Completion Report

Project Number: 48481-001
Technical Assistance Number: 8859
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Technology Transfer for Disaster Resilient Infrastructure Project Development

Asian Development Bank

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TA Number, Country, and Name:			Amount Approved: $225,000	
TA 8859-REG: Technology Transfer for Disaster Resilient Infrastructure Project Development			Revised Amount: N.A.	
Executing Agency: ADB		Source of Funding: TASF-V	Amount Undisbursed: USD 46,777.68	Amount Utilized: USD 178,222.32
TA Approval Date:	TA Signing Date:	Fielding of First Consultant:	TA Completion Date Original:	Actual:
16 December 2014	N.A.	25 March 2015	31 December 2015	31 December 2015
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			31 March 2016	18 April 2016

Description

Asia and the Pacific is easily the most disaster-prone region in the world. Among the many ways of cushioning against the adverse impacts of disasters is to put in place disaster-resilient infrastructure with innovative technologies and solutions that can withstand the impact of disasters.

TA 8859–REG: Technology Transfer for Disaster-Resilient Infrastructure Project Development brought together ADB staff, developing member country (DMC) officials, and private sector technology providers to discuss innovative knowledge solutions promoting disaster-resilience and smart communities. Private sector participation was sought as knowledge contributor, not business partner, in the SSTA.

Expected Impact, Outcome, and Outputs

The expected outputs were a long list of innovative and cost effective technologies applicable to ADB disaster resilient projects, identification of potential knowledge partners, and dialogue among ADB, DMCs, and private sector technology providers towards finding technology solutions for ADB projects. The expected outcome was to increase the number of ADB projects adopting the identified innovative technology solutions, and the projected impact was more disaster-resilient infrastructure in DMCs, leading to sustainable economic development.

Delivery of Inputs and Conduct of Activities

ADB served as executing agency (EA) of the SSTA. The Knowledge Sharing and Services Center (SDCC-KS) led the implementation of SSTA activities, with support from the energy, transport, water, and urban development sector groups (SGs).

The main activity was the *Knowledge Partnership Forum: Innovation for Resilient and Smart Communities*, held last 19–20 May 2015. This tripartite dialogue brought together ADB project officers, DMC officials, and private sector technology providers in the energy, transport, urban, and water sectors. The event attracted over 300 participants—176 participants representing 75 private companies from 14 countries; 27 officials representing 12 DMCs, 57 development partners, and 42 ADB project officers. The post-event evaluation revealed that on a scale of 1–5, with 1 being the highest, 42% of the respondents rated their overall satisfaction as 1 and 45% ranked theirs as 2. After the Forum, an online community was established in LinkedIn (https://ph.linkedin.com/in/smart-cities-2b7ba6b6) to enable participants to pursue discussions.

Two national individual consultants were initially recruited for the SSTA, one to manage the networking and communications among the invited participants and another to manage the logistics of the SSTA activities. A third consultant, international, was engaged to help with ADB's support to the Indonesian Government. All consultants effectively supported the activities of the SSTA. In terms of inputs, the SSTA consumed 8.7 person months of the 12 person months budgeted for national consultants.

The TA was economically efficient, spending only 80% of its budget for both the DMF-specified deliverables and the follow-through activities as ADB pursued knowledge partnerships on various fronts. The savings can be attributed to the efficient operations and budgeting for the Knowledge Partnership Forum in May 2015. Specifically, a) ADB facilities were used as venue; b) private sector participants shouldered their travel and lodging expenses; and c) members of ADB's Board and Management and high level ADB staff served as resource persons, thereby reducing the number of resource persons requiring honorarium/remuneration from the TA funds.

ADB's performance as EA was satisfactory as it supported the consultancy work as well as implementation of SSTA activities and follow-through initiatives. Highlights of key events were constantly shared with relevant stakeholders and uploaded in www.k-learn.adb.org.

Evaluation of Outputs and Achievement of Outcome

The SSTA has delivered its specified outputs and continues to pursue its projected outcome. The Knowledge Partnership Forum effectively surfaced technology demands and priority needs of DMCs and gave the SGs involved leads for possible collaborations with the private sector.

To ensure continuation of the tripartite dialogue, several follow-through initiatives were undertaken—and continue to be pursued beyond SSTA completion. These include: a) country-based Knowledge Partnership Fora; b) ADB support to Indonesian Government for the establishment of the Center of Excellence (COE) on Clean Energy[1]; and c) promoting knowledge partnership between ADB and the Regional Task Force (RTF), a network of private sector companies engaged in the promotion of clean energy.

Two country knowledge partnership forums have been conducted—in Indonesia, where the Indonesian Government welcomed the private sector's inputs on establishing its COE on Clean energy; and in Japan, which had the strong commitment of the Government as the initiative aligns with its pursuit of quality infrastructure investments. More are planned for the People's Republic of China, Republic of Korea, and the Philippines. ADB's support for the Indonesia COE on Clean Energy uses the One ADB Approach, where the PSOD, SERD, and SDCC join forces to provide the technical support Indonesia needs. Selected private sector firms and academic institutions have agreed to mentor the COE staff on a pro-bono basis. The emerging ADB-RTF knowledge partnership will give ADB staff and selected DMCs access to RTF's private sector experts on clean energy.

The SSTA's activities demonstrated the private sector agencies' intent to work with ADB beyond their interest for profit. The development of DMC capacity so that they can understand innovations and create an enabling environment for them seems to be a strong motivation for the private sector.

Overall Assessment and Rating
Overall, the SSTA can be considered successful. It used its resources efficiently, and follow-through activities to sustain the knowledge exchange are adding to the gains. The sector and thematic groups that participated in the SSTA activities were exposed to technology-driven solutions with potential applications in their respective projects, and top-notch advice from think tanks or private sector technology providers remain available to the Indonesia COE.

Major Lessons
Conducting country-based partnership forums prior to holding the regional Knowledge Partnership Week (KPW) would likely have improved the chances of brokering workable knowledge partnerships at the end of the KPW.

A consensus on the roles and contributions of the different ADB units to support the COE on Clean Energy would significantly improve interventions for Indonesia and make the One ADB approach more productive.

Further collaboration among the relevant ADB units is needed for working with the private sector agencies as "One ADB" to account for different perspectives, e.g., business opportunity, knowledge partnership, and cofinancing.

Recommendations and Follow-Up Actions
The technology needs of DMCs are often basic in nature. In contrast, the technology breakthroughs from the private sector are often cutting edge but expensive. Continue the dialogue to expose the DMCs to what is new and advanced and enable the private sector to gauge the demand for less cutting edge technology relevant to the DMCs.

The cost of imported technology is high, which slows its adoption. Use knowledge partnerships to harness private sector expertise to develop local capacity and attract investments, thereby making technologies more affordable and offsetting high costs.

Pursue the following projects that showed promise in the matching exercise undertaken under the SSTA.

Continue support for the COE on Clean Energy, pursue the partnership with RTF, and explore opportunities for South-South knowledge exchange involving countries, think tanks, and private sector firms.

TA = technical assistance.

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[1] The Government of Indonesia aims to raise the share of renewable energy from 6% in 2014 to 23% in 2025. It established the Center of Excellence (COE) on Clean Energy, officially launched in February 2016, to promote new and renewable energy development and integration at micro to medium enterprise and industry levels; undertake research, development, and demonstration activities in controlled environments and as pilot projects; provide project development and implementation support; optimize policy and regulatory frameworks to enhance private sector investment and participation; and find innovative solutions to mitigate costs and risks for both public and private sectors in the deployment of new and renewable energy. ADB, through TA 8859, supported the COE establishment through the a) development of a geospatial decision support system designed to enable the COE to assess the potential for, and suitability of, new and renewable energy investments in a given area; b) crafting of a development plan for the COE; c) identification of innovative clean energy technologies to be applied to Indonesia; and d) identification of potential knowledge partners who can build the capacity of the COE staff.