

The Pilot Asia-Pacific Climate Technology Network and Finance Center

The Asian Development Bank and the United Nations Environment Programme, in partnership with the Global Environment Facility and other donors, promote climate technology transfer and deployment

How can technology help address climate change?

Technology transfer is an important response to global climate change. It is particularly critical in the developing countries of Asia and the Pacific, whose greenhouse gas (GHG) emissions are rapidly increasing while their large populations are highly vulnerable to the impacts of climate change.

New and advanced technologies are important for addressing both the causes and effects of climate change, and they also offer a broad range of additional benefits. The deployment of cleaner and more advanced technologies especially in the energy, transport, and urban sectors is crucial to reducing GHG emissions. They can also reduce both air pollution and reliance on increasingly expensive energy imports. Innovative technologies can play an

important role in boosting resilience to climate change. Better infrastructure and building technologies, flood management, and early warning technologies all help protect areas faced with increased climate-related risk. Agricultural technologies, such as drought or saline-tolerant crop varieties, can help develop more resilient food systems. Off-grid electricity generation and water supply technologies can offer services to isolated areas where provision has been prohibitively expensive.

Markets for climate technologies are likely to grow rapidly in the coming years. Developing industries with climate technologies can contribute to building long-term competitiveness. There is an urgent need to ensure these are made available as widely as possible in the region.

The 73-megawatt Lopburi solar power plant in central Thailand is the largest solar photovoltaic project in the region.





Gerhard Jörén

Water is distributed to people displaced by severe droughts in Pakistan

Why do climate technologies need support?

At present, advanced climate technologies are not widely available in the region, and frequently face barriers that can hinder their transfer and deployment. Barriers to new technologies can stem from a general lack of knowledge about technologies, lack of understanding of current and future climate risks, insufficient government support, and institutional arrangements that may prevent broader up-take of a technology.

Climate technologies face additional barriers as they address long-term environmental problems, the costs of which are not properly reflected in market prices. Therefore, government policies may be necessary to generate demand for them. These barriers imply additional risk for investments in climate technologies, translating into difficulties in finding the private sector investment necessary to bring these technologies to market.

Different kinds of support for climate technologies are needed to overcome the barriers they face at different stages of their development. This includes improving awareness of available technologies in key sectors, providing favorable policies that promote both technology transfer and deployment by generating market demand, and support for the mobilization of financial resources. The Pilot Asia-Pacific Climate Technology Network and Finance Center is designed to address all these barriers.

Why do we need the pilot center now?

Rapid economic growth and high levels of investment in the region mean there is an opportunity to leapfrog conventional development paths and jump straight to cutting-edge climate technologies. If these technologies are not adopted in the near term, countries risk making investments in long-term capital stock, locking-in conventional technologies for years to come. Policies, institutions, and resources encouraging investment in climate technologies must therefore be put in place as soon as possible.

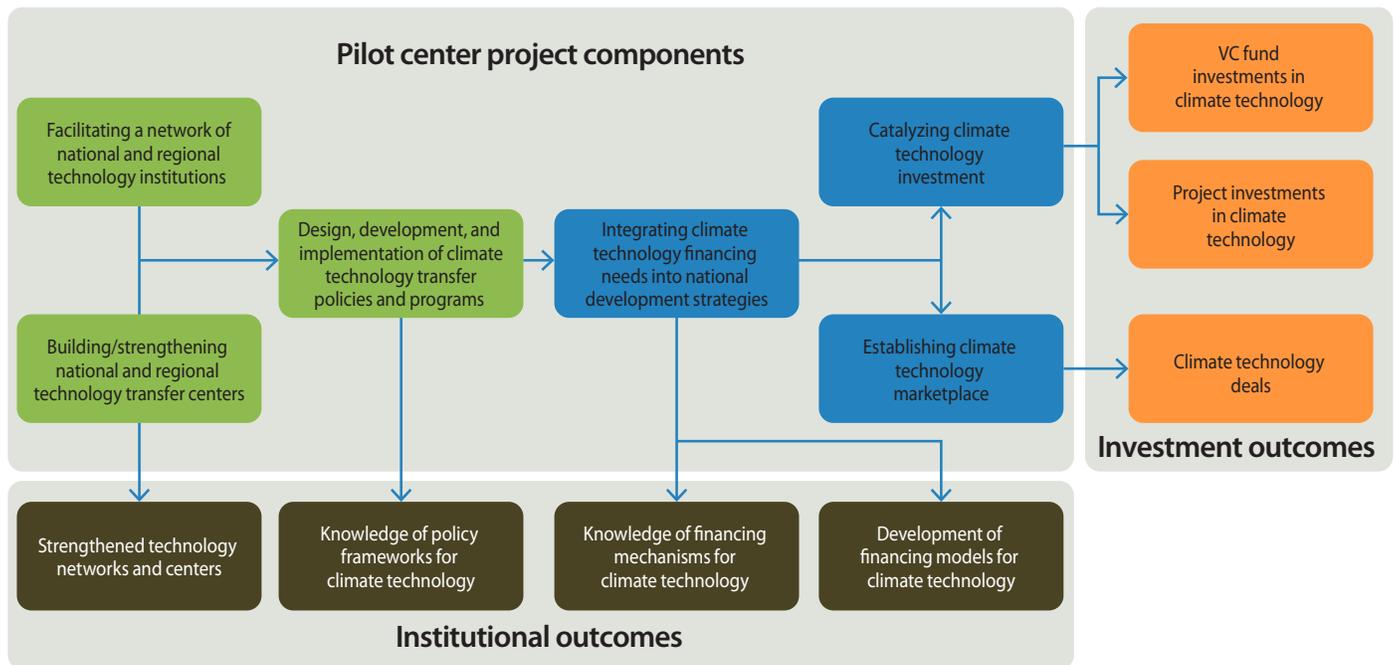
What is the Pilot Asia-Pacific Climate Technology Network and Finance Center?

The Asian Development Bank (ADB) and the United Nations Environment Programme (UNEP) are working in partnership with co-funding from the Global Environment Facility (GEF), the governments of Japan and Republic of Korea, and VITO-Flemish Institute for Technological Research NV to pilot a climate technology finance center in Manila, managed by ADB, and a climate technology network secretariat in Bangkok, managed by UNEP. These pilot institutions will directly address key barriers to climate technology transfer and deployment in Asia and the Pacific.

The climate technology network secretariat will focus on creating capacity readiness and enabling conditions for market transformation interventions in the region through fostering knowledge sharing, public-private partnerships, and the development of institutional capacity and climate technology policies. The secretariat will implement three main sets of activities:

- 1. Facilitating a network of national and regional technology centers, organizations, and initiatives.** These activities include strengthening cross-sectoral coordination on climate technology transfer and collaboration between key technology institutions, and promoting public-private investment partnerships in climate technology. Expert groups will also be formed to promote knowledge sharing and cooperation among developing countries with similar technology needs.
- 2. Building and strengthening national and regional climate technology centers and centers of excellence.** These activities will focus on strengthening specialized regional and national institutions that will host specialist expertise, offering advisory services on climate technology transfer to governments, financial institutions, and private technology providers at national and regional levels. The participation of private sector institutions will also be fostered. Targeted institutions will be supported and advised on technology entrepreneurship, such as in developing small and medium-sized enterprises and technology start-ups.

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3. Designing, developing, and implementing country-driven climate technology transfer policies, programs, demonstration projects, and scale-up strategies. This broad range of activities will support countries in designing technical and financial policy mechanisms for climate technology transfer and country-driven climate technology transfer initiatives. This will include developing monitoring and evaluation tools for technology transfer policy, setting up demonstration projects, designing strategies to scale up climate technologies, calculating costs of specific adaptation and mitigation measures, and advising on technology regulations and standards.

The ADB-managed climate technology finance center will concentrate on assisting the development of investment and economic policies and mobilizing private sector investment for climate technologies. The center will engage in three main sets of activities:

- 1. Integrating climate technology financing needs into national development strategies, plans, and investment priorities.** These activities will focus on integrating climate technology investments with national development strategies in a number of countries. Activities will focus on ensuring that best practices on climate finance are followed and the results of existing technology assessments are properly reflected in national investment planning.
- 2. Catalyzing climate technology deployment.** These activities will facilitate climate technology investments by mobilizing public and private sector financial resources. Large-scale infrastructure investment projects using innovative climate technologies, such as new types of solar panels or water filtration technologies, face greater

risks and can be difficult to finance. The center will support investment in these projects through a range of technical support for project development, thus reducing risk and encouraging investment.

Venture capital funds are another key way in which the private sector manages risks associated with new technologies. Funds pool risks by investing in a number of different companies with new technologies. Companies are usually start-ups or SMEs with high growth potential. ADB's Asia Climate Change and Clean Energy Venture Capital Initiative will invest \$60 million in several venture capital funds specializing in climate technologies. These equity investments are expected to leverage at least an additional \$200 million in investment. The technology finance center will offer advice and professional support for identifying market opportunities, technological competence, and analyzing the growth potential of companies targeted for investment and issues relating to intellectual property rights. This assistance will help the venture funds reduce their costs and build their capacity in the emerging climate technology market.

- 3. Establishing a pilot "marketplace" of owners and users of low-carbon technologies to facilitate their transfer.** The technology marketplace has been designed to address the lack of markets for climate technologies. The marketplace will provide a platform which allows knowledge sharing about available climate technologies. Importantly, it puts technology providers, such as SMEs and research institutions, in touch with firms looking to market new technologies. This lowers the effort spent on finding a suitable partner to bring a technology to market. The platform will also offer support for technology deals, lowering costs associated with contracting and legal agreements.



Eric Salles

Compact fluorescent lamps are tested at the Lighting and Appliance Testing Laboratory of the Department of Energy at the University of the Philippines, Diliman, Quezon City, Philippines

Together, these activities will constitute the workings of the Pilot Asia-Pacific Climate Technology Network and Finance Center. They have been designed to form a coherent framework for supporting all aspects of the process of climate technology transfer and deployment, with a particular focus on mobilizing private sector resources.

This pilot will also draw on a range of expertise and technical knowledge, working in partnership with various regional and global stakeholders.

How will the project relate to the ongoing international negotiations?

At the 16th Conference of the Parties to the United Nations Framework Convention on Climate Change, held in Cancun in December 2010, it was agreed that a Technology Mechanism would be established to facilitate the transfer and diffusion of climate technologies, including the Technology Executive Committee and the Climate Technology Centre and Network.

The Pilot Asia-Pacific Climate Technology Network and Finance Center is expected to help inform Parties on the implementation of the Technology Mechanism by providing practical experience and lessons, while enabling ADB and UNEP to concentrate their support for climate technology transfer and deployment in a way that is aligned with the international negotiations.

The development of a pilot center is not intended to preempt the ongoing negotiations on the operations, structure, and function of the Technology Mechanism in any way.

Expected outcomes from the pilot center

Key outcomes from the pilot center are expected to include strengthened national and regional institutions and networks that can better facilitate climate technology transfer and deployment, and better national policies to promote climate technologies. The pilot center's operations are also expected to mobilize considerable investment in climate technology projects, firms, and technologies, with at least \$660 million of financing spread across the region by the end of 2014.

For more information

www.adb.org/projects/project.asp?id=45134

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About the Asian Development Bank

ADB's vision is an Asia and Pacific region free of poverty. Its mission is to help its developing member countries reduce poverty and improve the quality of life of their people. Despite the region's many successes, it remains home to two-thirds of the world's poor: 1.8 billion people who live on less than \$2 a day, with 903 million struggling on less than \$1.25 a day. ADB is committed to reducing poverty through inclusive economic growth, environmentally sustainable growth, and regional integration.

Based in Manila, ADB is owned by 67 members, including 48 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.

www.adb.org

About United Nations Environment Programme

Created in 1972, UNEP represents the United Nations' environmental conscience. Based in Nairobi, Kenya, its mission is to provide leadership and encourage partnership in caring for the environment by inspiring, informing, and enabling nations and peoples to improve their quality of life without compromising that of future generations. UNEP's Division of Technology, Industry and Economics—based in Paris—helps governments, local authorities and decision-makers in business and industry to develop and implement policies and practices focusing on sustainable development. The Division leads UNEP's work in the areas of climate change, resource efficiency, harmful substances, and hazardous waste.

www.unep.org

About the Global Environment Facility

The GEF unites 182 countries in partnership with international institutions, civil society organizations, and the private sector to address global environmental issues while supporting national sustainable development initiatives. Today the GEF is the largest public funder of projects to improve the global environment. An independently operating financial organization, the GEF provides grants for projects related to biodiversity, climate change, international waters, land degradation, the ozone layer, and persistent organic pollutants.

Since 1991, the GEF has achieved a strong track record with developing countries and countries with economies in transition, providing \$10.5 billion in grants and leveraging \$51 billion in co-financing for over 2,700 projects in over 165 countries.

www.thegef.org

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