizing that there is no “one-size fits all” policy and that country ownership is a key element to guide the enhancement of climate finance.**

Building on CFSG 2015 Report, the CFSG decided in 2016 to share experiences on the following topics:

1. *Promoting efficient and transparent provision and mobilization of climate finance to enhance ambition of mitigation and adaptation actions.*
2. *Mainstreaming climate change considerations into international public finance with a view to maximizing sustainable development & climate co-benefits*

Three separated deliverables have been developed: (i) a Report presented here, and (ii) a Toolkit on instruments/enabling environments with technical inputs from International Organizations¹ provided to the CFSG on topic 1, and (iii) an Outlook on key issues related to topic 2.

To share experiences and develop the report on *Promoting efficient and transparent provision and mobilization of climate finance to enhance ambition of mitigation and adaptation actions*, the Group invited

¹ **The CFSG notes with appreciation the support of the organizations that contributed to the Toolkit:** Administrative Unit of the Climate Investment Funds - CIF, Secretariat of the Green Climate Fund – GCF, Secretariat of the Global Environment Facility – GEF, Inter-American Development Bank – IDB, Organisation for Economic Co-operation and Development – OECD, United Nations Development Programme – UNDP, and the World Bank Group. **This document represents the views of IO’s authors only and does not express the views of the G20 member countries.**

CFSG country members to present on a voluntarily basis their views and experiences on the following key questions:

- *How to better take into account developing countries' country-driven strategies, priorities and needs when providing and mobilizing scaled-up climate finance for them?*
- *How to promote efficient usage of financial instruments, access to financial resources and coordination and delivery of these?*
- *How to improve transparency on climate finance?*
- *How to leverage private climate finance flows with public funds at the international and national level?*
- *How to improve enabling environments to facilitate enhanced provision, mobilization and utilization of climate finance and enhanced ambition for mitigation and adaptation?*
- *How to facilitate technology development, innovation and transfer and capacity-building support?*

The report provides a Summary prepared by the CFSG co-chairs, Brazil and France, of the contributions from CFSG members that provided inputs on the questions outlined above. This Summary strives to respect the substance of the contributions received. However, it is important to note that, as only a limited number of contributions were received, **the Co-Chairs' Summary does not express the views of all G20 member countries**. The text of the full contributions from CFSG country members is provided under each key question in the main part of this report.

Recognizing the contribution and role of the CFSG, as next steps for 2017, we recommend to G20 Finance Ministers and Central Bank Governors to continue working on climate finance under the working arrangement considered the most appropriate by next year's Presidency of the G20, in consultation with other G20 members, with the objective to contribute to the discussions held under the UNFCCC on Paris Agreement's implementation, taking into account the objectives, provision and principles of the UNFCCC and building on G20 fora expertise and knowledge and experiences sharing.

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CO-CHAIRS' SUMMARY

The following Summary was prepared by the CFSG co-chairs, Brazil and France, considering the contributions from those CFSG members that provided inputs on the key questions focused by the Group.

This Summary strives to respect the substance of the contributions received. However, it is important to note that, as only a limited number of contributions were received, **the Co-Chairs' Summary does not express the views of all G20 member countries**. The text of the full contributions from CFSG country members is provided under each key question in the main part of this report.

To better take into account developing countries' country-driven strategies, priorities and needs when providing and mobilizing scaled-up climate finance for them, contributing CFSG members, acknowledging that climate finance investments are more sustainable and effective when country-owned, highlighted the need to:

- (i) Support capacity building and institutional development within developing countries to help them develop and achieve their Nationally Determined Contributions (NDCs), National Adaptation Plans (NAPs), National Adaptation Programmes of Action (NAPAs) or other national mitigation and adaptation plans, in the context of sustainable development and efforts to eradicate poverty, according to their needs, priorities and national circumstances, translate their NDCs, NAPs, NAPAs and other priority frameworks into effective measures and implement them with finance, technology and capacity support from developed countries, and then to
- (ii) Ensure the alignment of climate finance and action with these country-driven strategies and plans through notably policy dialogues with all stakeholders, monitoring and review of achievements.

Indeed, as noted by some CFSG members, such country-driven strategies and plans will help to align climate change priorities with broader country strategies, in particular development objectives. Some CFSG members also noted the importance of country-driven mainstreaming climate change consideration into development strategies and plans.

When providing bilateral support, some CFSG members indicated that this can be achieved through partnership agreements with the countries themselves. Through international climate funds, contributing CFSG members noted that current arrangements seek to enhance country ownership and help developing countries to have direct access to the funds and develop project proposals that meet both their climate and development priorities. Both the Green Climate Fund (GCF) and the Global Environment Facility (GEF) have national focal points in recipient countries who must endorse projects proposed for their respective countries, confirming they are in line with national climate strategies and plans. Both the GCF and the GEF highlight the importance of direct access of developing countries to climate finance and more efforts in accreditation and development of National Implementing Entities (NIE). Both funds also seek to enhance capacity building, technology collaboration and strengthen country ownership with mechanisms such as the Readiness Programme of the GCF, which supports the development of national strategic frameworks to engage with the fund and has seen strong demand for its services since its inception in 2014. At the level of Climate Investment

Funds (CIFs), countries develop Investment Plans, in partnership with and with the support of Multilateral Development Banks (MDBs).

To promote efficient usage of financial instruments, access to financial resources and coordination and delivery of these, the contributing CFSG members stressed the following key aspects:

- **Technology and capacity-building support** to help recipient partners directly access funds (GCF, GEF and other international financial institutions), access and develop climate friendly technologies, bolster institutional and technical capacity to support domestic climate actions;
- **Knowledge and expertise sharing**, notably from contributor countries' domestic programs to recipient partners;
- **Promotion of country ownership** – responding to national priorities, and engaging national governments in investment design, decision-making and implementation improves buy-in and sustainability;
- **Creation of enabling environments and policy levers** – by helping partners establish supportive regulatory, policy and institutional environments, investments can foster long-lasting results and leverage private sector investments;
- **Assessment of social and economic impacts and co-benefits of climate action** (technical level, participation of governmental and non-governmental stakeholders, comprehensive understanding);
- **Focus on results** – designing investments with clear, realistic and tangible outcomes will increase effectiveness;
- **Promotion of collaboration, coordination and complementarity** – coordinating strategies and investments and sharing lessons learned between contributing countries or funds that support climate action, and working on enhancing added value and complementary between the different climate funds, helps to avoid duplication and increase synergies, and also strengthening South-South cooperation;
- **Clarification of the climate finance landscape** – by simplifying and harmonizing procedures, recognizing the different mandates and governance of institutions, and helping funding applicants to navigate between numerous bilateral and multilateral financing institutions with varying application procedures and funding criteria;
- **Scalable and transferrable initiatives support** – investing in projects that can be scaled up or transferred to countries or sectors with similar needs allows results to be achieved beyond the scope of the initial investment;
- **Promotion of innovation**, in terms of technologies, approaches or financial instruments and mechanisms;
- **Availability of concessional resources** to bridge the viability gap, support innovative approaches and scale up of nascent technologies.

Contributing CFSG members recognized the outstanding achievements of COP21 and the Paris Agreement on the transparency of both action and support, and highlighted the need to better understand the outgoing and incoming climate finance flows and the results achieved on the ground in order to ensure that support is aimed at intended objectives and that action is as effective as initially expected, and thus enhance more effective use, build trust between contributing countries and recipients and scale up climate finance flows.

To improve transparency on climate finance, some CFSG members stressed the need for capacity building in countries where finance flows and welcomed the arrangements ongoing to implement the Capacity Building

Initiative on Transparency (CBIT) through the GEF as agreed in COP21 in Paris. An individual member also mentioned the support from G7 Environment Ministers to this effort.

Some CFSG members also noted instruments that help improve transparency, in particular:

- the biennial reports developed countries provide to the UNFCCC to fulfill their obligation to communicate indicative quantitative and qualitative information on financial resources they provided and mobilized for climate mitigation and adaptation actions in developing countries (reports that can also be provided by other Parties on a voluntary basis),
- reports of MDBs to contributing countries,
- monitoring, reporting and verification systems,
- other instruments such as public communication via websites of a contributing country's initiatives on climate action and support.

However, some CFSG members noted a need for improved transparency with regards to bilateral funds reporting from the incoming side. Some countries noted that transparency should encompass support provided as well as support received. Whereas the former allows tracking the implementation of climate finance commitments, reporting on support received is crucial to increase the effectiveness of the financial means applied.

Regarding accountability issues, some CFSG members pointed out the importance of clarity in definitions of new and additional climate finance to clearly identify it within general development finance, including consideration of climate-related co-benefits. Some countries also considered the importance of harmonization of accounting standards, development of harmonized procedures, guidelines and eligibility criteria, and tracking original funding sources to avoid double counting. This work will be done under the UNFCCC – some countries mentioned that this work can benefit from the substantial work that has already been accomplished outside the UNFCCC, notably with the Rio Markers on climate change developed by the OECD Development Assistance Committee (DAC). Some countries highlighted that the work undertaken by the OECD is not consensual.

On leveraging private climate finance flows with public funds at the international and national level, contributing CFSG members underlined the need to work on the understanding gap that can exist between public sector and private interests, and the knowledge gap private investors may face with regards to local markets and policy environments. Platforms to present policy and regulatory environments, to share knowledge and best practices and consultation means can reduce these gaps.

Contributions by CFSG members also pointed out the need to provide and continuously develop innovative policy environments in developing countries (notably through capacity building, regulatory or fiscal instruments, financial incentives) and financing solutions (including guarantees, riskier capital, concessional financing of different types, etc.) to address key barriers to private investments, crowding-in new private flows by de-risking and making easy investments that are otherwise overlooked by conventional financiers, while avoiding displacing investments that would take place otherwise. In this regard, some CFSG members noted that providing with the appropriate incentives to move towards low-carbon investments, preferably by addressing market failures and/or “buying down” risks should generally be preferred to subsidizing returns on investment directly. So as to induce a transformational effect, contributions also highlighted the need to demonstrate the commercial bankability of a project, and to favor a replicable and scalable approach that can

achieve transformational climate results. Effective public and private partnerships were noted as a good practice to use public funds to leverage private finance by some CFSG members.

In order to identify the barriers and the potential levers that could leverage private climate finance flows, contributing CFSG members stressed the importance of consulting the private sector through exercises such as roundtables gathering a wide range of stakeholders, from major financial actors and industries to NGO representatives.

Regarding enabling environments to facilitate enhanced provision, mobilization and utilization of climate finance and enhanced ambition for mitigation and adaptation, contributing CFSG members recognized that the conclusion of the Paris Agreement, including commitments to action by all countries, is the strongest signal sent to the markets that the world is moving towards a more sustainable and low-GHG development pathway, and thus help drive financial flows in that direction.

Scaling up climate finance could be facilitated by countries setting adapted institutional, regulatory and policy environments that would facilitate the movement of climate finance flows to countries as well as to the right projects and activities. To this respect, contributing CFSG stressed the following aspects:

- Developed countries should make efforts in areas such as political will and institutional arrangements and create good conditions for achieving the goal of jointly providing and mobilizing by developed countries \$100 billion annually by 2020 for developing countries. With approaches such as readiness capacity building, they should help developing countries effectively get access to funds, provide recipient countries with capacity building support, help them improve their fund efficiency and transfer the technologies necessary to meet the targets of their NDCs;
- At the recipient countries' level, climate financing and cooperation can be an effective way to help build enabling environments but cannot be a substitute for it. Factors such as a high political commitment, an ambitious NDC with a clear roadmap, a pipeline of bankable projects/programmes, engaged stakeholders and robust assessments on support needs are key to attract climate finance.

On the topic of facilitating technology development, innovation and transfer and capacity-building support, countries shared national, bilateral and multilateral initiatives that contribute towards building developing countries' capacities. In particular, countries highlighted the importance of establishing a dialogue between developed countries and developing countries and understand technical needs of developing countries.

Among other initiatives, contributing CFSG members considered the central role of the Climate Technology Centre and Network (CTCN), the implementation arm of the UNFCCC Technology Mechanism. In large part, the CTCN provides technical assistance to developing countries to enhance the implementation of climate technology projects and programmes.

The Capacity Building Initiative for Transparency (CBIT) under the GEF and the Paris Committee on Capacity Building (PCCB) were also mentioned as key instruments to support developing countries. The support provided by MDBs and UN bodies was also highlighted by some countries.

CFSG MEMBERS INPUTS

1. HOW TO BETTER TAKE INTO ACCOUNT DEVELOPING COUNTRIES' COUNTRY-DRIVEN STRATEGIES, PRIORITIES AND NEEDS WHEN PROVIDING AND MOBILIZING SCALED-UP CLIMATE FINANCE FOR THEM?

ARGENTINA

It is important to ensure that all climate finance relates to countries objectives as expressed in their INDCs, or national mitigation and adaptation plans.

AUSTRALIA

Australia recognises that often the most important contribution donors can make is to support developing countries to take ownership of their mitigation and adaptation agendas by helping build domestic capacity and expertise.

Australia takes a country driven approach to the delivery of support, acknowledging that climate finance investments are more sustainable and effective when owned by partner governments. In line with this approach, our bilateral climate support relationships are administered through partnership agreements. Through this process, partner countries work with Australia to ensure our assistance supports their priorities and climate finance needs. We also work explicitly with countries approved mitigation and adaptation plans, including their Intended National Determined Contributions (INDCs), National Adaptation Plans (NAPs) and National Adaptation Programmes of Action (NAPAs).

CANADA

A key priority for Canada is that climate finance provided to countries supports the implementation of their commitments under the Paris Agreement in line with their priorities. There are various ways to ensure this, depending on the funding channel used to support developing countries. In particular, national climate priorities are integrated in Canada's approach for providing bilateral support, which is informed by engagement with the countries themselves. Canada's climate financing is also provided through bilateral funds at MDBs and in the international climate change funds. Canadian funds through MDBs are intrinsically tied the each country's strategic priorities, including for climate change.

Current arrangements for international climate funds seek to support country ownership. Both the Green Climate Fund (GCF) and the Global Environment Facility (GEF) have national focal points that must endorse projects proposed for their respective countries, confirming they are in line with national climate strategies and plans. At the GEF, developing countries can choose what agency to work with, as well as having the option to opt to of access to GEF resources directly for enabling activities (e.g., preparing National Portfolio Formulation Exercises (NPFs) or complying with Convention reporting requirements). Similarly, in the GCF, recipient countries will choose their mode of access and access to resources will be through sub-national, national, regional and international implementing entities. A key delivery mechanism at the GCF to strengthen

country ownership is the Readiness Programme, which supports the development of national strategic frameworks to engage with the fund and has seen strong demand for its services since its inception in 2014. At the Climate Investment Funds (CIFs), countries develop Investment Plans, in partnership with and with the support of MDBs.

CHINA

Developing countries are facing onerous tasks on development and poverty alleviation. Meanwhile, they are more vulnerable to adverse impacts of climate change. Provision and mobilization of scaled-up climate finance by developed countries for developing countries not only helps developing countries take mitigation and adaptation actions, but also contributes to those countries' better achievement of development goals. Developing countries are the users of the fund. Only ensuring good combination of climate finance with "country-driven" strategies, priorities and needs of users can leads to maximum benefits of the finance.

(I) Fund providing countries/providers may develop their financing plan based on the development strategy and focuses of recipient countries. When planning the GEF-6 country project of China, the Global Environment Fund (GEF) agrees especially setting aside some fund for the design and implementation of new projects based on the latest policy requirement for the development of ecological civilization identified in the "13th Five-Year Plan" of China. This arrangement not only is conducive to better achieving the "maximizing global environmental benefits" objective of GEF funds, but also has distinct "customer-friendly" feature, which is welcomed by all regions and departments of the Chinese side.

(II) Fund providing countries/providers may carry out the "country-driven and ownership principle" of recipient country through enhancing institutional development and help developing countries have direct access to the funds. The Green Climate Fund (GCF) has included the "country-driven and ownership" principle in its Governing Instrument and stressed that NDA of recipient countries should play an important role in reviewing, approving and implementing programs and projects. Both the GCF and the GEF highlight the importance of direct access of developing countries to climate finance and more efforts in accreditation and development of National Implementing Entities (NIE). The above measures could greatly strengthen the confidence of developing countries in the future development of the GCF and the GEF.

(III) When providing and mobilizing funds, developed countries may help developing countries meet their intended nationally determined contributions based on specific circumstances of developing countries. However, they should not set unreasonable additional conditions for developing countries in applying for and utilizing the fund on excuse of it. They should mainly consider specific needs of developing countries in areas such as adaptation, technology and capacity building reflected in the documents such as National Communications and two-year update, National Adaptation Plan, and technical requirement assessment submitted by developing countries.

EUROPEAN COMMISSION

Following the conclusion of the Paris Agreement, support to developing countries to implement their Nationally Determined Contributions (NDCs) plays a key role in achieving the transformation to low GHG emissions economies and reaching the agreed goal of limiting the global average temperature increase to below 2 °C above pre-industrial levels and with an aim of making finance flows consistent with a pathway towards low greenhouse gas emissions and climate resilient development.

Nationally Determined Contributions are a fundamental feature of the Paris Agreement that provides overall information on strategies, priorities and needs in each country. In order to make the Paris Agreement a reality it is time for governments and policy makers to become concrete and that means clarifying and translating the NDCs into national policies. By doing so a guiding framework can be provided, that can serve as a reference for assessing the compatibility of climate finance provided with national strategies, priorities and needs.

The EU is already supporting the development of NDCs, low carbon development strategies, adaptation plans and measures building on these strategies and plans via the Member States' specialised agencies, by the Commission itself and through multilateral channels. Capacity building to increase local knowledge and experience on the ground is an integral and cross-cutting part of EU support. For example the EU supports work on low-emission development strategies and on monitoring and reporting of greenhouse gas emissions through the **EU-UNDP Low-Emission Capacity Building (LECB)** programme, a programme that currently operates in 25 countries with a budget of about €32 million (€18 million by the EU, €10 million by Germany, about €4 million by Australia). Another example is the **EUROCLIMA** programme which operates in 18 Latin American countries since 2010. It supports, inter alia, a regional sectoral policy dialogue on climate finance for Latin America and the Caribbean, which aims at better integrating domestic and international climate change finance and development finance. The successor of the EUROCLIMA programme (2016) will provide financial support for specific services in connection to the following key areas:

- **Dialogue and exchange** (a) between Latin American countries and the EU, as well as (b) among Latin American countries on issues related to climate change/environment.
- **Climate knowledge management** through the provision of **Climate Services** to provide decision-makers in the public and private sectors with key information on climate change in order to allow better decision-making through improved risk management.
- **Communication on Climate Change and Learning:** suggested specifically by Latin American countries as an area to assist with services and south-south cooperation in helping with awareness raising and environmental education.
- A "**Climate Technical Facility**" for technical assistance available to all countries, with the objective to improve Latin American capacity to cope with climate change and environmental challenges, and to implement their INDCs.

In addition it is promising to see many NDC's refer to carbon pricing and that 40 jurisdictions have already introduced a carbon price. The carbon price, nonetheless, is still relatively low. The EU emissions trading system (EU ETS) is a cornerstone of the European Union's policy to combat climate change and its key tool for reducing industrial greenhouse gas emissions cost-effectively. The first - and still by far the biggest - international system for trading greenhouse gas emission allowances, the EU ETS covers more than 11,000 power stations and industrial plants in 31 countries, as well as airlines. In the EU we have implemented an emissions trading system since 2005. We are on track to reduce industrial emissions by 21% from 2005 to 2020 while our economy is growing at the same time. The post-2020 phase is under consideration as part of the policy package to deliver our contribution to the Paris Agreement.

Balancing of financing between adaptation and mitigation was one of the novelties of the Paris Agreement. The EU will strive to balance mitigation and adaptation in its funding. However what this balance means in practice should be decided bottom-up on the basis of developing countries' priorities. This is supported by evidence that shows that climate finance is delivered most effectively in countries with a conducive political

and policy environment for taking climate action. In late 2015 the Commission announced a new phase of the Global Climate Change Alliance (GCCA+), with a projected commitment of around EUR 350 million until 2020, in addition to the private and national public investments that this financial support is expected to leverage. GCCA+ will support least developed countries (LDCs) and Small Island developing states (SIDS) in adapting to the impacts of climate change and integrating climate change resilience in their overall development planning and implementation.

At the same time, the EU will focus on those countries most in need and the most vulnerable countries. Scaling up climate finance must go hand in hand with stronger domestic planning and strategies, combined with conducive regulatory environments. That includes achieving synergies between development and climate objectives, which is crucial in moving towards a low-carbon climate resilient world.

GERMANY

- Developing countries' NDCs are expected to be a key reference point for programming climate finance over the next years.
- In such a way, climate finance can support priority measures identified by developing countries in the fields of climate change mitigation and adaptation, capacity building and technology cooperation.
- The NDCs are a means to link and integrate climate change into development planning. In doing so, support for the implementation of NDCs can also support the implementation of broader country strategies. If such strategies are ambitious and transparent, they can guide the provision and mobilization of support.
- Given the high-political ownership for countries' nationally determined contributions to the Paris Agreement, using NDCs as a reference point for making climate investments could help to enhance the overall coherence of actions and the buy-in from stakeholders on all levels (National, sub-national, regional, local).
- More generally, country-owned investment plans help ensure that investments from international funding institutions are anchored in national priorities. The Green Climate Fund encourages countries to develop country programming documents, in order to provide the framework for country priorities. In our view, this is a best practice example for ensuring country-ownership.
- Participative processes to involve stakeholders during the conception and the programming of investments are essential to ensure full country ownership.

INDIA

Taking into account developing countries' priorities and needs should be an essential component of provision and mobilisation of scaled-up climate finance for them. To better take into account developing countries' country driven strategies, priorities and needs when providing and mobilising scaled-up climate finance, two points are important:

- a) **Following a country driven approach and aligning with country-specific policies:** This is essential as the mobilised finance is to be ultimately used by these countries and effective utilisation by the developing countries would be dictated by whether the finance provided is in line with their development priorities. In a country driven approach, the needs and requirements are identified by the developing countries themselves. In such a case finance would go into priority areas identified by the countries as per the national requirements which is likely to be missed in a top-down approach.

- b) **Building the capacity in developing countries:** Building the capacity of developing country entities to develop project proposals that meet their development priorities is important. A country driven strategy cannot work unless the country has the requisite capacity to assess its needs and put forth projects that can address these needs. The proper utilisation of finance in an efficient and effective manner also requires capacity development.

INDONESIA

To promote efficiency and transparency of the provision and mobilization of climate finance, the Indonesian Ministry of Finance (MOF) has designed a platform, namely budget tagging system (BTS), to identify and track climate change mitigation actions-related expenditures within the national budget, by adding specific codes for any expenditures related to mitigation actions.

By establishing the BTS, the Indonesian government expects to be able to allocate appropriate resources to any mitigation actions of climate change. Furthermore, it will assist the government to measure the efficiency and effectiveness of the budget allocation. The mitigation actions have been spread into many programs of line ministries and institutions. Most actions are included into other umbrella projects, such as, forestry, maritime, and water sanitation. Therefore, it is difficult to calculate the real expenditures and evaluate the effectiveness of mitigation actions.

The development of BTS is currently at the early stage. Thus, it has some limitations, as follow: (1) the platform is limited to track fund allocation and expenditure in the government budget only, not yet covered private investments; (2) It has not evaluated the efficiency and effectiveness of the actions' outputs; (3) the coding is limited to the expenditures of climate finance only. After successful implementation in the area of climate change, BTS is expected to expand to adaptation programs and biodiversity. There is also the possibility to develop the monitoring and evaluation process for capital flows in climate finance.

JAPAN

For scaling up climate finance, first of all, it is important that climate change is mainstreamed in development strategies/plans of developing countries and that developing countries recognize their climate-related needs and gaps. Respecting recipient countries' ownership, Japan's bilateral support processes are initiated upon the request from recipient countries. Therefore, it will be very important for scaling up climate finance that developing countries prioritize projects for addressing climate change in their strategies and communicate their needs for those projects to us.

<Case> Support Programme to Respond to Climate Change in Vietnam (SP-RCC) in Vietnam

Government of Vietnam (GoV) adopted "National Target Program to Respond to Climate Change (NTP-RCC)" in 2008 to address climate change as a national priority. To assist GoV in implementing NTP-RCC, "Support Programme to Respond to Climate Change in Vietnam (SP-RCC)" was launched in 2009 by Japan International Cooperation Agency (JICA) and Agence Française de Développement (AFD), which later had participation of World Bank (WB), Export-Import Bank of Korea, Canadian International Development Agency, and Australian Government. Currently, SP-RCC is entering into the phase 3 starting from 2016 to 2020 with participation of development partners including JICA, AFD and WB.

Under SP-RCC, related ministries of GoV, the group of international development partners and other stakeholders have policy dialogues and identify prioritized policy actions to implement NTP-RCC as well as other government policies and strategies to address climate change. Policy actions are organized as a policy

matrix, and they cover mitigation, adaptation and cross-cutting issues. Progress of the implementation of policy actions is monitored and reviewed on annual basis, and financial support is provided by international development partners upon satisfactory achievement of key outcomes. Currently, the formulation of policy matrix for the phase 3 is under preparation with collaborative efforts of GoV and international development partners. Some policy actions are included to contribute to implement Paris Agreement in Vietnam.

Apart from the financial support under SP-RCC, international development partners provide various forms of technical and financial assistance to implement the policy actions either as a part of their assistance programs of related sectors (e.g. energy, agriculture, forestry and capacity development) or with special additional funding for SP-RCC. Furthermore, some policy actions are set for increasing investment and diversify financial resources. These actions will facilitate mobilization of resources of not only public sector but private sector.

As above indicated, climate finance under SP-RCC is provided taking the full account of GoV's strategies, priorities and needs, which is made possible through the repetitive cycle of policy dialogues, monitoring and review of achievements. Also, SP-RCC contributes to improving enabling environments for enhancing mobilization of both public and private climate finance.

For more information on SP-RCC, please refer to the following link.

<http://www.afd.fr/jahia/webdav/site/afd/shared/PORTAILS/PAYS/VIETNAM/PDF/SPRCC%20Brochure%20ENG.pdf>

KOREA

The Korean government provides ODA including climate finance based on the Country Partnership Strategy (CPS), which is established in consultation with the recipient country. Policies to support recipient countries take into account their demand, policy priority, and national development plan. The CPS is the ODA strategy of Korea for each country that includes budget, focus areas, implementation plan based on Korea's aid strategy and the recipient country's development plan.

Recipient countries are also involved in the assessment and the results can be reflected when establishing strategies in the future. This way, the Korean government incorporates the demand and opinions of recipient countries.

UNITED STATES

Climate finance should align with and support country Nationally Determined Contributions (NDCs) and National Adaptation Plans (NAPs). In the case of the Green Climate Fund (GCF), we expect that the GCF National Designated Authorities and Accredited Entities will be guided in planning and project development by countries' NDCs and NAPs. Climate finance mobilized through and by other bilateral and multilateral channels should similarly support projects, programs, and activities that align with NDCs and NAPs. In all cases, it is important that country demand be a key consideration in the process.

U.S. support for country-driven approaches involves engaging in strategic planning to ensure that climate finance is distributed effectively and is designed to meet partner countries' needs. The United States is supporting efforts to identify and pursue country-driven, low-carbon development strategies through the Enhancing Capacity for Low Emission Development Strategies (EC-LEDS) program and the LEDS Global

Partnership. For example, the Enhancing Capacity for Low Emission Development Strategies (EC-LEDS) program is designed to provide partner countries the necessary tools (e.g., technical support for developing GHG inventories and conducting technical and economic analyses) for developing their own low-emission development strategies that are driven by their unique circumstances and priorities. U.S. government funding for adaptation is also tailored to partner country needs and often works directly through country-led processes.

2. HOW TO PROMOTE EFFICIENT USAGE OF FINANCIAL INSTRUMENTS, ACCESS TO FINANCIAL RESOURCES AND COORDINATION AND DELIVERY OF THESE?

ARGENTINA

Definition of allocations of resources by country and prioritization exercises, to ensure national priorities are pursued in climate finance (similar to the GEF STAR approach).

AUSTRALIA

Australia provides a range of financial, technological and capacity-building support to developing countries to help reduce greenhouse-gas emissions and adapt to climate change.

- Australia has provided an average of A\$197 million per year in climate finance since 2010 through multilateral and bilateral channels. Australia provides its support to build local capacity to address climate change. We do this by helping our partners to access and develop climate friendly technologies, and bolster institutional and technical capacity to support their domestic climate change activities, especially in areas where we have specialist technical expertise. This includes building capacity to measure, report and verify greenhouse gas emissions to support the design and monitoring of evidence-based, cost effective domestic mitigation policy.

Australia has learned a number of important lessons over the reporting period that can help make future investments more effective and sustainable. These include:

- Focus on results – designing investments with clear, realistic and tangible outcomes will increase effectiveness.
- Play to your strengths – some of Australia’s most effective and best-received investments have been those designed to share knowledge and expertise from our own domestic programs, in areas such as renewable energy research, energy efficiency, science and adaptation, and measurement, reporting and verification.
- Ensure partner government national ownership – responding to national priorities, and engaging national governments in investment design, decision-making and implementation improves buy-in and sustainability.
- Promote donor coordination – coordinating investments helps to avoid duplication and increase collaboration between donors.
- Create enabling environments and policy levers – by helping partners establish supportive policy and institutional frameworks, investments can foster long-lasting results and activate the private sector.

- Support scalable and transferrable initiatives – investing in projects that can be scaled up or transferred to countries or sectors with similar needs allows results to be achieved beyond the scope of the initial investment.

CANADA

Through Canada's valuable experience in providing significant climate financing over the past years, we see two key lessons: Firstly, we need to ensure that the public support we provide is not only seen in terms of its "quantity", but also in terms of "quality". Public support should thus be targeted where it is the most effective, using the right instruments. Secondly, effective public funding on its own will not be sufficient to help scale up climate financing. Funding must go hand-in-hand with the institutional, regulatory and policy environments that would facilitate the movement of climate-friendly flows within recipient countries. In this respect, support that contributes to credible climate change approaches being implemented can be an effective use of climate finance – Canada recognizes that capacity-building for governments and institutions and support for the development of financeable projects can be transformational.

Furthermore, emphasis should be placed on collaboration between climate funds to share lessons learned to build on successes and avoid repeated missteps; and, improved coordination across funds to focus on the complementariness of each fund. New climate funds, like the GCF, should actively seek to learn from existing funds, including the CIFs and the GEF.

Canada has taken a leadership role in blended finance, serving as chair of the Redesigning Development Finance Initiative (RDFI) Steering Committee, which was established by the OECD. Through this forum, Canada has been able to emphasize its commitment to increasing the financial resources available to developing countries, including for climate finance. Furthermore, in conjunction with several public and private partners, Canada is working to build a financing platform called Convergence. This platform facilitates blended finance and serves as a marketplace, knowledge broker and accelerator for innovative development finance models. The Convergence platform proposes a database that would show investors what opportunities are available to them, as well as showing those seeking funding what investor options exist. Convergence also provides support tools for both investors and investment seekers. Canada believes that an innovative and collaborative approach is the most efficient and effective way forward.

CHINA

(I) Give full play to the advantages of various kinds of fund utilization tools and achieve complementary advantages. In view of "global public goods" feature of climate change actions, international communities should ensure the concessionality of the funds. When providing grants or other concessional-based funds to developing countries for climate change in accordance with the UNFCCC provisions, developed countries may provide finance support by using such financial instruments as "equity or guarantee" based on practical circumstances of developing countries in order to fully leverage the funds of private sectors. However, they should fully consider specific enduring and digestive capacity of developing countries. CHUEE is a cooperation project between China (using GEF grant) and World Bank Group International Finance Corporation. This project has shared loan risks of commercial banks with public funds, made innovations in guarantee mechanism, scaled up the loans on energy saving and emission reduction, and made good benefits in areas of comprehensive use of several kinds of financial instruments. Up to June of 2015, GEF grants have leveraged a total of \$625 million loan from commercial banks, supported finance to 222 energy efficiency or renewable energy projects and achieved 20 million t reduction of CO₂ emission each year.

(II) Help developing countries obtain more direct access to the funds and raise fund efficiency. When continuously giving play to the role of international implementing entities, international communities will help more institutions of developing countries become accredited agencies and implementing entities of the GCF, the GEF and other international financial institutions. This will not only reduce capital use cost and better integrate project objectives into the strategy and policies of recipient countries, but also effectively leverage the funds of recipient countries and raise the co-financing ratio of relevant projects. The GCF agrees to ensure the same right and interests of AEs of developing countries in project implementation in third countries as that of AEs of developed countries or international implementing agencies. This is conducive to strengthening the South-South cooperation among developing countries on climate change.

(III) Strengthen capacity building of developing countries and improve their capacity in using financial resources. When striving for direct access to financial resources and developing their own project implementing entities, developing countries should enhance capacity building in areas such as financial standards, risk control and performance assessment to ensure the compliance, safety and maximum benefits of the use of the funds. Developed countries should support capacity building of developing countries. However, they shall not set unreasonable obstacles for developing countries in terms of direct access to funds, innovative development and use of various financial instruments on the excuse of relevant standards.

EUROPEAN COMMISSION

Developed countries have over the last few years pledged significant funding to the operating entities of the Financial Mechanism, other funds and through bilateral efforts. At the same time, the private sector is becoming increasingly interested in climate-relevant investments. Despite these significant sources, access to climate finance remains a challenge:

- a) A complicated climate finance landscape: Funding applicants need to navigate between numerous bilateral and multilateral financing institutions with varying application procedures and funding criteria.
- b) Capacity to develop bankable projects: Transforming NDCs and project ideas into bankable projects that fit to a financial instrument's conditions and more broadly in formulating or funding project development until funding approval can be challenging. The broader enabling environments for successful projects can be lacking and impeding project development or access to funding as well.
- c) Stringent funding regulations: Stringent funding standards can increase the demand for documentation and the costs to funding applicants.
- d) Lack of an adequate enabling environment: Research (IMF work) shows that the most important factor for private green investment is an enticing environment for private investors, in particular the possibility to enter a market. Negative externalities should be priced to avoid unwarranted competitive disadvantage to green investors.

Addressing the informational challenge in order to demystify the climate finance landscape is thus important while working on enabling environments that will help the transformation towards low GHG emissions economies. The EU is reflecting on the best ways to guide and inform developing countries on the sources of finance available for NDC implementation without creating new institutions or duplicating the already existing initiatives which assist parties in developing financing strategies and signposting them towards relevant sources of financing.

GERMANY

The following recommendations are derived from the experience of preparing INDCs:

- carry out accurate analysis of context specific circumstances, such as, for example, precise financial and support needs
- ensure the availability of high-quality data and analysis
- scope and type of INDC needs to be clear and appropriate
- assess the economic impacts and co-benefits of mitigation action (technical level, participation of governmental and non-governmental stakeholders, comprehensive understanding)
- Synchronisation of technical and political processes.

Capacity-building in country is crucial to facilitate this. In the case of the GCF, the provision of readiness support helps increase the capacities of NDAs to coordinate and facilitate in-country processes for identifying and prioritizing support needs and developing a country pipeline of transformational projects and programmes. Furthermore, it builds capacity amongst national implementing entities to structure financial instruments, access financial resources, and ensure successful delivery.

The provision of technical assistance and capacity building also helps create enabling environments and lift barriers to private sector involvement. Germany supports through the provision of technical assistance the creation of enabling environments.

JAPAN

There are various needs for finance in addressing climate change, therefore, various financial instruments should be used in accordance with these needs. Projects should be designed more strategically, considering that how we should address to what kind of needs in order to make the projects the most effective, from the viewpoint of recipient side. For example, grant or concessional loan could be suitable for infrastructure projects addressing climate change adaptation, depending on scale of the projects and affordability. And, one more example, microfinance to support farmers in recipient countries could be ideal for projects to breed drought tolerant crops or for projects with some commercial elements.

In light of this, green bond is an important instrument to mobilize finance for climate purpose. In Japan, the Ministry of the Environment organized the studying group regarding green bonds last year, and the report was officially disclosed in last March.

<http://www.env.go.jp/press/files/jp/102417.pdf> (Only available in Japanese)

This report includes the fundamental information on green bonds and explains the efforts by those concerned to promote issuance and investment of green bonds in order to scaled-up the Green Bond market.

<Case> PCRAFI (Pacific Catastrophe Risk Assessment and Financing Initiative)

Promoting innovative financial schemes such as Climate Risk Insurance also contributes to efficient usage of financial instruments for climate finance. Japan, as the initial donor, has supported in developing the PCRAFI, Pacific Catastrophe Risk Assessment and Financing Initiative, in close cooperation with the World Bank.

Launched in 2007, PCRAFI aims to provide the Pacific Island Countries (PICs), where are highly exposed to the adverse effects of climate change and natural disasters in their long history, with disaster risk assessment and financing tools for enhanced disaster risk management and climate change adaptation. Following the official announcement by the Japanese Prime Minister at the Fifth Pacific Islands Leaders Meeting (PALM5) in 2009, The PCRAFI insurance program was established in January 2013 and designed to provide PICs with disaster risk insurance by using parametric conditions for rapid payouts just after natural disasters, such as tropical cyclone and/or earthquake/tsunami.

The PCRAFI Insurance Program has applied for five PICs: Vanuatu, Tonga, Marshall Islands, Samoa and Cook Islands. Since its establishment, two insurance payouts were provided for the cases of Tropical Cyclone, which caused damages in Tonga in January 2014 (US\$ 1.3 million) and in Vanuatu in March 2015 (US\$1.9 million), respectively.

PCRAFI insurance program demonstrates a close cooperation between public and private sectors. International reinsurance companies, namely Sompo Japan Insurance, Mitsui Sumitomo Insurance, Tokio Marine & Nichido Fire Insurance, Swiss Re and Munich Re have taken reinsurance. The World Bank has also played an intermediary role between PICs and a group of insurance companies. Japan provided co-financing of the insurance premiums in the initial stage during first three years of operations. However, since 2016, the PICs are paying their premium in full to keep country ownership and financial sustainability of the program.

Based on thorough consultations with the PICs, in 2015, Finance Ministers of the PICs decided to establish the PCRAFI Facility, as an independent legal entity, to provide disaster and climate risk insurance. The PCRAFI Facility will provide the PICs with climate and disaster related insurance with the aim to increase the financial resilience of PICs against natural disasters. Process to set up the new Facility is underway .

PICs has developed the following six key principles for the new PCRAFI Facility: (1) **Country Ownership** by PICs for the long-term sustainability of the program; (2) **Financial Sustainability** by ensuring that the initial capital injection by donor countries will not be depleted and can even grow over time; (3) **Contingency Planning** which is aiming at timely and effective use of funds in the procedure of insurance payouts; (4) **Accountability and Transparency** of the expenditures with detailed information on how the insurance payouts were used; (5) **Comprehensive Disaster Risk Financing Strategy** which has purpose of developing appropriate financial management at natural disasters; and (6) **Link with Disaster Risk Management Agenda** which encourages PICs to recognize this insurance program is a part of the comprehensive DRM agenda to mitigate the disaster risks.

Under the 'InsuResilience' initiative led by G7 German presidency in 2015, which targets at increasing by up to 400 million people to be covered by insurance, G7 countries have announced to strengthen the PCRAFI as well as other insurance programs such as African Risk Capacity (ARC) and Caribbean and Central American Catastrophe Risk Insurance Facility (CCRIF).

For more information on PCRAFI, please refer to the following link.

https://www.gfdrr.org/sites/default/files/publication/PCRAFI_4%20pager.pdf

KOREA

We promote efficient use of the limited resources where they are most needed in recipient countries by selecting key partner countries based on their economic development stage, nominating projects based on the

priority list of the recipient country, and aligning our support with the demand and policy priority of the developing country based on the CPS, established in consultation with the recipient country.

In addition, we are reinforcing aid effectiveness by focusing our multilateral cooperation efforts in regions and sectors where bilateral cooperation is difficult to implement and in areas where multilateral organizations hold expertise. We aim to improve the development effectiveness by strengthening assessment and performance management of multilateral cooperation projects.

It would also help to further enhance the efficiency in utilizing resources if mutual cooperation among development agencies in areas such as project identification and feasibility studies is strengthened.

Meanwhile, in order to boost accessibility to resources, we are not only making efforts to diversify resource allocation by region and sector but also providing support to feasibility studies in recipient countries.

UNITED STATES

The United States uses a range of financial instruments to mobilize climate finance. These include grants; risk mitigation tools, such as guarantees and insurance; and low-cost, long-term debt financing, including both concessional and market-rate loans. Together, these instruments are helping to mobilize finance by providing a robust, yet flexible, toolkit that is prioritized and adapted according to each country's unique needs, circumstances, and specific financing and investment landscapes. We are also promoting the use of a wide range of financial instruments at the multilateral banks and specialized environmental funds.

Ultimately, however, it is essential that recipients of resources promote domestic resource mobilization and financial-sector development. The United States provides technical assistance for capacity building in this area. It is important that technical assistance be driven by and responsive to recipient countries' needs to maximize its usefulness.

3. HOW TO IMPROVE TRANSPARENCY ON CLIMATE FINANCE?

ARGENTINA

Clear definition of what constitutes climate finance, i.e. separate climate finance from general development finance is needed. More important, OECD statistics on climate funding should prevent double counting. Only funds provided (not implemented, executed) should be counted. For funds provided by a separate trust fund, i.e. GEF and managed or executed by another entity, i.e. World Bank, a uniform citing system should be used with the reference to the original funding source in order to prevent double counting.

AUSTRALIA

Having agreed and transparent accounting methodologies is of increased importance for source countries of climate finance, particularly given the articles of the Paris Agreement.

Effective tracking of Australia's climate finance spend will be important to demonstrate our contribution towards the US\$100 billion goal, identify opportunities to improve effectiveness, and meet enhanced reporting requirements under the Paris Agreement. Methodological approaches and data availability has improved in recent years – in part as a result of the French-led process in 2015 to prepare the OECD and

Climate Policy Initiative report on aggregate climate finance flows. Nevertheless, there is room to improve the accurate tracking and aggregating of climate finance spending across countries.

Australia applies an internally developed methodology to account for our climate finance in the aid program. This methodology is published in our biennial report on the UNFCCC website. We are working to refine this methodology and develop further guidance on accounting for

- ‘other official flows’ – ie spending by other government departments on climate finance outside of the aid program, and
- private finance mobilised by government spending – ie the portion of private finance that can be counted as government spending when government influence/funds are used to facilitate it.

For recipient countries, a clearly articulated plan for mitigation and adaptation needs (such as INDC, NAP or NAPA), as well as transparent policies and processes in the use of international climate finance are essential in promoting transparency.

CANADA

Transparency helps to showcase successful contributions and ensure demonstration effects and increase accountability as well as our common understanding of achieved results. In order to ensure that both donors and recipients are achieving intended objectives and that action is as effective as initially expected, we all need to better understand the outgoing and incoming climate flows and the results achieved on the ground. Ultimately, this better understanding through transparency will translate into more effective use and scaled up climate flows.

Canada has been transparent about its climate finance commitment of CAD\$2.65 billion over the next five years to support developing countries’ transition to low carbon and climate resilient economies. Canada has openly communicated that Canadian climate finance will ramp up to CAD\$800 million per year by 2020, which is the most significant Canadian climate finance contribution ever.

Biennial Reports (BR) to the UNFCCC underpin transparent climate finance reporting by Canada and other major donors that have committed to provide climate finance through the UNFCCC. These reports detail both multilateral and bilateral funding, detailing funding allocations according to recipient countries and the projects. In particular the data tables in the BRs provide detailed information about outgoing climate flows. In support of its climate finance commitment and reporting through Biennial Reports, Canada is further developing a robust and transparent methodology in collaboration with other donor countries for better tracking and reporting both public and private climate finance flows over the coming years.

A further example of Canada’s approach to climate finance transparency is its interactive International Climate Financing website (www.climatechange.gc.ca/finance/). With a user-friendly interface, the website allows users to view Canadian initiatives by region or country. The information provided includes the amount of contribution, the fiscal years that funding was provided, and some details regarding the initiatives and its outcomes, or expected outcomes. The website provides accountability, reflecting not only where Canadian finances are being directed, but also what the direct outcomes are as a result of the financing.

Further model of multilateral funding transparency is provided by MDBs that report back to donor countries the progress of projects that have been funded. This allows for accountability of incoming flows, as well shows actual progress and results. However, there is somewhat of a blind spot with regards to bilateral funds

reporting from the incoming side which should be addressed, or capabilities to increase reporting should be supported by donor countries.

CHINA

(I) The transparency on climate finance is an outstanding achievement of the COP 21 in Paris. It is provided in the Paris Agreement that developed countries shall biennially communicate indicative quantitative and qualitative information on the financial resources they have provided and mobilized. In view of the above, assuming finance report obligations by developed countries is the key to improving the transparency of climate finance. The practical fulfillment of the obligation for finance report by developed countries based on the above requirement and thus improving the transparency of funds would not only enhance mutual political trust between developed and developing countries, but also better encourage their mitigation and adaptation actions.

(II) Improve “monitoring, report and verification (MRV)” system of climate finance through multilateral process is an effective approach to improving the transparency of climate finance. Scientific and appropriate MRV of providing and mobilizing climate finance should be conducted in accordance with the requirements of the Paris Agreement and UNFCCC to ensure “new and additional” nature of the funds.

(III) Encourage developing countries to regularly provide information on the support needed and received , provide them with relevant capacity building, meanwhile enhance the exchange of the experience among developing countries. Unreasonable conditions shall not be set for developing countries for their striving for and use of the funds on the excuse of improving the transparency of fund use. Raising the transparency of developed countries in providing or mobilizing climate funds is the prerequisite for requiring developing countries reporting the progress in meeting their intended nationally determined contributions. It is no good only requiring developing countries to raise their transparency of actions, while do not mention the transparency of developed countries in terms of financial support.

EUROPEAN COMMISSION

The EU considers delivering on climate finance in a transparent way paramount. The Paris Agreement already provides a new framework for the provision of transparent and consistent information on support for developing country Parties provided and mobilized through public interventions. The purpose of the new framework for transparency of support is to provide clarity on support provided and received by relevant individual Parties in the context of climate change actions and, to the extent possible, to provide a full overview of aggregate financial support provided. The EU considers that the future common modalities, procedures and guidelines, as appropriate, for the transparency of action and support will contribute to improving transparency of public climate finance.

GERMANY

- Transparency, encompassing both action and support, is a cornerstone of the Paris Agreement, and calls for common modalities, procedures and guidelines. We should keep up the momentum after Paris to further overcome the firewall and bifurcated MRV system. This will only succeed if we all face the upcoming discussion on transparency of support in an open and constructive manner to continue building trust among Parties.
- The transparency framework on support, including climate finance, should not reinvent the wheel, but improve the system where there is need for it. We should thus build on the substantial work that has been accomplished outside the UNFCCC, especially under the OECD. The Rio Markers on climate change

were developed by the OECD Development Assistance Committee (DAC) and have been continuously improved. They are useful instruments to track climate finance in a transparent, comprehensive while pragmatic manner.

- When further talking about accounting modalities of financial resources provided and mobilized through public interventions, the OECD CPI study on “Climate Finance in 2013-14 and the USD 100 billion goal” has gathered robust methodologies.
- The Transparency framework encompasses support provided as well support received. Whereas the former allows tracking the implementation of our commitments to scale-up climate finance, reporting on support received is crucial to increase the effectiveness of the (financial) means applied. We are happy to engage in constructive discussions on how to develop and implement operative MRV systems. We are also aware of the current capacity and institutional gaps required for having these systems run. That is why we engage both bilaterally and multilaterally to support capacity building. As such, we support a timely and effective operationalization of the Capacity Building Initiative for Transparency (CBIT) through the GEF as soon as possible.

INDIA

Provision of finance is embedded in UNFCCC and has also been mentioned in the Paris Agreement for addressing the adaptation and mitigation needs of developing countries. Equally important is the tracking of climate finance. Lack of a clear definition of climate finance has led to controversies in recent estimates of climate finance. Reporting by developed countries seems to include the full value of multilateral development bank (MDB) loans as well as official development assistance (ODA), some private finance, export credits, etc. as climate finance, leading to double counting. In addition, they include the promises, pledges and multi-year commitments and not actual disbursements as climate finance. The decline in allocation of ODA to the least developed countries (LDC) in the past year, could perhaps be linked to higher allocation to ‘climate-related objectives’, implying that ODA is being diverted to climate-related activities. The Paris Agreement mandates that transparent and consistent information on support provided and mobilized through public interventions for developing country Parties be provided by developed countries. However, it is silent on the definition of climate finance. While the question of what counts as climate finance would be decided at a later stage by the Standing Committee on Finance under the UNFCCC, it is important that it should highlight certain basic elements like sources of funding, terms of funding and purpose of funding in addition to resources being committed/disbursed/new. Moreover, while defining climate finance, it is also important to define what cannot be counted towards climate finance. Aid money meant for development purpose should not be counted as climate finance. With reference to funds provided for multiple purposes, only the share provided solely for climate change should be included under climate finance. Also systems should be in place to check for double counting or treatment of ODA as climate finance. There is an even greater gap in tracking adaptation finance and segregating it from development funds as a whole; as a result, very often the entire amount allocated to a project is erroneously treated as adaptation finance.

JAPAN

For improving transparency of climate finance, it is important that each country communicates information on climate finance provided and received. In the Paris Agreement there are some related provisions on providing information on finance provide and mobilized and transparency for support, and the works to develop modalities for them will be undertaken to implement the Agreement. Under the Paris Agreement, not only developed county parties but also other parties that provide support should provide information on support provided to developing country parties, and developing county parities also should provide information on

support received. It is essential to develop such a system which enables other parties than developed country parties to provide information based on their own circumstances, such as reporting capacities and data availabilities which are varied from country to country. In light of this, the Capacity Building Initiative for Transparency (CBIT) was agreed at Paris, and arrangements are ongoing, which was also welcomed by the G7 Environment Ministers in this May.

Excerpt from Communiqué of G7 Toyama Environment Ministers' Meeting Para53

“we are looking forward to arrangements to be made by the GEF to establish and to operate a Capacity-Building Initiative on Transparency and welcome the GCF's readiness program in support of the implementation of INDCs.”

KOREA

Although Korea is a Non-Annex country under the UNFCCC, the Korean government is engaged with efforts to improve global transparency on climate finance by providing a collective report through “Biennial Update Report (BUR)” on our funding to developing countries for climate finance.

Korea's Economic Development Cooperation Fund (EDCF) is making efforts to enhance transparency by developing an independent system for reporting and evaluation on the usage of funds and its performance.

In general, project evaluation is done through the project progress report submitted by the partner country's government. The report includes the progress status, implementation plan, outcome, and execution schedule, and the evaluation is conducted on a regular basis from the moment of the first loan disbursement to the completion of the project. There is a standardized requirement for these evaluations and the KEXIM hires independent consultants for such evaluations.

- i. Completion Evaluation: The Project Completion Report (PCR) should be submitted by the partner country's government within six months after the completion of the project or by the date stated in the loan agreement. Based on the PCR, KEXIM reviews and evaluates the adequacy of the project.
- ii. Ex-post Evaluation: The ex-post evaluation is conducted two years after the completion evaluation to assess the economic and social impact of the project and the degree of achievement of the original purpose of the project. Various methods including interviews, literature reviews, and field studies are used for ex-post evaluations through which adequacy, efficiency, effectiveness, impact, and sustainability are assessed, and lessons and recommendations are drawn.

In addition, the system for disclosure of evaluation results has been developed and put in place. In order to improve transparency and responsibility, the EDCF is using the following methods to disseminate evaluation results.

(Methods for Disclosing Evaluation Results)

- Reports: distributing evaluation reports to partner countries and related agencies
- Website: posting evaluation reports (including summary in both Korean and English) on the EDCF website
- Evaluation briefing session: disclosing evaluation results and collecting opinions to strengthen performance and structure by holding seminars, roundtables, and discussions where evaluation results can be reported.

UNITED STATES

The United States views transparent tracking and reporting of climate finance as key to ensuring accountability, promoting effectiveness, and building trust. To ensure robust reporting, each implementing government agency or entity follows strict guidelines and eligibility criteria when collecting information on support of climate-mitigation and adaptation-related activities.

With respect to certain categories of public finance, the OECD-DAC provides detailed project-level information on Rio-marked official development assistance (ODA), including ODA that supports climate mitigation and adaptation, in a format that makes the information available broadly.

Key points to consider are that climate finance is multifaceted and that in many cases it involves redirecting or “greening” existing financial flows to ensure that they align with low-carbon climate-resilient development objectives. With respect to the first point, climate finance may include a range of instruments, including grants, concessional and non-concessional loans, equity, guarantees and other de-risking instruments; but technical assistance to enable policy and regulatory reform can play essential roles in mobilizing (i.e., encouraging, facilitating, redirecting or incenting) both private and public finance from international and domestic sources. Thus, full transparency involves not only accounting for traditional forms of development assistance, but also a wider understanding of what kinds of policies and public financial investment have the greatest effect in enhancing the overall volume of climate finance and achieving low-carbon climate-resilient development outcomes on a large scale.

Greater understanding of policy and enabling environment “bottlenecks” and opportunities can be helpful in targeting technical assistance and other interventions efficiently to maximize impact and open the doors to much greater flows of finance for climate mitigation and adaptation objectives. For example, fulfilling the G-20 commitment to the elimination of inefficient fossil fuel subsidies can play a significant role in redirecting finance. However, the range of opportunities to support low-carbon climate-resilient development is much broader than this one example.

4. HOW TO LEVERAGE PRIVATE CLIMATE FINANCE FLOWS WITH PUBLIC FUNDS AT THE INTERNATIONAL AND NATIONAL LEVEL?

AUSTRALIA

In Australia, the Clean Energy Finance Corporation (CEFC) will continue to provide and develop innovative financing solutions across the clean energy sector spanning renewable energy, low-emissions technologies and energy efficiency. These efforts by the CEFC are mobilising the flows of funds (public and private) needed for the commercialisation and deployment of clean energy technologies necessary for Australia's transition to a carbon constrained economy. The CEFC works collaboratively with co-financiers and project proponents to seek ways to secure financing solutions for the clean energy sector. They act to de-risk and make easy investments that are otherwise overlooked by conventional financiers.

Internationally, the Paris goal of mobilising US\$100bn per year for mitigation and adaptation by 2020 will not be met without substantial private financing. Australia is working with the private sector to seek new opportunities and partnerships to leverage additional funds towards mitigation and adaptation in our region. We are engaging strongly with the private sector in Australia to identify opportunities to leverage further funds, beyond the A\$1 billion of public funding we have committed. We have instituted a series of

roundtables, including major financial, mining, manufacturing and NGO industry representatives to seek opportunities to increase private climate finance flows from Australia. We are supporting Mission Innovation; including a doubling of Australian R&D expenditure on clean energy and seeking opportunities to link high-net-worth Australian investors to these developments. We are working with the OECD and G20 to seek new private finance opportunities.

In addition, Australia, is also actively encouraging greater climate finance through its co-chair of the Green Climate Fund. The GCF is a new institution, having approved its first round of eight projects totalling US\$168 million in October 2015. It has set itself an aspirational target of approving projects worth US\$2.5 billion this year and the private sector will play a critical role in helping the Fund achieve this ambitious target.

- The Fund’s private sector engagement is led by its dedicated Private Sector Facility. The Facility supports the private sector to make climate investments in developing countries through a number of funding instruments, including loans, guarantees, grants, and equity investments. The GCF works through a wide range of partner institutions for implementation, known as Accredited Entities - the fund currently has 33 Accredited Entities, including public, private, and non-government institutions.

CANADA

Canada’s experience in providing blended financing for climate financing through MDBs indicates that effectively leveraging private climate finance flows should follow a number of guiding principles:

- Crowding-in new private flows, without displacing investments that would take place otherwise;
- Addressing key barriers to private investments, using the right financing instruments (guarantees, riskier capital, concessional financing of different types, etc.) and with the least subsidy possible;
- Providing with the appropriate incentives to move towards low-carbon investments, preferably by addressing market failures and/or “buying down” risks should generally be preferred to subsidizing returns on investment directly;
- Demonstrating the commercial bankability of a project;
- Aiming to achieve transformational climate results and favouring a replicable and scalable approach.

Attracting private climate finance requires a stable financial climate. There are certain barriers investors are reluctant of when deciding to invest into a developing country. There are both perceived and real risks. First and foremost tends to be political instability and insecurity. The high risk environment for ROI is a private sector concern that has to be addressed. Further concerns include unstable risky currencies, illiquid markets, poor legal structures, taxes, tariffs, inefficient fossil fuel subsidies etc.

Additionally, there needs to be an understanding from the public sector of corporate interests. The most plausible way to leverage private financing is to find a way to align interests. The private sector is attracted to emerging markets because of the above-average returns, and is interested in using climate finance as a way to enter these markets more. However, that does not eliminate the previously mentioned barriers. Furthermore, there is a lack of private sector understanding of local markets which is a knowledge gap that needs to be addressed.

Platforms such as Canada’s Convergence initiative (as mentioned in the response to question 2 above) that facilitate public and private investment knowledge need to be expanded within the realm of climate finance for knowledge development and sharing among the private sector. Government can play a knowledge sharing

role with developing country governments on the policy front, sharing best practices, legal concepts and ways in which to foster a more stable environment for commerce. Another benefit of such a platform is its ability to establish a common lexicon specific to blended finance, and more specifically blended climate finance, which helps further consolidate the working relationship between the public and private sector.

Through the International Finance Corporation, the Canada Climate Change Program (CCCP) promotes private sector financing. Part of the initiative has been to build local capacity, fill knowledge gaps in the market, and enable developing countries to adopt regulatory and business environments that provide a more attractive business climate. To demonstrate transparency, the projects that have resulted from this initiative can be found on the IFC website, including details about financial allocations and the leveraged private finance.

In partnership with MDBs, Canada has two other similar initiatives. The Canadian Climate Fund for the Private Sector in the Americas (C2F) with the Inter-American Development Bank co-finances climate-friendly private sector projects in Latin America and the Caribbean, providing transparent results on its website as well. Lastly, the Canadian Climate Fund for the Private Sector in Asia with the Asian Development Bank also catalyzes private investment in the Asia and Pacific region. The fund provides concessional financing promoting projects in both the energy and non-energy sector. It also facilitates new technologies and supports activities to enable policy, institutional reforms, and regulatory frameworks to enhance enabling environments for climate finance flows.

CHINA

(I) The activities addressing climate change are global public goods with characteristics such as “low market return”. Public funds should provide primary support to the activities addressing climate change. However, in view of big financial gap in addressing climate change, international communities could actively explore the possibility of employing public funds to leverage private funds for investment in mitigation and adaptation actions. Meanwhile, we should employ innovative mode to share or reduce investment risk of private sector.

(II) China has made meaningful attempts in leverage private funds with public funds at the international and national level. In terms of international funds, China has effectively leveraged the funds of private sectors with the funds of international financial institutions or governments of developed countries and made great achievements. For example, the joint financing proportion of GEF projects implemented in China is 1: 9.72, most of which comes from the supporting funds of private sectors. The international fund of GEF for China has effectively leveraged the funds of private sectors and provided strong support to China’s action on climate change. In national finance, China has been effectively employing financial funds to leverage private funds. The central finance of China has provided a total of 16.6 billion Yuan “fund for the demonstration of financial policy on energy saving and emission reduction” from 2014 to early 2015 to support over 60 typical demonstration projects. They have driven more than 100 billion Yuan social investment and facilitated the construction of a group of key projects such as industrial transformation and upgrading, pollution control, development and application of new energy and transformation of public works. This provides a strong support to meeting energy saving and emission reduction targets of the demonstration cities.

(III) Under the circumstance of big financial gap in addressing climate change, the international communities and the government of each country could actively explore effective approaches leveraging the funds of private sectors. Based on their financial commitments, developed countries should scale up their financial budget; provide developing countries with grants or other preferential funds through bilateral channel or injecting capital to multilateral institutions such as the GCF and the GEF; and effectively leverage the funds of

private sectors for scaling up with consideration of specific national conditions and capacity of development countries. The government of each country based on its national conditions also could make more efforts and input in climate change activities, actively develop private fund integration platform and investment channels in forms such as the cooperation of public and private capitals, or guide more investment of private funds to climate profit and climate resilient projects.

EUROPEAN COMMISSION

Private finance plays an important complementary role to public finance. It will be needed to transform financial flows to achieve low GHG, sustainable development and climate resilient economies and societies with the long term goal set out in the Paris Agreement. Multilateral Development Banks and the Green Climate Fund have a crucial role to play and have made scaled up climate finance pledges; they are developing a pipeline of innovative and transformational programs this year.

Blending finance and effective public-private partnerships are key to mobilising the private sector for climate action and sustainable development. The right circumstances are needed to deliver the most from leveraging public with private funds.

The EU is working to align private investments with climate objectives both through policies and by strategic investments. For the long-term transition, we are putting in place a policy environment that is compatible with the decarbonisation of the economy and more resilient growth. We are also using public funds to leverage private investments into strategic areas. For example, 50% of the operations of the European Fund for Strategic Investments (EFSI) are climate relevant, which shows that the transition to a decarbonised economy is a central part of restarting the EU economy. The same approach is valid for support to third countries, through the various EU Blending Facilities.

GERMANY

- While the public sector plays an important role in financing climate action, the participation of the private sector is critical to achieve the scale needed to transition to low-carbon, climate-resilient economies.
- Germany is involved in collaborative efforts to increase and enhance the provision, mobilization and utilization of climate finance from the private sector, e.g. the Global Innovation Lab for Climate Finances.
- By supporting the creation of enabling environments or de-risking investments through e.g. insurance mechanisms, public funds can be used in a catalytic manner to mobilize private investments at scale. Other instruments such as minimizing the foreign exchange risk, either through specific financial instruments or through more local currency bond issues, which could be done by various actors (MDBs, DFIs, local development banks).
- Technical assistance instruments are also essential in contributing to creating the enabling environment at the country-level (low-carbon policies and regulation of the sector). This might not only include capacity building but also regulatory and financial instruments to cover price premiums, e.g. for feed-in-tariffs.

INDIA

Private finance is guided by the motive of profitability. It is not likely to come into areas where the risks are high and the returns are low. Considerable stimulus from the public sector is needed to induce private finance flows towards meeting climate targets. Governments have to incentivise and provide guidance to private

investment in green projects and activities. Government can use instruments to induce and steer private capital towards these. For example, the Government of India has been promoting private investment in renewable energy through an attractive mix of fiscal and financial incentives, in addition to the preferential tariffs being provided at the State level. These include capital/interest subsidy, accelerated depreciation and nil/concessional excise and customs duties. Public finance has to be directed to areas where private finance is not readily forthcoming to develop these markets for possible future investment by private sector.

JAPAN

To further mobilize private finance into addressing climate change, some public incentives are useful. Japan has been working on establishing mechanisms to leverage private investment by use of public finance. Private-Sector Investment Finance by Japan International Corporation Agency (JICA), co-financing by Japan Bank for International Cooperation (JBIC) and trade insurance by Nippon Export and Investment Insurance (NEXI) are examples of leveraging private finance.

<Case> The Japanese Green Fund (JGF), which is the fund established by the Ministry of the Environment in 2013 to mobilize private investment into low-carbon infrastructure, also focuses on projects that contribute not only reducing CO2 emission but also activating local communities such as;

- Fukushima solar power project where JGF investment supports not only the promotion of renewable energy but also restoration from the disaster of the Great East Japan Earthquake in 2011.
- Plant rehabilitation fund for nationwide medium size hydropower and also mid-smaller size hydropower projects utilizing the flow hydraulic power of the rivers.
- Biomass power generation projects (using timber from forest thinning to support the local industries and also biogas from food waste).
- Hot spring power generation fund in Oita (Kyushu).
- Off-shore wind farm project under the development by the local partners in the northern part of Japan.

JGF backed 23 projects with the commitment of approx. 7.8Bn mobilizing over eight times of private finance. Total amount of CO2 reduction estimated is approx. 680,000t-CO2/year.

KOREA

To support developing countries' efforts to respond to climate change, PPP method which enables the use of public funds to leverage private finance has been adopted and put in place. The hydroelectric power generation project in Laos is a case in point.

The Xe-Pien Xe-Namnoy Hydropower Project (the "Project") is concerned with the development, construction, ownership, and operation of a 410 MW hydroelectric power generating plant in Champassak province in southern Laos, and also includes a transmission system.

The Project is being executed by Xe-Pian Xe-Namnoy Power Company Limited and a special purpose company established by the consortium of SK Engineering & Construction Company Limited ("SK E&C"), Korea Western Power Company Limited ("KOWEPO"), Ratchaburi Electricity Generating Holding PCL, and Laos Holding State Enterprise.

The Project developed pursuant to a Concessional Agreement with the Government of Laos will sell the bulk of its electricity to the Electricity Generating Authority of Thailand pursuant to a long-term Power Purchase Agreement. The Project will be constructed by SK E&C in accordance with the Engineering, Procurement and Construction Contract and operated by KOWEPO pursuant to the Operation and Maintenance Agreement.

The Project was co-financed with a commercial loan through the private window of KEXIM and other commercial banks together with EDCF to the Laos government, and the government participated as an equity investor in this project in 2014. EDCF supported the Laos government's equity contribution and achieved financial viability of the project, while enhancing the recipient country's ownership..

Korea will gradually expand PPP in executing projects that support developing countries as it lowers the risk of climate projects by utilizing public funds while attracting private finance by strengthening project stability.

There is also a project in Korea named "Ulleungdo Energy Independent Island" which leveraged private finance through public resources, albeit distinguishable from the traditional concept of PPP. To make the second largest island in Korea energy independent, SPC was established through co-financing by the local government (North Gyeongsang Province) and private companies, based on which the project is currently being pursued. The participation of the local government generated expectations of positive policy interest and intervention and encouraged participation of private companies. It is evaluated that this mechanism is what lay the stable foundation for the project.

UNITED STATES

Like many G-20 members, the United States is actively pursuing strategies to encourage private investment in low-carbon, climate-resilient activities in developing countries. We are working to combine our public contributions with targeted, smart policies to mobilize maximum private investment in climate-friendly activities. More efficient leveraging of private investment can allow limited public resources to be concentrated in areas and sectors where the private sector is less likely to invest on its own and there is maximum development impact, particularly in adaptation activities in the most vulnerable countries and LDCs.

Targeted public resources can play a significant role in leveraging private climate finance flows at a macro level through investments in technical assistance and policy support to governments and other public authorities to support policy design and other enabling environment improvements that create market conditions in which private entities find it desirable to invest in activities that support low-carbon climate-resilient development. Examples include supporting public utilities in the design of reverse auctions for procuring low-cost renewable energy or advising on the design of national or municipal climate-resilient building codes. Provision of information, for example, through developing climate information services that can assist farmers in making their investments climate-resilient, can also be helpful.

Public resources can also pave the way for private investment in low-carbon development through concessional lending and through risk mitigation of individual projects or transactions -- e.g., by taking a first-loss position in a renewable energy project financial structure that allows potential private investors to meet their risk requirements, or providing a risk guarantee to a commercial bank that wishes to invest in energy efficiency projects. Public investments in revolving funds can leverage large amounts of public and private capital for low-carbon climate-resilient infrastructure investments. Such revolving funds have been used successfully to support municipal and private investment in water infrastructure projects in the U.S. and other

countries (developed and developing), by using low-cost long-tenor public financing to leverage higher-cost forms of finance. Because these funds revolve, they can support a wide array of projects over time.

Technical assistance to public and private entities can also support development and structuring of green bonds, can support individual banking institutions in developing new product lines in lending for energy efficiency retrofits or other low-carbon investments, and can assist in completion of clean energy transactions. Publicly funded project preparation facilities can help to develop pipelines of bankable projects that can attract private investment.

5. HOW TO IMPROVE ENABLING ENVIRONMENTS TO FACILITATE ENHANCED PROVISION, MOBILIZATION AND UTILIZATION OF CLIMATE FINANCE AND ENHANCED AMBITION FOR MITIGATION AND ADAPTATION?

ARGENTINA

A clear rule must be established that all climate finance, including carbon markets, should align incentives with enhanced ambition. Thus, instruments must be designed in order not to reward those with low ambition strategies. For example, existing carbon market designs that allow the sale of credits that exceed self-imposed targets, provide an incentive for low targets. These types of instruments must be redesigned to ensure incentives are aligned with rewarding those with higher-not lower ambition.

AUSTRALIA

In addition to our response at 1.1.4, the Australian Government is cultivating private-public co-operation through the Asia-Pacific Rainforest Partnership with the establishment of a private sector roundtable. Comprised of leading regional private sector organisations, including timber and palm oil companies and sustainable forestry finance groups, the Roundtable aims to leverage climate finance to scale-up best-practice forest conservation projects. The roundtable will report to the Asia-Pacific Rainforest Summit being hosted by the Government of Brunei in 2016.

CANADA

Effective public and private funding on its own will not be sufficient to help scale up climate financing. It must go hand-in-hand with the institutional, regulatory and policy environments that would facilitate the movement of climate-friendly financial flows to and within recipient countries.

At the global scale, the conclusion of a new climate agreement in Paris, including commitments to action by all countries, will be the strongest signal we can send to the markets that the world is moving towards a more sustainable and low-carbon development pathway, and will thus help drive financial flows in that direction. In addition, creating the enabling frameworks to develop robust capital markets for products like green bonds, as well as advancing on the liberalization of international trade in environmental goods and services will be important, as will ensuring that internationally agreed prudential regulations don't inadvertently create disincentives for climate friendly investments.

At the domestic-level, countries can attract further climate resources by implementing effective and transparent climate policies and by strengthening their institutional and regulatory framework. In developing countries where there are significant capacity and financing gaps, climate financing and cooperation can be an effective way to help putting in place such enabling environments but cannot be a substitute for it.

Canada's recent membership in the Carbon Pricing Leadership Coalition (CPLC) is strategic component of our effort to support enabling environments for enhanced climate ambition. The CPLC is a voluntary initiative that aspires to catalyze action towards the successful implementation of carbon pricing around the world. The CPLC aims to bring together leaders from government, business, and civil society to support the introduction of carbon pricing, share experiences and enhance global, regional, national and sub-national understanding of the emerging practices in the implementation of carbon pricing. The Coalition works to advance carbon pricing pathways and fosters corporate readiness through internal carbon pricing and business-to-business exchanges, as well as designing INDCs to make them attractive to the private sector.

CHINA

(I) Developed countries should make efforts in areas such as political will and institutional arrangements and create good conditions for achieving the goal of jointly providing \$100 billion annually by 2020 for developing countries". They should establish the burden-sharing mechanism for developed countries based on relevant provisions of the UNFCCC and the Paris Agreement and develop a concrete roadmap to achieve the \$100 billion goal. They should inject more funds to the operating entities of the UNFCCC finance mechanism such as GEF and GCF and provide and mobilize "sufficient, predictable, new and additional" financial support to developing countries with the help of them. They should strengthen the development of MRV system of climate finance and improve the transparency of the finance.

(II) With approaches such as Readiness capacity building, developed countries should help developing countries effectively get access to funds; provide recipient countries with capacity building support in the processes such as development of financial assistance strategy as well as plan, implementation and examination of specific projects; help recipient countries improve their fund efficiency and transfer the technologies conducive to meeting the targets of "Intended Nationally Determined Contributions". Under the support of donor countries and relevant project implementation institutions, developing countries should enhance the examination on project performances and raise the efficiency of the funds. With regular meetings such as the "National Meeting on GEF Project Management" and "National Meeting on Management of the Projects of International Financial Institutions", the Ministry of Finance of China has given systematic introduction of the policy requirements of Chinese and international financial organizations to each national department and province and effectively improved performance management of climate change projects and raised fund efficiency, which was spoken highly by international implementation institutions. Among them, GEF projects in China are praised by the current GEF Chairperson and CEO as "jewels" of its finance portfolio².

EUROPEAN COMMISSION

Please see reply to question 1.

GERMANY

- Creating enabling environments for investment will be key in order to attract (international) climate finance – from the public and private sector alike – this is particularly relevant for many Sub-Saharan African States which are still struggling with mobilizing investments mostly due to unattractive framework conditions.
- Technical support for creating an environment for investment will be key in this respect to complement financial support. Support should be provided in close collaboration with financial institutions and be

² Regarding climate change projects of international financial institutions in China, see Annex I, Annex II and Annex III (provided by the GEF, the WB and ADB).

country- and context or sector specific. It should target not only countries that already have quite robust enabling environments but also address those countries that have large mitigation potentials/ potentials for transforming their economies/ sub-sectors towards low-carbon paths but not yet the necessary attractive environments.

- What constitutes an attractive enabling environment varies strongly between countries and contexts may include a variety of factors (regulatory, economic incentives including phasing out inefficient fossil fuel subsidies, legal framework etc.). For enhancing mitigation ambition this could also include factors such as high political commitment, an ambitious NDC, a pipeline of bankable projects/ programmes, engaged stakeholders on subnational/ local level, a clear roadmap for the implementation of the NDC, robust assessments on support needs etc.
- On the level of recipient countries, the following aspects seem of high importance:
 - Capacity building with a view to adherence of international standards such as fiduciary standards for trust fund management, improving the governance of financial systems in host countries, including linking up of domestic and international flows of finance and the transparency of used finance (reporting). On the disbursement side, institutions and actors need to be strengthened in order to design high quality plans, and finance programs, including a financeable project pipeline.
 - All these aspects are reflected in institutions and actor's mandates, and capacity building may improve the respective enabling environments. It seems on a more concrete level a very individual decision and depending on individual countries which aspects need to be strengthened or improved.
- With regard to adaptation national climate change laws have demonstrated a positive effect on countries' domestic enabling environment for adaptation, for example in Mexico, the Philippines and the UK. Further countries are in the processes of drafting and adopting national climate change laws, for instance South Africa. The National Adaptation Plan (NAP) process, which many countries have embarked upon to integrate adaptation into development planning and identifying mid- to long-term adaptation needs, provides a systematic way to increase ambition. The NAP process can also serve as a platform to coordinate and support the implementation of countries' adaptation related (I)NDC commitments.

JAPAN

In order to accelerate mobilizing and scaling up climate finance from private sector, dialogues between public and private actors are important and useful. It is important for private actors to understand the importance of mainstreaming climate change in their business, but at the same time, public actors should understand that profitable aspect is essential for private actors to invest in climate change related projects for both mitigation and adaptation. Especially with regard to adaptation projects, through dialogues, public actors, including those of developing countries, should understand what kind of difficulties private actors are facing and they should reflect needs of private actors to their national policies so as to improve investment environment. With regard to the improvement of the enabling environments, it is also indispensable to develop capacities (e.g., project-developing capacity) and environments at developing countries that are required to receive supports and investments.

KOREA

Given the nature of climate change response which makes it difficult to mobilize funds through private channels, the Korean government is continuing to provide policy support to scale up domestic climate finance through active public intervention. In addition, special support is provided to green industries including climate change by policy funds and policy-based financial institutions. The Ministry of Trade, Industry and Energy, Small and Medium Business Administration, and Korea Development Bank have put in place funds that could strengthen support for green industries, and policy-based financial institutions recorded giving out about 6.2 trillion KRW in loan in 2014 alone through direct lending and on-lending for green certified technology, businesses, and companies. In addition, the Korea Credit Guarantee Fund and the Korea Technology Finance Corporation are expanding their support for lending by providing guarantees for green companies.

While stressing the importance of the role of private finance, in consideration of the reality that public finance alone cannot fully meet the demand for climate change response, efforts are being made to increase private participation in responding to climate change by strengthening the link between climate-related industries and financial support. In particular, there are efforts to build infrastructure for financial support. By introducing the “green certification system” and using it as one of the standard for providing financial support to provide stronger financial support for the green industry. It helps to increase loans in this sector as it reduces the burden of financial institutions in judging whether the company has a positive external impact on responding to climate change. In addition, preferential benefits such as priority support and loan limit exemption are available to green certified companies by the government or policy-based financial institutions. Moreover, by utilizing the Green Technology Rating System (GRTS) of the Korea Technology Finance Corporation for green certification, the objectivity and credibility of green certification are being reinforced. In addition, following the adoption of “green management disclosure program” that notifies whether a company has been green certified, information related to green management was designated as a voluntary disclosure item at the stock market, and incentives are being provided to those that effectively disclose such information.

In addition to these arrangements, a system to increase investment in climate change responses by institutional investors has also been developed and put in place. In order to enable the National Pension, which is the largest pension fund in Korea, increase social responsibility investment including that for climate change response, a clause that takes ESG (Environmental, Social, Governance) into account from the profit perspective of the long-term fund operation when managing the pension has been stipulated in the National Pension Act, and at the same time, by making it possible to announce it publicly, we are encouraging the National Pension Service’s investment in addressing climate change.

UNITED STATES

There are a wide range of approaches that can be taken to improve enabling environments to facilitate the enhanced mobilization and utilization of climate finance and enhanced ambition for mitigation and adaptation. A key component is to undertake a sector-by-sector examination of the economic and policy drivers of greenhouse gas emissions and vulnerabilities to climate change impacts. Within the energy supply sector, improving enabling environments will include eliminating or reducing fossil fuel subsidies, developing appropriate tariff structures, including through reverse auctions, to encourage deployment of renewable energy, and providing support for grid integration. Strong efficiency standards for appliances, energy efficient and climate-resilient building codes, motor vehicle standards—including fuel efficiency, fuel quality, and emissions standards for light- and heavy-duty vehicles, and tax incentives can help to drive improvements in the relevant sectors.

The land use sector is complex but land tenure reform, comprehensive land use planning, conservation payments, and subsidy reform can all play a role in reducing emissions from this sector. Agricultural extension services also have an important role to play in climate smart agriculture and protecting forests under threat from agricultural expansion. Zoning and land use policies will be important in urbanized industrialized areas to enhance climate resilience.

The United States acknowledges the critical role our partner countries play in promoting the effectiveness of climate finance. Our experience in climate finance has shown that any public financial instrument and intervention's ability to mobilize and deploy additional finance depends largely on the broader policy framework in place in developing countries. For example, development of public long-term low-emission development strategies can be helpful in signaling to public and private entities alike the types of investments and policies that will be needed and may be anticipated to align with a long-term low-carbon climate-resilient development trajectory.

6. HOW TO FACILITATE TECHNOLOGY DEVELOPMENT, INNOVATION AND TRANSFER AND CAPACITY-BUILDING SUPPORT?

AUSTRALIA

The Australian Government Renewable Energy Agency (ARENA) provides grant funding for basic and applied renewable energy research to help build new industries that advance the common good. These industries are then built further by private capital, through the skills and resources of investors with experience in driving innovation from the lab to the marketplace.

The Australian Government has established a A\$1 billion Clean Energy Innovation Fund to help promising technologies make the leap from demonstration to commercial deployment. Managed jointly through the complementary expertise of the CEFC and ARENA, this fund will accelerate Australian innovation and create jobs of the future, while delivering a financial benefit from the investment of public money. The fund will provide innovative equity and loan financing to match the growing maturity of the Australian clean energy technology sector.

CANADA

Canada believes the key element to facilitate technology development, innovation and transfer is to create enabling environments that will eventually pave the way for large-scale implementation and transformational changes. These could include the establishment of national sector-wide inventories, emissions baselines, feasibility studies, national strategies and pilot projects.

Canada has vast experience in supporting technology transfer in developing countries both bilaterally and through various multilateral channels, including the Global Methane Initiative and the Climate and Climate Air Coalition (CCAC). Canada has notably worked with Latin American countries to reduce short-lived climate pollutants (SLCPs) and GHGs from the oil and gas industry and the waste sector through a step-by-step replicable approach to implement clean technologies that demonstrate environmental and economic benefits. In particular, Canada's approach involved the following steps:

1. Identification of mitigation SLCPs and GHG emissions reduction opportunities: Through capacity building, development of inventory mechanisms and feasibility studies, Canada supported the preparation of

comprehensive baseline emissions inventories and the estimation of technologically feasible abatement potential and related costs and benefits.

2. Development of national sectoral mitigation strategies: Canada then provided bilateral technical and policy support that allowed developing countries to develop a comprehensive strategy, with related policies and actions;

3. Implementation of pilot projects: Under the lead of Canada and with funding from the CCAC supported, pilot projects were implemented in Mexico in the oil and gas sector and in Chile in the waste management sector. This allowed the introduction of innovative and transformative changes through partial deployment of clean technologies and which yielded some tangible emissions reductions as well as significant cost savings.

CHINA

(I) Establish the dialogue mechanism between developed countries and developing countries and understand technical needs of developing countries. With the approaches such as establishing technology transfer window/facility in international financial institutions such as the GCF and GEF or bilateral loans or grants, international communities should help developing countries assess their technical needs for addressing climate change and develop specific technical assistance and transfer projects. They should attach importance to the participation of stakeholders in all mitigation and adaptation fields of developing countries and help their successful work on cost analysis, market assessment and obstacle identification in the process of technological transfer.

(II) Improve technological transfer and development of innovation mechanism. International communities should help developing countries develop and improve the policy and strategy mechanism on technological transfer and innovation and promote the development and transfer of environment-friendly technologies.

(III) Strengthen capacity building and talents exchange. International communities should strengthen capacity building of research and advisory institutions and create favorable conditions for transfer of environmental protection and low-carbon technologies in the processes such as research & development, demonstration and commercial application. They should encourage knowledge sharing and experience exchanges of the professionals of this field.

(IV) Support relevant activities of the technical mechanism under the United Nations Framework Convention on Climate Change. For example, we could work with the Technology Executive Committee and jointly provide recipient countries with information on technology development and transfer and policy recommendations. Targeting on consultation service needs for technical projects presented by NDA of recipient countries, we could conduct further cooperation with Climate Technology Center and Network.

(V) Support climate change technical cooperation beyond UNFCCC. We could support organizations such as Innovation Mission, Energy Breakthrough and ISES and create favorable conditions for development, innovation and transfer of technologies.

EUROPEAN COMMISSION

In Article 10 of the Paris Agreement, the importance of strengthened cooperative action on technology development and transfer and a long-term vision on the importance of fully realizing technology development and transfer in order to improve resilience to climate change and to reduce greenhouse gas emissions (article

10.1 and 10.2) was agreed. The existing Technology Mechanism will serve the Paris agreement and support shall be provided to developing countries, also for research in developing countries to implement the agreement (article 10.3 and 10.6).

The EU is a strong supporter for the new Climate Technology Centre and Network (CTCN), the implementation arm of the UNFCCC Technology Mechanism. It supports country efforts to enhance the implementation of climate technology projects and programmes. It has three core services: (1) providing technical assistance to developing countries; (2) creating access to knowledge on climate technologies; and (3) fostering collaboration among climate technology stakeholders.

Since its establishment under the Climate Convention (UNFCCC) almost 100 requests have been submitted. We have in Europe today 12 National Designated Entities, as local ambassadors of the CTCN. The European Commission and Member States together are the largest donor group. In addition the European Commission and its 28 Member States are implementing dozens of projects to help developing countries to apply climate technologies. To give just one example, vocational training centres in Cape Verde help to train locals to use renewable energies in a better way.

Please also see reply to question 1.

GERMANY

Capacity building is a key element to strengthen climate action and accelerate the transformation towards low carbon and resilient economies. Providing targeted capacity building support is crucial in order for Parties to effectively prepare and implement the Paris agreement, especially with regard to new requirements such as the regular communication and implementation of NDCs, the enhanced transparency requirements and the enhanced reporting obligations on adaptation under the Paris Agreement

In the UNFCCC context, the Capacity Building Initiative for Transparency (CBIT) under the GEF and the Paris Committee on Capacity Building (PCCB) could play a key role and its prompt operationalization should be supported. Outside the UNFCCC context, relevant implementing organizations, multilateral and bilateral cooperation as well as private sector, academia and research organizations should enhance their collaboration on capacity building.

The EU approach to Capacity Building is country-driven, gender responsive and comprehensive. It links activities to context specific needs and challenges and emphasizes national ownership. As cross-cutting issue, it is a substantial and integral part of all development activities. Cooperation and synergies with other initiatives are envisaged to assess the effectiveness and progress made.

Technology-transfer, innovation and development: Promoting a clear long term vision of what a net-zero GHG emission economy and society will look like, and laying out long-term strategies for how to realize this vision, will go a long way towards incentivizing innovation in the field of zero or negative-carbon technologies. Furthermore, there is a strong need for workable mechanisms for the transfer of technologies on the international level. Export initiatives such as the one for renewable energies by the German ministry for economy and energy (BMW) could be suitable for replication in other countries. Furthermore, concepts for partnerships with the private industries in developing countries to develop climate friendly technologies are not yet well researched, including financial instruments to support the industries in doing so.

JAPAN

Innovation is critical in order to effectively address the long-term climate change challenge. In this regard, it is essential to develop and disseminate innovative technologies while further promoting the introduction of existing low-carbon technologies. Based on this idea, Japan has been actively engaged in the field of technology development and transfer, including through policies and initiatives mentioned below.

Firstly, as a forerunner of innovation, Japan presented the “Energy and Environment Innovation Strategy” in spring 2016 to reinforce the development of innovative technologies in energy and environment. In the strategy Japan sets goals including establishing a hydrogen supply chain to achieve a CO₂-free society and developing storage batteries whose energy density is more than five times thicker than that of the conventional one at less than one-tenth of the current cost compared to existing technologies.

Japan is also an active member of “Mission Innovation”, a plurilateral initiative that aims to dramatically accelerate public and private global clean energy innovation.

Furthermore, Japan will continue to take lead by incorporating various opinions and efforts of each country at conferences such as the Innovation for Cool Earth Forum (ICEF), an international conference where world leaders from businesses, academia and governments come together to discuss how to best address climate change through innovation. More than 1,000 experts from around 70 countries participated in its second annual meeting last year, with discussion topics including innovative technologies such as artificial photosynthesis, full-scale use of Hydrogen, cooperation among funding agencies of different countries, and technology transfer to developing countries. Japan aims to further develop ICEF as a platform to promote international cooperation for innovation, and plans to hold the third annual meeting of ICEF from 5th-6th October this year.

Lastly, Japan will promote diffusion of advanced low carbon technologies particularly through implementation of the Joint Crediting Mechanism (JCM). Japan has signed bilateral documents with 16 countries so far, and will be further elaborating and implementing low-carbon technology projects.

Japan considers the promotion of innovation as the key to fundamentally address climate change, and will proactively contribute to solutions to the issue through policies and initiatives such as Energy and Environment Innovation Strategy, Mission Innovation, ICEF and JCM.

KOREA

<Technology Development & Transfer>

With the inclusion of a new article on technology support in the Paris Agreement, there is a growing emphasis on the importance of technology development and transfer. With this in mind, Korea designated the Ministry of Science, ICT and Future Planning as the NDE of CTCN, which is a body under the UNFCCC, and newly established climate technology cooperation team. With such efforts, Korea is working to accelerate climate-related technology development and transfer that meets the expectation of the international community. .

Developing countries are continuously requesting capacity-building and R&D rather than a mere technology transfer. We plan to take their request into account and create a system that can provide support in multiple aspects so that developing countries can benefit from more than technology industrialization such as equipment provision and construction and take advantage of personnel training and joint R&D. By constituting

a consortium of companies, universities and research institutions, we can find out the best case of providing practical support for climate technology and expand climate technology cooperation.

Since ownership of developing countries is the most important factor of technology assistance projects, we aim to operate diverse capacity building programs where developing countries can develop project models themselves. In addition, we plan to operate a program for government officials and technology related workers to specify technology cooperation projects and providing support for writing out project proposals. By doing so, we believe that we can get an accurate understanding of the demand of developing countries.

Based on the domestic public technology and companies, Korea will simultaneously resolve developing countries' climate challenges and prepare an effective plan to support climate technology development that can expand achievements of public research and create new markets and jobs.

<Capacity Building>

To support capacity building of developing countries for their response to climate change, Korea International Cooperation Agency (KOICA) and the Greenhouse Gas Inventory and Research Center of Korea (GIR) have been pursuing related projects. The GIR provides a training program to enhance mitigation measurement and mitigation modeling analysis capacity of developing countries. The program is set up for about 40 government officials, researchers and consultants every year and is comprised of lectures, on the job training and discussions. In addition, support is provided to build up capacity of developing countries in policy establishment by sector such as energy, water resources, forest and waste management through KOICA's professional program for energy and climate change experts, low-carbon green growth program, and South Asian Association for Regional Cooperation (SAARC) special training program. .

Meanwhile, as the host country of the GCF secretariat, Korea committed to contribute 10 million USD per year for four years since 2014, which amounts to a total of 40 million USD, to the GCF readiness program. In order to improve accessibility of GCF programs and support developing countries' business models, we invite more than 100 GCF NDAs and focal points at once twice a year to Korea to introduce Korea's experience in developing business models and provide a field visit to related sites.

UNITED STATES

The United States has engaged in a number of activities to enhance the development, deployment, and diffusion of climate technologies and practices to developing countries and economies in transition. At all levels of activity, the principal U.S. focus is to facilitate the development of the policies, regulations, and overall institutional scaffolding that is required to enhance technology transfer actions.

One of the greatest advances in the climate technology domain over the past few years has been the launch of the operational arm of the technology mechanism under the UNFCCC— the Climate Technology Centre and Network (CTCN). The United States has played a leadership role in the CTCN from its inception, with DOE's National Renewable Energy Laboratory serving as one of 11 regional core Consortium Partners from around the world. The CTCN has allowed the global community access to the advanced knowledge and policy planning expertise necessary to advance clean-energy and climate-resilient technologies at the national level. In 2015, the United States named its National Designated Entity (NDE) to serve as a focal point both for requests going to the CTCN as well as a proactive resource of information dissemination. The United States is also among the leading financial contributors to the CTCN, having delivered more than \$2 million in core funding over its first two years of operations.

Since a long-term view of climate change and development is crucial to sustainability and results, the United States is approaching the issue of capacity building for climate change in an integrated manner. Linking capacity building directly to projects and programs helps ensure that capacity built is relevant, effective, and tied to results. Building local capacity through greater reliance on local cooperating agencies is an explicit goal of the U.S. Agency for International Development (USAID). Capacity-building needs are addressed throughout all U.S. support activities, not as separate line items or projects, and are provided as a means for taking action on a mutually shared goal.

GEF's Contribution to China in Terms of Climate Finance

The Global Environment Facility (GEF) has significantly contributed to delivering global environment benefits in China over the past 25 years. Since 1991, the GEF has invested 148 projects and provided over \$1.16 billion as new and additional grants in China; the Chinese government and other Chinese stakeholders have contributed approximately \$11.2 billion in co-financing. These projects have covered a wide range of activities and scopes including new concepts and ideas, capacity building, new institution and legal system development, business model innovation, advanced technology transfer, new financial mechanism initiatives, technology demonstration and scaling up, etc. Table 1 summarizes GEF's investments in different focal areas. Particularly in Climate Change, the GEF financed 58 projects with a total grant of \$610 million which is more than 50% of total GEF grants in China. These investments have mobilized more than \$6.56 billion in co-financing from the Chinese government and other project stakeholders.

Table 1: GEF Investments in China

| Focal Area | Number of projects | GEF Grant (\$ million) | Co-finance (\$ million) |
|----------------------|---------------------------|-------------------------------|--------------------------------|
| Biodiversity | 41 | 155 | 1,409 |
| Climate Change | 58 | 610 | 6,562 |
| Land Degradation | 3 | 8 | 99 |
| International Waters | 11 | 97 | 1,460 |
| POPs | 19 | 148 | 388 |
| Multi Focal Area | 12 | 81 | 978 |
| Chemicals and Waste | 4 | 61 | 305 |
| Grand Total | 148 | 1,161 | 11,200 |

Source: GEF PMIS, as of May 23, 2016

The GEF has initially disseminated useful concepts and ideas of global environment conservation and protection to China. In the early 1990s, very few people in China knew the importance and urgency to protect and save endangered species, to mitigate climate change, and to prevent land from degradation. Through GEF's national communications and other enabling activities, the government, industrial and communal entities, CSOs, commercial banks, the private sector, and individual households gained considerable knowledge and experience in generating global environment benefits. Nowadays, the concepts and ideas to

maintain biodiversity, mitigate climate change, reduce land degradation, recycle and reuse water and other wastes have been written in government laws and regulations, text books of schools and universities, and stay in minds of over one billion Chinese people. This transformation change of Chinese people in mind will help the Chinese consciously protect the global environment in a long term.

The GEF has enhanced transfer of advanced environment protection technologies from developed countries to China. In Climate Change focal area for example, the GEF financed Chinese projects that deployed (1) the first and worldwide largest coalmine methane to power generation plant (120 MW) in Shanxi Province which used technologies from the US; and (2) the first group of off-shore wind power generation turbines in the East China Sea that transferred off-shore wind power technologies from Europe. Today, China becomes the largest country in wind turbine production, including both on-shore and off-shore. Without the GEF technology transfer project (World Bank/China Renewable Energy Scale-Up Program (CRESP II)), China's position of championship in wind power production might have been delayed for many years.

The GEF has empowered China to the top runner in adopting new business models. In the 1990s, the GEF has been the first financial institution to finance several projects with objectives to promote a new business model, namely, establishing Energy Service Companies (ESCOs) in China to promote energy efficiency and renewable energy investments. In the ESCO area, the GEF provided a total of \$75.5 million in grant and leveraged \$659.6 million co-financing. One of the projects financed by the GEF, for example, is China Utility-Based Energy Efficiency Finance Program (CHUEE). Through CHUEE, the GEF has enabled commercial banks, utility companies, government agencies, and ESCOs which supply energy efficiency equipment and services to collaborate for the first time, in creating a sustainable financing model. This program successfully reduces greenhouse-gas emissions and promotes cleaner production through the implementation of energy efficiency and renewable energy projects. As of June 2015, the CHUEE program's partner banks had provided loans worth over \$625 million under the risk-sharing facilities provided by the GEF and the IFC, financing 222 energy efficiency/renewable energy projects. These investments are estimated to reduce over 20 million tons of CO₂ every year, which is equivalent to the total annual emissions of Mongolia. Beyond the risk-sharing facilities, the CHUEE's advisory service has led project partner banks to develop green portfolios of over \$170 billion. As of May 2016, CHUEE program has moved into its third phase. The GEF grants used as de-risk guarantee for commercial banks are still playing an important role in the program.

The GEF has greatly facilitated the Chinese government to reach its climate mitigation goal. In its Intended Nationally Determined Contributions (INDCs) to the UNFCCC, China pledged to peak its carbon emissions around 2030. One of the most important measures to achieve the goal is to promote energy efficiency, renewable energy and carbon emission trading nationwide. Recently, with the World Bank, the GEF has provided a \$17.8 billion grant and mobilized over one billion US dollars of co-financing to finance a program in Beijing, Tianjin and Hebei that will establish an MRV (monitoring, reporting and verification) system for energy saving certificates and carbon emissions trading. This project will provide the Chinese government with valuable experiences and knowledge for its 2017 nationwide emission trading scheme.

In adaptation, the GEF has financed, through its Special Climate Change Fund, south-south adaptation project whereby China, through the research centers of its Academy of Sciences (CAS), is developing and sharing research and soft technologies on ecosystems-based adaptation (EbA) with Nepal, Seychelles and Mauritania, representing differing ecosystem types (mountainous, coastal and arid) and focusing on the agricultural and ecological constraints specific to them. The GEF has also financed an agricultural sector intervention, which supported the development of state-of-art information systems and models in order to incorporate climate

change considerations in the broader agricultural development frameworks in the 3H basin, and optimize production given the region's climate vulnerabilities. As a result, high-value crop production rose from \$3.2 million tons to \$4.2 million tons per year.

Since Dr. Naoko Ishii started leading the GEF, China has continued receiving more innovative concepts and ideas from the GEF. The Sustainable Cities Integrated Approach Pilot program, for example, attempts to promote urban sustainability, recognizing that mayors in China seek to transform cities as inclusive and resilient hubs of growth. The Program is providing innovative tools and knowledge to help them make informed decisions for sustainable development for cities. As a result, the Program will contribute towards avoiding or reducing tens of million metric tons of CO₂e in greenhouse gas emissions and significantly mitigate local air pollution in China alone. History has approved that GEF has capability to deliver expected outputs in sustainable city program. From 2011 – 2016, the GEF financed Sino-Singapore Tianjin Eco-City project. The project demonstrated how to turn a waste land into a socially harmonious, environmentally friendly and resource-efficient city. The GEF grant (\$6 million) contributed to the establishment of enabling policy, regulatory and institutional framework and implementation of an integrated urban plan, piloting energy efficient buildings, promoting great usage of public transport and non-motorized transport modes and reducing GHG emissions per trip. The GEF project also articulated the need to complement technical solutions with economic incentives, to help seek the balance between commercial and public interest, and to create socially inclusive, vibrant communities in the city.

In addition, the GEF has facilitated China to develop multi-focal area (MFA) projects and programs. For instance, the GEF financed a program entitled *Partnership on Land Degradation in Dryland Ecosystems*. With \$50 million of GEF funds, this program nested nine 'child' projects in six provinces, leveraging approximately \$800 million of co-funding. In 2014, the Chinese government launched a second phase (2014 – 2023) of the program that was funded by ongoing GEF-5 projects. China's GEF-6 and future CCM and LD STAR allocations are likely to be invested in child projects in three more provinces. Creating synergies of related stakeholders, the program has significantly contributed to the progress in combating land degradation and mitigating climate change in China.

The Chinese government and people believe that the GEF will continue to have a unique position to successfully help China as a developing country to deliver remarkable global environment benefits. By making good use of GEF's innovative ideas and concepts, capacity, technologies, business models and financial mechanisms, the Chinese government and people will continue to join the international community's in tackling climate change and environmental degradation.

World Bank Group Support for Climate Action in China

Climate change has been mainstreamed into the WBG program in China, which has one of the Bank's largest and most innovative climate change mitigation and adaptation investment programs with 40% of the IBRD's active portfolio of 112 projects supporting climate change. In addition, of the US\$2.5 billion IFC's overall climate related investments last year 14% were in China. This represented 30% of IFC's investments in China in the same period. Most of the interventions are at the cutting edge of technology and institutional and financial reform, providing demonstrations that are then replicated at a significant scale through subsequent investment from China's own resources.

The main focus of the WBG support to China in CC includes project in the energy, transport environment, water and urban sectors using almost all available instruments, from technical assistance and GEF grants to IBRD and IFC loans. Most recently, the first two PforRs being prepared in China to improve air quality in the JingJinJi region also contribute significantly to climate change mitigation agenda.

Energy. Over the past decade, the World Bank has committed \$1.6 billion in the energy sector, including IBRD, GEF, and carbon financing, of which 93% are fully green energy (about 60% energy efficiency, 23% renewable energy and 8% gas). Currently, the energy sector has an active portfolio of 23 projects and \$1.4 billion 100% in climate change mitigation related commitments. Its core investment and advisory services business lines aim to align with the GOC's goals for moving toward a more sustainable development path: energy efficiency, renewables, low carbon cities, and clean energy solutions. In addition, the energy practice has supported several and growing number of south-south knowledge exchange activities (e.g. energy efficiency, hydropower).

The IBRD has also supported the introduction of market-based delivery models and financing mechanisms for energy efficiency. These include introducing and mainstreaming energy service companies (ESCOs), leveraging commercial financing for energy efficiency investments through advisory services (also through IFC), equity, direct lending, credit risk guarantees (both, IBRD/IFC), credit lines to banks, and financial leasing. The IBRD's China Energy Efficiency Financing credit lines to two commercial banks have mobilized \$1 billion since inception: \$240 million in IBRD commitments has leveraged substantial commercial financing from banks and commercial enterprises. The subprojects are expected to save 2.3 million tons of standard coal equivalent per year (and lifetime savings of 46 million tce), or about 5.6 million tCO₂ of emissions per year (and lifetime emission reduction of 112 million tCO₂). IFC also worked with eight Financial Intermediaries on the China Utility-Based Energy Efficiency (CHUEE) programs which now claim green finance portfolios of over US\$75 billion.

The World Bank and IFC have been working closely to identify synergies in China, especially on climate change and energy. The WBG is now working with NDRC on the development of trading mechanisms such as energy saving certificates trading and carbon emissions trading schemes to make compliance with anticipated new targets easier for enterprises.

Transport. The transport sector also places a strong focus on the Climate change agenda (13 projects, US\$1.7 billion in climate change commitments). The contribution to China's achievements in this sector includes: (i) improving public urban transport and infrastructure, (ii) strengthening the railway network, and (iii) increasing the use of waterways. The IBRD has developed a unique demonstration-style approach to urban transport lending – the “integrated demonstration corridor”. A single lending operation cannot support all of the interconnected investments and policy changes needed to ensure the successful operation of an urban transport investment across an entire city. So the first operations make these investments on a smaller scale, on a corridor basis, to serve as a best-practice template for replication throughout the rest of the city. This approach is being successfully implemented in seven cities. Furthermore, these and other experiences feed into the science of delivery knowledge hub convened by China and the IBRD, the Urban Transport Solutions Platform- TransFORM, envisaged to be a collaborative solutions platform to make urban transport safer, cleaner, and more affordable for development.

Urban. This sector (7 projects US\$1.2 billion in commitments) has been focus on supporting cities develop integrated plans like the Tianjin Eco-city and the Liaoning Coastal Economic project which support the development of low carbon urban infrastructure and service delivery in, and considering adaptation when necessary.

Environment. This sector (5 projects and US\$385 million in commitments) has been focusing on decreasing emissions of short-lived pollutants. An example is the over US\$400 million support to phase-out ozone depleting substances (ODS) over the past 12 years. This program also encouraged the adoption of modern alternatives to ODS and less energy intensive processes, both of which supported reversing unsustainable environmental trends, both domestically and globally. As a result, ODS was phased out and the mitigation impact achieved through the production sector plans alone is calculated to be 443 million tons CO₂- equivalent (about 20% more than France's total CO₂ emissions in 2013). The IBRD long-term support to reforestation resulted on the establishment of over 4 million hectares of forests. Each project introduced innovation and international experiences. The operations moved from simple timber plantations to focusing on ecological functions such as watershed/degraded land management and biodiversity conservation, serving as benchmarks for new initiatives in China. This year IBRD approved a project in Hebei to demonstrate sustainable biogas production and utilization to reduce environmental pollution and supply clean energy in rural areas of Hebei Province.

Water. IBRD developed the innovative integrated water and environment management (IWEM) approach which has been successfully tested in pilot sub-basins which contributes to the adaptation agenda. These are now being replicated, with WBG support in other basins. On flood risk management the IBRD has been supporting the design and deployment of flood warning and disaster assessment and decision support systems at the basin level as well as the introduction of new technology, materials and construction methods.

This mainstreaming in the lending portfolio has been supported with innovative pilots financed by GEF and trust funds. China has one of the IBRD's largest GEF climate change portfolios with about 67% of its 21 GEF projects and total GEF commitments of about US\$ 187 million currently. GEF grants, especially when blended with IBRD financing, have provided a successful platform to develop laws, policies and regulations, and to test and scale-up innovations at national and local levels on energy, transport, water resources and agriculture, helping to promote innovation, policy dialogue, and capacity building.

Asian Development Bank - Managing Climate Change in the PRC

Over the last three Country Partnership Strategy (CPS) periods (2008 – 2020), ADB has gradually mainstreamed climate change mitigation and adaptation through its lending and non-lending operations in the PRC. This has helped to “green” the portfolio across all major sectors – energy, transport, urban, water and environment. Previous and ongoing efforts have not only directly reduced greenhouse gas emissions (GHG) significantly but helped pilot and demonstrate some new technologies and solutions with high impact on climate change mitigation and adaptation. The current CPS (2016 – 2020) has placed managing climate change and environment as the top strategic priority.

In December 2014, ADB and the National Development and Reform Commission (NDRC) signed a Memorandum of Understanding (MoU) on Cooperation to Address Climate Change. A major achievement under the MoU had been ADB’s policy recommendations for PRC’s 13th Five Year Plan on environmental and climate protection. The MoU further led to a Joint High Level Side Event at the Paris Climate Change Summit. Based on the MoU, the ADB is now accelerating its support for the PRC’s effective implementation of its Nationally Determined Contributions (NDCs), particularly in the areas on GHG control, low carbon technology promotion, and carbon financing.

Lending: Within the previous CPS period 2011 – 2015, ADB’s lending operations (both sovereign and PSOD) were scaled up leading to the avoidance of 25 million tons (Mt) CO₂/year. This conservative estimate directly attributed to ADB financing ignores multiplier effects of successful demonstration of respective projects.

Non-lending: In terms of impact regarding GHG emission reduction, ADB is supporting since 2011 PRC’s establishment of a cap-and-trade carbon-dioxide emissions trading system (ETS). This ETS support is consistent with the PRC government’s stated objective of reducing the country’s carbon intensity by 60–65% by 2030 compared with 2005. If rolled out at national level the ETS can lead to 200 Mt CO₂ emission reductions per year. Further, ADB established a Climate Technology Finance Center (CTFC) that is currently working with Hunan and Ningxia provinces to provide assistance in mainstreaming climate technologies into their provincial development and investment plans.

Climate Investments in the PRC

Table 1 below is presenting the breakdown of climate finance to the PRC from the ADB from 2011 – 2015.

| PRC Climate Investments 2011-2015 (\$ million) | | | | | | | | | |
|------------------------------------------------|-----------------|--------------|-----------------|---------------|-------------|---------------|-----------------------|--------------|-----------------|
| Year | Mitigation | | | Adaptation | | | Total Climate Finance | | |
| | ADB Resources | External | Subtotal | ADB Resources | External | Subtotal | ADB Resources | External | Total |
| 2011 | 370.55 | 3.36 | 373.91 | 92.12 | 5.10 | 97.22 | 462.67 | 8.46 | 471.13 |
| 2012 | 261.73 | 0.00 | 261.73 | 190.00 | 0.00 | 190.00 | 451.73 | 0.00 | 451.73 |
| 2013 | 192.30 | 3.65 | 195.96 | 340.65 | 0.00 | 340.65 | 532.95 | 3.65 | 536.61 |
| 2014 | 145.46 | 5.10 | 150.55 | 2.00 | 0.00 | 2.00 | 147.46 | 5.10 | 152.55 |
| 2015 | 431.94 | 0.00 | 431.94 | 21.30 | 0.00 | 21.30 | 453.24 | 0.00 | 453.24 |
| TOTAL | 1,401.97 | 12.11 | 1,414.08 | 646.07 | 5.10 | 651.17 | 2,048.04 | 17.21 | 2,065.25 |

Note: The sharp drop of adaptation figures from 2013 to 2014 is mainly a result of reclassification of adaptation measures. The new system only takes into account the incremental costs directly targeting adaptation to climate change.

Selected operations supporting reductions of GHG emissions

A. MITIGATION

- **Mitigation through energy efficiency.** The Guangdong Energy Efficiency Project (2008 -2013) was ADB's first large-scale energy efficiency project in PRC that demonstrated a sustainable business model to establish a revolving financing facility for energy efficiency investments in SMEs. The first batch of sub projects have been successfully demonstrated and resulted in avoided peak electricity demand of 242 MW. There have been several follow-up projects in Shandong and Hebei Provinces using a similar lending modality based on the lessons learnt from this project. In 2015, ADB supported chemical industry energy efficiency and emission reduction project.
- **Mitigation through renewable energy.** While ADB's private sector operations focused on more mature on shore wind power projects and solar PV projects development in the country, ADB public sector operations focused on supporting development of concentrated solar power and approved PRC's one of the first large-scale concentrated solar power projects in Qinghai in 2014.
- **Climate change mitigation by reducing methane emissions from coal mining.** The Coal Mine Methane (CMM) Development Project (2004) is the first such large scale recovery and utilization of methane - a highly potent GHG, from coal mining. This project had a catalytic impact on the use of CMM and CBM in PRC which resulted in improved coal mine safety, reduced GHG emissions and availability additional clean energy.

- **Climate change mitigation with clean coal technology.** The Tianjin Integrated Gasification Combined Cycle Project (IGCC) Project is a pioneering project to demonstrate clean coal technology which is more efficient and results in lower level of emissions compared to the traditional coal technologies. This is the first large scale IGCC project (250 MW) in Asia and is in operation since December 2012.
- **Securing mitigation through Carbon Capture and Storage (CCS).** Carbon capture and storage (CCS) is the only commercial low carbon technology that can avoid up to 90% of CO₂ emissions from large fossil fuelbased industrial and power plants. The PRC included CCS in its NDCs. ADB has supported PRC's Road Map for CCS Demonstration and Deployment and the roadmap identified opportunities that can lead to 50 - 70 Mt CO₂ capture and storage per year by 2030. CCS was supported by four TAs. ADB is likely to support feasibility assessment of the first large-scale CCS project in the PRC.
- **Improving air quality by reducing emissions through policy-based lending.** The Beijing-Tianjin-Hebei Air Quality Reform Program is ADB's first policy-based loan in the PRC that focuses on combating air pollution with large co-benefits of GHG mitigation effects due to its support for a cleaner primary energy mix, clean transport and various efficiency enhancements.
- **Reducing Emissions through the Sustainable Transport Initiative (STI).** ADB's transport sector operations in the PRC are guided by the STI, which calls for emissions reductions through lower carbon modes of transport and policy intervention. Recent project examples include promoting cleaner urban mass public transport, transit oriented development and non-motorized transport.
- **Low carbon cities.** Launching a Climate-Smart/Low-Carbon Cities Initiative: ADB has been working to promote such smart and low-carbon approaches in urban settings through various lending and non-lending projects. (e.g. 2015 Qingdao Smart Low –Carbon District Energy Project). ADB, in close cooperation with NDRC-CC, plans to provide technical assistance that would respond to the need of local and city governments on building a GHG inventory and knowledge management system for low carbon economy development.
- **Mitigation through efficient utilization of agriculture wastes.** Investments in integrated rural biomass renewable energy development piloted leading biomass energy technologies and resources for various distribution scales and explored the potential of biomass energy to displace use of coal for heating and electricity, close the urban-rural energy gap, and mend the environment in the PRC.

B. ADAPTATION

- **Ecosystem-based climate adaptation.** The use of biodiversity and ecosystem services to help people adapt to the adverse effects of climate change has been piloted in several ADB projects to enhance

resilience to climate induced droughts or floods. The 2005 GEF-ADB Sanjiang Plain Wetlands Protection Project aimed to achieve an integrated conservation and development model to protect the natural resources (biodiversity, water, forests) while improving the well-being of local communities. The 2014 Xinjiang Akesu Integrated Urban Development and Environment Improvement Project is focusing on an oasis town threatened by reduced seasonal water replenishment from upstream glacial and snow melt and the conversion of local wetlands into farmland. This project addresses these risks through the rehabilitation and protection of wetlands, aimed at replenishing local aquifers, as well as capacity building and public awareness programs on wetlands and responsible water use.

- **Optimal water infrastructure to adapt to climate change.** The 2014 Guangdong Chaonan Water Resources Development and Protection Demonstration Project is showcasing adaptation measures to projected climate-induced higher temperatures, changing precipitation patterns, and increases in the numbers of droughts as floods, such as (i) reducing future demand for water through increased efficiency, improved maintenance, and conservation of water; (ii) increasing the availability of raw water supply through the capture and storage of excess winter river flows; and (iii) reducing drought, flooding, sea level rise and subsidence risks to assets and infrastructure.
- **Integrated water resources management to strengthen the resilience capacity.** The Guiyang Integrated Water Resources Management (Sector) Project supported water scarce Guiyang Municipality in managing its water resources by improving water quality and improving water use efficiency with nonstructural and structural measures. With similar rationale, the 2016 Qinghai Haidong Urban-Rural Eco Development Project will support the sustainable development of the western Province's second largest city through wetland rehabilitation and reforestation and by building capacity for local integrated watershed management and water allocation management at the river basin level.
- **Infrastructure climate proofing.** In the road subsector, ADB has developed guidelines for climate proofing investments in roads that are now followed in all transport projects.

Looking ahead, ADB is committed to scale-up efforts and double its climate financing. It is well placed to build on past efforts and strongly support PRC's efforts to peak its emissions around 2030. At the same time, ADB lending and non-lending operations are also focused on building more resilience in its investment projects so that climate change related risks can be better managed.