



Regional: Promoting Ecosystem Services and Forest Carbon Financing in Asia and the Pacific

Project Name	Promoting Ecosystem Services and Forest Carbon Financing in Asia and the Pacific												
Project Number	44141-012												
Country	Regional												
Project Status	Active												
Project Type / Modality of Assistance	Technical Assistance												
Source of Funding / Amount	<table border="1"><tr><td colspan="2">TA 8564-REG: Promoting Ecosystems Management for Sustainable Development</td></tr><tr><td>Climate Change Fund</td><td>US\$ 800,000.00</td></tr><tr><td colspan="2">TA 8564-REG: Promoting Ecosystem Services and Forest Carbon Financing in Asia and the Pacific (Supplementary)</td></tr><tr><td>Technical Assistance Special Fund</td><td>US\$ 270,000.00</td></tr><tr><td colspan="2">TA 8564-REG: Promoting Ecosystem Services and Forest Carbon Financing in Asia and the Pacific (Supplementary)</td></tr><tr><td>Strategic Climate Fund - FIP</td><td>US\$ 250,000.00</td></tr></table>	TA 8564-REG: Promoting Ecosystems Management for Sustainable Development		Climate Change Fund	US\$ 800,000.00	TA 8564-REG: Promoting Ecosystem Services and Forest Carbon Financing in Asia and the Pacific (Supplementary)		Technical Assistance Special Fund	US\$ 270,000.00	TA 8564-REG: Promoting Ecosystem Services and Forest Carbon Financing in Asia and the Pacific (Supplementary)		Strategic Climate Fund - FIP	US\$ 250,000.00
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Strategic Climate Fund - FIP	US\$ 250,000.00												
Strategic Agendas	Environmentally sustainable growth Inclusive economic growth												
Drivers of Change	Governance and capacity development Knowledge solutions Partnerships												
Sector / Subsector	Agriculture, natural resources and rural development - Fishery - Forestry - Land-based natural resources management												
Gender Equity and Mainstreaming	No gender elements												

Description

The TA will support knowledge, partnerships and assessments of ecosystem service values and their application to strategic planning and projects in participating ADB developing member countries (DMC). It will do this through the provision of technical advisory services and knowledge support to ongoing and planned ADB and DMC projects focused on integrated landscape management and coastal and marine resource management.

The TA will support the achievement of the Convention on Biological Diversity (CBD) Strategic Plan for Biodiversity and Aichi Targets for 2010-2020, which targets, among others, that by 2020, biodiversity values will be integrated into national and local development and poverty reduction strategies and planning processes (Target 2). The TA is consistent with ADB's Climate Change Program (CCP), including objectives relating to managing land use and forests for carbon sequestration; and promoting climate resilient development. In particular, the TA is designed to address specific criteria of ADB's Climate Change Fund (CCF), including support to maintain, restore and enhance carbon-rich natural ecosystems, while maximize co-benefits for the conservation of biodiversity and the generation of other ecosystem services. The TA also supports the implementation of ADB's Environment Operations Directions (EOD) for 2013-2020, which highlights the importance of addressing the degradation of 'natural capital' and promotes the assessments of ecosystem service values as a tool. The TA will build on RDTA 41246-01: Capturing Economic Benefits from Ecosystem Services, which focused on DMC access to emerging carbon markets through REDD-plus. This included review and information sharing on DMC policies, strategies, and experiences, as well as the identification of opportunities for 'co-benefits' for biodiversity and rural livelihoods.

The TA will be implemented over 24 months.

Impact: Improved regional trends in reducing land and forest degradation and in sustainable coastal and marine resource management by 2020.

Outcome: Increased DMC capacity to apply and integrate ecosystem service valuation in policies, strategies and/or plans by 2016. This will be measured by a review of the level of integration of ecosystem services values within selected policy and planning processes targeted by the TA.

Outputs

(i) Strengthened knowledge and regional partnerships for economic valuation of ecosystem services. The project will undertake a review existing methods and tools for the assessment and economic valuation of ecosystem services and biodiversity, including climate regulation services; and will review case studies to assess gaps, barriers, constraints and opportunities for wider-scale use in the region. This will be combined with a review of experiences and good practices in establishing functioning PES, REDD-plus and other sustainable business models, incentives and financial mechanisms, based on past projects and initiatives of ADB and others. Methodological issues will include consideration of classifications, concepts, indicators/proxies and data sources required for the physical measurement of ecosystem services; and pricing and valuation approaches amenable to information and data constraints in DMCs. The reviews will provide a basis for pilot projects under Outputs 1 and 2. Knowledge generated will also be shared regionally through publications, workshops and web-based materials.

Knowledge generation, DMC capacity strengthening, and pilot projects will be supported through the establishment/strengthening of partnerships and knowledge networks with key global, regional and local organizations, including academic groups, national and regional organizations, non-government organizations (NGOs) and programs by other development partners. South-south knowledge exchange will also be promoted and supported. Knowledge dissemination strategies will include support for regional knowledge sharing events and products. Country level capacity building and institutional strengthening will be linked to pilot activities under Outputs 2 and 3. Final knowledge products from the TA are expected to include: (i) case studies and policy briefs on ecosystem service valuation, conservation and carbon financing, and country mainstreaming progress and approaches; and (ii) guidance notes and training modules on the ecosystem service assessments within ADB country programming and project level economic assessments will be prepared in collaboration with ADB's Economic Research Department (ERD). Training will include: identification of ecosystem services and benefits; impact of conversion or degradation on service delivery; practical methods, tools and data requirements, and integration of ecosystem service valuation in project level economic analysis.

(ii) Improved assessment and mapping of ecosystem service values for critical landscapes and seascapes. In order to support capacity development and wider testing of ecosystem system assessments, the project will support assessment and spatial mapping of ecosystem services and values in ecosystem landscape and/or seascapes in the Asia-Pacific region. Up to four assessments will be undertaken (linked to Output 3 below). Support for these assessments will be provided on a demand basis through close cooperation with ADB regional departments and DMCs. Ideally, the assessments will link with ongoing or planned projects and initiatives, where additional resources for ecosystem service assessments can provide a catalyst to the establishment of PES/REDD-plus mechanisms; and/or support identified policy, strategy and planning processes in DMCs. Selection criteria for project support will be developed and are expected to include the following: (i) degree of linkage with ongoing and planned projects and initiatives; (ii) targeting of thematic gaps for ecosystem service assessments; (iii) opportunities for scale-up and replication; (iii) countries or target areas with limited past support; and (iv) opportunities for community benefits and poverty reduction. Project support will include technical advisory services by consultants and resources and additional analytical studies where needed.

(iii) Piloting the integration of ecosystem service values and financing mechanisms into projects and planning. Building on Output 2, the project will support the integration of ecosystem service values into decision-making processes through pilot activities at 3 levels: (i) integration within preparation of an ADB country partnership strategy (CPS), through links with country environment analysis/country environment notes (CEA/CEN) and relevant sector papers (1 pilot); (ii) integration within national / sector level policy or spatial planning processes at the DMC level (1 pilot); and (iii) integration at the project level, particularly in support of project preparation and economic analysis, including analysis of economic internal rates of return (EIRR) (2 pilots). The activities will be undertaken through participatory processes with DMCs in target countries in order to increase capacity and ownership. Each of the four pilots will include assessments of options for establishing financial mechanisms through PES, REDD-plus or other financial mechanisms. Participatory planning processes will evaluate opportunity costs and trade-offs, green growth opportunities within the given strategic planning or project context. At least four pilots will be undertaken and will be selected through consultation with regional departments. It is also expected that project level assessments will be undertaken in collaboration with ADB's Economic Research Department (ERD), with a view to drawing lessons on the integration of ecosystem service assessments in project level economic analysis.

Project Rationale and Linkage to Country/Regional Strategy

Natural ecosystems in Asia and the Pacific are among the richest and most diverse on the planet. The region holds 20% of the world's biodiversity, 14% of the world's tropical forests, and 34% of global coral reefs, including the greatest number of marine species in the world. Unfortunately, these resources are under enormous pressure due to rapid economic growth and unsustainable management practices. Over the last 20 years, the rate of loss of highly diverse and carbon-rich primary forests has increased, and from 2000 to 2010, primary forest cover declined by an estimated 0.5% per annum. Forest loss and associated degradation are key drivers of terrestrial biodiversity loss, and between 1970 and 2008 biodiversity in the region declined by 64% - twice the global average. Land use change, including deforestation and degradation are also a key source of greenhouse gas emissions, and it has been estimated that continued conversion of the region's forests could potentially release 39 million tonnes of carbon stocks. Climate change and variability are likely to compound these issues, leading to more forest fires, accelerated species loss, and degradation of ecosystem goods and services. Coastal and marine ecosystems face similar challenges, with approximately 50% of coral reefs in Southeast Asia at risk from unsustainable coastal development, overfishing and destructive fishing practices and climate change.

Ecosystem goods and services flow from the world's stocks of _natural capital_ and are worth billions of dollars per year in Asia and the Pacific. For example, the monetary values of services provided by tropical forests have been estimated at between \$91 and \$23,222 per hectare per year, while services from coastal wetlands have been valued between \$1995 and \$215,349 per hectare per year. The myriad of provisioning, regulating and other services provided by this _natural infrastructure_ support, among others, food and fiber production, clean water, soil protection, climate regulation, flood control, and contribute to food, water and energy security, and climate resilience. This is particularly important for the poor, who are often more directly reliant on ecosystem services for their livelihoods and have less access to affordable substitutes. Few ecosystem services however, have explicit prices or are traded in open markets. As a result they are rarely taken fully into account through economic signals in markets or reflected adequately in national accounts. This contributes to their decline and often marginalizes the importance of natural capital in decision-making processes. Further, lack of information and market failures have largely prevented the private sector from using market opportunities to support ecosystem services to the full extent possible.

In response, a range of policy and regulatory reforms and capacity development are needed to integrate the value of natural capital into decision-making, and provide suitable enabling conditions and incentives to reduce negative externalities and drive markets and consumers towards green growth. Although such approaches are not new, the momentum in favour of mainstreaming economic analysis of ecosystem services has accelerated in recent years, owing to factors such as new evidence on declining ecosystem services and its linkages with apparatus such as monetary and fiscal policies. In particular, this has been stimulated by analytical studies such as the Millennium Ecosystem Assessment (UNEP, 2000) and initiatives such as The Economics of Ecosystems and Biodiversity (TEEB), which have drawn increased attention from policy-makers to the economic benefits of biodiversity. Focused mostly at global and sub-regional levels, these efforts drew together experience, knowledge and methodologies on the valuation of ecosystem services and their integration with policy-making. Recent efforts by the TEEB and the World Bank's WAVES Program, , as well as pilot projects supported by non-government organizations (NGOs) such as WWF have also begun to focus on national and sub-national assessments. There are also numerous smaller projects ongoing, however regional level knowledge exchange is still somewhat limited.

In the Asia-Pacific region, there has been growing interest from DMCs to better value ecosystem services, particularly in relation to the development of sustainable financing mechanisms to support biodiversity conservation and sustainable livelihoods. This has included analytical work to support the establishment of payments for ecosystem services (PES), as well as support for forest carbon financing mechanisms to reduce greenhouse gas emissions from deforestation and forest degradation (known as REDD-plus). To date, ADB has played a role in supporting PES and REDD-plus efforts through capacity development, policy advice and pilot projects in a number of countries. This has included for example, support for the formulation of national and provincial policy and legal frameworks and guidelines (in the People's Republic of China [PRC] and Viet Nam), and the identification of PES and carbon financing opportunities linked to the management of forests and watersheds (in the GMS, Indonesia and PRC), grasslands and degraded lands (in the Mongolia and the PRC) and coastal and marine ecosystems (in the Coral Triangle). In particular, ADB supported regional programs such as the Coral Triangle Initiative on Coral reefs, Fisheries and Food Security (CTI-CFF), the Heart of Borneo Initiative (HOB), and the Greater Mekong Subregion Core Environment Program and Biodiversity Corridors Initiative (GMS CEP-BCI) are promoting the use of these approaches through national and regional level interventions.

While there has been a growth in activities in the region, most PES and REDD-plus projects remain at a small scale and have not yet lived up to their potential in delivering system wide impacts. The reasons for this vary, but include constraints in relation to: a lack of clearly defined rights over common property resources; high transactions costs and complexity associated with establishing benefit distribution mechanisms; lack of rigorous assessments of ecosystem service values and / or limited data and information on which to base assessments, and lack of confidence and limited willingness to accept and establish payment levels that reflect at least the opportunity cost of alternative land uses.

From an institutional perspective, there is also a need to develop local and regional institutional frameworks and capacities to support the integration of ecosystem service values within relevant policy, planning and project-level decision frameworks. Furthermore there are a number of thematic gaps in the focus of ecosystem service assessments and PES mechanisms, which have tended to focus on the protection of forests and watersheds in order to protect water quality for hydropower or other water utilities. Relatively less attention however has been given to the establishment of PES mechanisms for coastal and marine ecosystems, including incentives for improved fisheries management; and transfer mechanisms to encourage the protection of mangroves, seagrass beds and salt marshes, which rank among the most concentrated carbon sinks on the planet. More attention is also needed on quantifying the benefits of maintaining natural ecosystems for climate resilience, including benefits such as flood control and coastal protection.

Impact	Increased integration of ecosystem service values within national and subnational development planning processes
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Project Outcome

Description of Outcome	Increased commitment of DMCs to integrating requirements for ecosystem service assessment within policies and regulatory frameworks
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Progress Toward Outcome	
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Implementation Progress

Description of Project Outputs	<ol style="list-style-type: none">1. Knowledge shared and partnerships strengthened for economic valuation of ecosystem services2. Mapping and valuation performed for ecosystem services in critical landscapes and seascapes3. Pilot activities conducted of the integration of ecosystem service values and financing mechanisms in planning processes and projects
Status of Implementation Progress (Outputs, Activities, and Issues)	<p>Output 1: A study on <i>Opportunities for Investing in Natural Capital</i> was undertaken. An inception workshop was held at ADB HQ on 3-6 May 2016, and the draft report was reviewed at a workshop at ADB in October 2016. Drafts of the technical report and knowledge briefs were finalized in March 2017. Finalization of the report, with web-based information dissemination is expected by June 2017. A regional forum on Sustainable Infrastructure: Integrating Climate Resilience and Natural Capital into Transport Infrastructure Planning and Design is being planned for 17-18 May 2017 in Hanoi, Viet Nam. It is being organized jointly by ADB, with the World Wide Fund for Nature (WWF) and the Viet Nam Ministry of Natural Resources and Environment (MONRE). The forum will bring together about 100 decision makers and experts to discuss good practices and guiding principles for planning, designing and financing climate-resilient and ecologically sound transport infrastructure. Under Outputs 2 and 3, the two pilot studies were undertaken:</p> <p>a. In Myanmar, a pilot study supported the preparation of the <i>Irrigated Agriculture Inclusive Development Project</i>, which was approved by ADB in November 2016. The work focused on developing approaches for sustainable land management in the Central Dry Zone of Myanmar. Preparatory studies involved a household survey on ecosystem services and livelihoods, land use assessment; and the mapping and valuation of ecosystem services across the Dry Zone. The team also prepared a \$5 million grant proposal for the Global Environment Facility (GEF) linked to the irrigation project. The preparation of the final report and knowledge products are ongoing and are expected to be completed by 31 May 2017.</p> <p>b. In Viet Nam, a pilot study assisted the preparation the <i>Support to Border Areas Development Project</i>, which was approved by ADB in December 2016. The assessment included the mapping and valuation of ecosystem services in 5 Central Highlands provinces. In addition a study on entry points for mainstreaming ecosystem services into transport planning was completed at the national level working with the Ministry of Transport and the Ministry of Natural Resources and Environment. The study influenced the project design, which now includes an activity to update the regional master plan integrating climate change and ecosystem services. The preparation of the final report and knowledge products are ongoing and are expected to be completed by 31 May 2017.</p> <p>A useful output of the 2 pilot studies was the development of a Spatial Ecosystem Service Valuation Tool, which can be used to rapidly assess the value of ecosystem services at multiple scales. In Cambodia, the TA has supported the Ministry of Agriculture, Forestry and Fisheries (MAFF) and the Ministry of Natural Resources and Environment (MOE) to prepare a Forest Investment Plan. The plan is expected to be finalized in May 2017.</p>
Geographical Location	

Summary of Environmental and Social Aspects

Environmental Aspects

Involuntary Resettlement

Indigenous Peoples

Stakeholder Communication, Participation, and Consultation

During Project Design

During Project Implementation

Responsible Staff

Responsible ADB Officer	Dunn, Bruce K.
Responsible ADB Department	SDEC
Responsible ADB Division	SDES
Executing Agencies	<i>Asian Development Bank 6 ADB Avenue, Mandaluyong City 1550, Philippines</i>

Timetable

Concept Clearance	04 Nov 2013
Fact Finding	-
MRM	-

Approval	06 Dec 2013
Last Review Mission	-
PDS Creation Date	19 Mar 2010
Last PDS Update	27 Apr 2017

TA 8564-REG

Milestones					
Approval	Signing Date	Effectivity Date	Closing		
			Original	Revised	Actual
06 Dec 2013	-	06 Dec 2013	31 Dec 2015	12 Jun 2017	-

Financing Plan/TA Utilization							Cumulative Disbursements	
ADB	Cofinancing	Counterpart				Total	Date	Amount
		Gov	Beneficiaries	Project Sponsor	Others			
1,070,000.00	250,000.00	0.00	0.00	0.00	0.00	1,320,000.00	06 Dec 2013	1,248,824.54

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Request for Information	http://www.adb.org/forms/request-information-form?subject=44141-012
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