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Green Finance for Green Growth

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EXECUTIVE SUMMARY

Required Action/Decision Points

The joint study of 'Green finance for green growth' will be performed during 2010 and 2011. This is the interim report for the first year study.

It is recommended that FMM:

1. Should notice the importance and urgency of green growth and green finance in their policy-making. Green growth is defined as growth generated through the harmony between the economy and the environment and green finance refers to financial support for green growth. To incentivize private-sector financing from banks and capital market for green growth, we consider various government interventions including market-based instruments, government subsidies, and tax incentives.
2. Should understand the importance of technology development and private sector participation in pursuing green growth and green finance. There are many barriers for technology development and distribution and we need to prepare various solutions for it. The financing sources from public sectors are limited and we should attract the financing from private sectors. To ensure adequate risk-adjusted rates of return for private finance, public intervention is required.
3. Should consider various policies to improve the participation of banks and capital market in green finance. Because private institutions have limited information about green industries, governments should try to reduce the information gap by introducing green certificates, credit-rating agencies, environmental stock index, etc.
4. Should investigate the feasibility of market-based instruments like tradable permits and carbon tax. The use of market-based instruments in APEC is still not as widespread as more costly command and control regulations, despite their cost advantages in addressing environmental problems.
5. Can consider the creation of a virtual Green Finance Institute as a platform among APEC member economies for knowledge co-creation, learning, and dialogue.
6. Should build an infrastructure for green financing in APEC economies and work towards a standardized Monitoring, Reporting and Verification system beginning with greenhouse gas emissions. We can undertake a limited number of focused country-specific green growth case studies including an analysis of incentives and constraints and leading to specific policy recommendations. This would recognize structural differences in institutions and policies across APEC economies.

Key Recommendations from the APEC Experts Panel on Green Finance for Green Growth to the APEC Finance Ministers Summit in Kyoto

The joint study, 'Green finance for green growth', was initiated by Korean Ministry of Strategy and Finance in SFOM in Singapore in July, 2009 and was reported to FMM in November, 2009 to be implemented during 2010 and 2011. This report is the result from the first year study in 2010.

Green growth is defined as growth generated through the harmony between the economy and the environment. It accomplishes industrial and economic advancements in an attempt to reduce the danger of global warming and to prevent other environmental problems. It aims to achieve the goal of a low-carbon economy. It strategically promotes green industry, including environmental pollution prevention projects and renewable energy development projects. Green growth is the solution to three current threats to the global economy: climate change, energy constraints and financial crisis.

Green finance refers to financial support for green growth. The role of corporations is most important in accomplishing environmental improvement and green growth, but the financial programs available to such corporations and industries may, in fact, accelerate and expand their performance. To incentivize private sector financing from banks and capital markets, we consider various government interventions, including market-based instruments, government subsidies, tax incentives and necessary measurement reporting and verification infrastructure. .

Technology for green growth. The national average of energy efficiency among APEC member economies varies widely. The development and distribution of innovative technology may narrow the energy efficiency gap across APEC economies and significantly contribute to green growth worldwide. The adoption in China of existing advanced technologies, such as those used in the US and Japan, can reduce CO2 emissions and local air pollution in this economy sharply.

The barriers for technology development and distribution are high upfront costs, reliability of technology, information gaps and protection of intellectual property rights. We suggest three solutions to tackle these barriers.

- First, we must create sufficient volume of the market to purchase the technology. We must guarantee enough sales volume in the market for the manufacturer with the new technology.
- Second, we can make a list of commercially viable best technology to reduce the information gap.
- Third, we should create incentives to motivate direct investment by firms which have developed the technology. This will be helpful in recovering the R&D expenses and in transferring the technology.

Global greenhouse gas reduction targets, such as a proposed 50% reduction by 2050, will require the development and deployment of new, cutting edge technologies. We are investigating appropriate supporting programs to stimulate each stage of the technology cycle, including R&D, commercialization, and diffusion.

Public private partnership in green finance. The demand for funding in order to shift to the green growth economy is enormous. Actually, many of the traditional donor countries face government budget constraints, and, as such, private finance is expected to play an important role. The private sector can be the primary source of funds for green growth, but it does require profits that are adequate for the risks involved. To ensure that adequate risk-adjusted rates of return for the private finance, public intervention is required. Possible options are risk mitigation by public financial institutions, co-financing through public and private finance, taking funding risk through a tranche approach, and improving the investment climate in the host countries.

Role of public sector to assist private bank financing. Commercial banks are currently somewhat reluctant to participate voluntarily in the green finance market because the inherent uncertainty regarding returns and risks prevents private financial institutions from jumping into green finance. The public sector may be the most appropriate actor to make green finance more attractive via risk sharing, tax benefits, etc. Green assessments and tax deductions in the Netherlands green fund scheme, public credit guarantees to green technology and green industry in Korea and the green bank proposal in the US are examples.

One danger of government interventions of this kind is that private sector participation may be crowded out.. Such interventions therefore need to be carefully designed, and once the market begins to work itself, the public sector should gradually withdraw such interventions. Governments can also enhance the operations of green finance through banks by providing:

- A database on green industries with the data they have already acquired with the ultimate objective of building credit rating agencies specialized in green industries. This would help overcome transition problems where banks have limited information about green industries, including policy risk, market risk, credit risk, etc.
- Green certificates to certain projects or companies will help to categorize the green sector when commercial banks cannot define it.
- Information programs to enhance public awareness on environmental protection and information about the environmental performance of goods. This would encourage demand to gradually substitute green products for conventional products

Green financing from banks in emerging economies. Ambiguous definitions of green companies and green industries cause uncertainty about the objectives of policy. This is particularly the case in emerging and less developed economies. Published information about the environmental performance of firms is often inadequate and less timely than in more advanced economies. Most small and medium enterprises have to rely on private financing or self-financing, finding it difficult to obtain loans from financial institutions. Governments find it difficult to guide and supervise commercial banks' green credit effectively. The lack of specialized institutions, staff and systems exacerbates these problems and further leads to the ineffective implementation of green credit. These issues lead to a green financing gap in emerging economies. Solutions identified thus far in our study include:

- The need to formulate a clear set of definitions about what green companies and industries are in order to enable green credit policies.
- Enhance banking regulators' supervision of commercial banks' environmental lending practices.
- Promote public environmental awareness education
- Create and/or improve environmental information databases, enhance the information communication between government and banking sectors and strengthen disclosure of green credit information.
- Help the commercial banks to establish enterprise environmental risk assessment systems.
- Strengthen international cooperation to standardize definitions and adapt them in accordance with local settings

Increased role of capital markets towards green growth. Clean energy infrastructure investment has already begun in the APEC area. Capital markets are playing an increasingly important role. For example, global corporations are speeding up their adoption of clean tech products/services and clean energy renewable capacity rollout has shifted from Europe towards APEC areas like China and India. Investments in renewable technology and energy efficiency technology have increased over the years, and many of them are financed through capital markets. Especially, the participation of venture capital and private equity in clean energy, like wind and solar power, has been expanded. Clean energy and climate change equity funds have soared in many economies, and environmental, social and governance (ESG) factors are increasingly integrated into the investment process. Social and environmental risks and opportunities have become a common theme in long term investment. New energy and some clean energy-related stock have outperformed the broader market recently.

More effective capital markets towards green growth can be achieved from the following policies.

- First, there should be increased requirements to report and disclose environmental information. Therefore, there must be more research on information disclosure standards and measurements of refinement. We should enforce companies to establish enterprise environmental accounting systems and to improve environment audit and assessment standards.
- Second, green rating systems need to be constructed. With the environmental performance rating system, the regulatory compliance rate has increased in some nations.
- Third, an environmental stock market index needs to be introduced to provide a quantitative measure of the environmental damages caused by a company. The general criticism about these indices is that the 'score' given is partially subjective.

Adoption of market-based instruments for green finance. Market-based instruments are policy tools – based on regulations – that use market signals (e.g. changes in relative prices) to change behavior. In comparison, the traditional method of achieving environmental outcomes ('command and control' regulation) uses explicit government directives such as mandated technologies to improve environmental outcomes.

The benefit of using market forces, as opposed to explicit directives, is that firms are allowed to respond to the signal in the manner that minimizes costs to them. This flexibility provides incentives for greater pollution reduction in firms with lower abatement costs and helps achieve an environmental objective at the least cost to society. In practice, implementation issues such as administrative and transaction costs, measurement and enforcement issues and the need for assistance packages will reduce the efficiency of market-based instruments. Nonetheless, market-based instruments do provide significant cost savings when compared to a pure 'command and control' approach. There are four key types of market-based instruments: taxes and subsidies, tradable permits, market friction reductions and voluntary programs.

Tradable permits. With careful design, tradable permit schemes offer excellent prospects to tackle diffuse source environmental problems such as air pollution and climate change. Where some pollution sources cannot be (or are not) covered, complementary measures – including where necessary command and control regulations are implemented – can be used to avoid creating unnecessary distortions and to achieve abatement in non-covered sectors. Some tradable permit schemes will have negative impacts on particular households, industries and employees of polluting activities who may lose their jobs. The presence of such costs may create a need for government assistance and such assistance can be built into the scheme design. The use of tradable permit systems in APEC is still not as widespread as more costly command and control regulations, despite their cost advantages in addressing environmental problems

Fiscal policy. The use of incentives through government spending on green activities and disincentives through the taxation of polluting activities influences green growth. Fiscal policy can therefore be designed to be more or less consistent with green growth. Subsidies to technology developers, tax breaks for manufacturing scale-up and tax credits to consumers can all accelerate green growth. The challenge is to find cost effective fiscal solutions, noting that subsidies impose costs on the rest of the economy and that taxes have distortive elements.

The full potential of green taxes (eg. carbon tax, fuel tax) has not yet been reached in APEC and should be explored further, to be accompanied by removal of pervasive fuel subsidies. Where used effectively, green tax has the potential to bring budget neutrality, by raising revenue to accelerate green growth and reducing tax distortions elsewhere in the economy. Subsidies, tax benefits and other incentives designed for green industries have to withstand pressure from other sectors and changes in political systems. There is no systematic reporting of subsidies, taxes and credit policies at APEC level. Establishing an information sharing mechanism will help member economies to learn from each other on successful policy practices.

Collaboration among APEC member economies. There are significant opportunities for collaboration and risk sharing among APEC countries. These could take place if APEC developed and developing countries agree to a "division of labor" in order to create a conducive environment for green growth. An optimal flow of green finance will take place when middle/high income APEC countries assuming the technology risks invest in cutting edge technology to accelerate the path of climate-friendly growth and low income countries invest in reducing their future vulnerability by adopting proven technologies that enhance energy efficiency, increasing energy access and building resilience to expected future variability. Both groups of APEC countries may establish a culture of learning and information sharing, so that a green growth path is achieved through partnership with each other.

Interim action plan. A three point action plan may be considered as the start of a region-wide effort to promote green finance for green growth.

- First, we should transform climate change concerns into 'win-win' partnerships between the developed and less developed APEC economies. The APEC Finance Ministers will encourage

their respective institutions to work toward removing barriers to diffusion of commercially proven climate-friendly technologies. The creation of a virtual Green Finance Institute as a platform among APEC member countries for knowledge co-creation, learning and dialogue is proposed.

- Second, we should build the infrastructure for green financing in APEC economies and work towards a standardized Monitoring, Reporting and Verification system beginning with greenhouse gas emissions.
- Third, we should undertake a limited number of focused economy specific green growth case studies including an analysis of incentives and constraints and leading to specific policy recommendations. This would recognize structural differences in institutions and policies across APEC economies. Through these studies key national decision makers can gain ample appreciation of the opportunities and constraints in green finance development.