



Completion Report

PUBLIC

Project Number: 50159-001
Technical Assistance Number: 9461
October 2023

Protecting and Investing in Natural Capital in Asia and the Pacific

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TECHNICAL ASSISTANCE COMPLETION REPORT

TA Number, Country, and Name: TA 9461-REG: Protecting and Investing in Natural Capital in Asia and the Pacific		Amount Approved: \$3,689,862	
		Revised Amount: \$4,989,862	
Executing Agency: Asian Development Bank	Source of Funding: Technical Assistance Special Fund, Climate Change Fund, Global Environment Facility, Republic of Korea e-Asia and Knowledge Partnership Fund	Amount Undisbursed: \$412,934.75	Amount Used: \$4,576,927.25
TA Approval Date: 13 December 2017	TA Signing Date: 13 December 2017	TA Completion Date	
		Original Date: 31 December 2020	Latest Revised Date: 30 November 2022
		Financial Closing Date: 31 May 2023	Number of Extensions: 2
TA Type: Knowledge and Support TA	Nature of Activity: Capacity Development	TA Arrangement: Regional	

Description

The Asia and Pacific region is highly dependent on natural capital that is experiencing severe decline threatening to constrain future economic growth. Increasing pressure on natural capital is driven by a range of factors, including agriculture expansion, urbanization, infrastructure development, and poaching. The continuing decline suggests that current investments are not sufficient to cover deficits caused by unsustainable use and degradation of natural capital. Against this backdrop, the knowledge and support technical assistance (TA) has aimed to build the business case and capacity of Asian Development Bank (ADB) and its developing member countries (DMCs) to invest in natural capital.

Expected Impact, Outcome, and Outputs

- The TA's expected impact was natural capital assets improved. The expected outcome was commitment of DMCs to invest in natural capital increased. The expected outputs were: (i) Business case for natural capital investments established, (ii) Investments in natural capital prepared, (iii) Capacity to address illegal wildlife crime enhanced, and (iv) Knowledge and capacity for natural capital investment strengthened.
- During implementation, an increase in TA amount, minor change in scope and implementation arrangements, and extension of completion date were made for conducting additional activities particularly under outputs i, ii, and iv. The subsequent result was an increase in performance indicator targets while maintaining the outcome and output statements as reflected in the design and monitoring framework (DMF) in Appendix 1.

Implementation Arrangements

- ADB administered the TA through the Sustainable Development and Climate Change Department and the Environment Thematic Group (ETG). For output 3, the Biodiversity Management Bureau of the Department of Environment and Natural Resources was the implementing agency for TA activities in the Philippines. The ETG administered recruitment and supervision of consultants, procurement of goods and services, development and dissemination of publications, and organization of events.
- The TA total amount was \$4,989,862, increased (approved on 28 February 2020) from the original amount of \$3,689,862 to increase outreach and value for participating DMCs and ADB operations departments such as developing national guidelines, strengthening capacity, and mitigating negative impacts of renewable energy infrastructures on biodiversity. The TA was financed by Technical Assistance Special Fund (\$0.9 mil) and co-financed by Global Environment Facility (\$1.83 mil), Climate Change Fund (\$1.75 mil), and Republic of Korea e-Asia and Knowledge Partnership Fund (\$0.5 mil). The TA disbursement rate was 92% and undisbursed rate was 8%. The disbursements followed ADB's Technical Assistance Disbursement Handbook (2010, as amended from time to time).
- The TA implementation was from December 2017 to November 2022 with 2 completion date extensions. The original completion date (December 2020) was extended to December 2021 due to increase in TA amount and re-extended to November 2022 due to TA implementation delays caused by the coronavirus disease (COVID-19) pandemic.
- Thirteen minor changes in scope and implementation arrangements were made mainly due to the increase in TA amount, the extension of TA implementation period, and the response to a demand for TA support from operations.
- A total of 612 person-months of consultants (219 for international and 393 for national consultants) and 80 resource persons were engaged. The consultants were engaged in accordance with ADB's Procurement Policy (2017, as amended from time to time) and associated Project Administration Instructions and TA Staff Instructions.
- Knowledge work (e.g., events) were conducted under the partnerships with a range of development partners, including the Ministry of the Environment, Japan, and the Netherlands Enterprise Agency (RVO).

Conduct of Activities

In general, the TA activities and deliverables were received positively by beneficiaries, including DMC officials. The evaluation of events showed an increase in relevant knowledge and skills of participants. The details and reference documents of the outputs are provided in the DMF (Appendix 1) and summarized below.

Output 1: Prepared 15 natural capital biophysical and economic assessments of 12 DMCs such as erosion control (Bangladesh), habitat connectivity (Nepal), watershed protection (Pakistan), and flood risk management (Philippines).

Output 2: Linked to output 1, the TA assisted preparations of 8 innovative natural capital investment proposals for 7 DMCs which included Nature-based Solutions (NbS) such as restoration of mangroves, wetlands, and meandering rivers; land-use management and community-managed production and conservation with adaptable agroecological methods; bio-engineering slope stabilization; and biodiversity-sensitive road design.

Output 3: Drafted the legal reforms to revise and strengthen the Philippine Wildlife Resources Conservation and Protection Act; developed and implemented capacity building program on illegal wildlife trade with 676 government officials (42% women) trained; and conducted demand reduction measures for two priority species.

Output 4: Prepared and disseminated 15 publications, including 8 official knowledge products, and organized 10 regional conferences, 8 national workshops, and 4 webinars with 672 DMC officials (31% women) trained.

Technical Assistance Assessment Ratings

Criterion	Assessment	Rating
Relevance	<p>The TA was rated as relevant as it was aligned with ADB's strategies and DMCs' development needs although the TA design could be improved by focusing on a few key areas and setting DMF performance indicators and targets with flexibility.</p> <ul style="list-style-type: none"> The TA's outcome was highly aligned with Strategy 2030 and its Operational Priority 3 by assisting DMCs to protect and investment in natural capital. The results chain was appropriate as all the outputs were mutually linked and contributed to achieving the outcome (DMCs' increased commitment to investing in natural capital). Output 1 (assessments) provided basis for output 2 (proposals) that informed investment projects, and output 3 (capacity building, including legal reforms) created an enabling environment for the government to address wildlife-crime. Output 4 (knowledge) compiled and utilized results of outputs 1-3. The TA modality was appropriate for incorporating natural capital protection and investment features in ADB pipeline projects. The TA was also highly demand driven to the needs of participating DMCs. The minor changes in scope and implementation were necessary to respond to the demand from operations, and maintain relevance and quality of deliverables. 	Relevant
Effectiveness	<p>The TA was rated as highly effective for achieving the outcome and outputs, including unanticipated favorable results, exceeding original expectations.</p> <ul style="list-style-type: none"> The outcome target to increase DMC commitments to invest in natural capital with at least 6 new investments was exceeded with 8 projects with NbS added by TA included in ADB pipeline. The TA also delivered all expected outputs and surpassed 5 (i.e., outputs 1, 3b, 4a, 4b, 4c) of 8 of the performance indicator targets. Client satisfaction with the outputs was high. Recommendations based on output 1 assessments were incorporated in project designs through output 2. For example, assessments conducted in collaboration with the Infrastructure Preparation and Innovation Facility resulted to adoption of "room for the river" in the proposed Integrated Flood Resilience and Adaptation Project 1. Based on the support, specific NbS, including wetland restoration, embankment with bio-engineering, and obstacle removal, were integrated. For output 3, participatory public consultation results were included in a bill to amend the Philippine wildlife act. Key knowledge products under output 4 (e.g., Practitioner's Guide, Guidelines for Mainstreaming Natural River Management) were cited in ADB's major publications such as the Water Sector Directional Guide 2030. The Indonesian Ministry of National Development Planning also referred to the Philippine case study for developing a national flood risk management strategy. The post-event surveys showed effectiveness of trainings. For instance, the technical needs assessment and post-event survey revealed improved capacity of the Local Government Engineering Department (LGED) of Bangladesh on bio-engineering. The unintended favorable results included the Bangladesh: Rural Connectivity Improvement Project that benefited from the TA's bio-engineering policy and training products (e.g., Operational Guidelines, Training Manuals). The following TA events were also ranked among the ten most viewed materials on Development 	Highly effective

Criterion	Assessment	Rating
	Asia in 2022: the Greening Transportation Projects (5 th) and NbS for Climate Disaster Risk Management (8 th).	
Efficiency	The TA was rated as efficient. The TA utilized funds efficiently with 8% savings from the total amount, and all deliverables were made within the approved budget and schedule. However, there were points to be improved. For example, it was inefficient to process a large number of minor changes in scope and implementation arrangements to (i) meet growing demand from operations for NbS by increasing TA amount; (ii) manage delays caused by the pandemic by extending TA implementation period; (iii) reallocate costs, engage consultants, and procure equipment to conduct activities that were not originally envisioned. The pandemic lockdowns and travel restrictions delayed fieldwork, onsite activities, and administrative processes which necessitated TA extensions. To ensure continued efficiency and timely output delivery, the TA resorted to conducting events on virtual platforms and engaging additional national experts for conducting fieldwork and missions to overcome travel restrictions. Managing individual consultants directly required more technical and administrative support than managing consultants through a firm(s).	Efficient
Overall Assessment	Overall, the TA was rated as successful. The TA was relevant and aligned to ADB's strategies and DMC development needs. The TA was also highly effective and efficient as it achieved outcomes and outputs within budget and schedule with a high level of client satisfaction. The TA design and impact could be improved regarding performance indicators by focusing on key fields and sectors and upstream support. Despite completion of activities, the TA was less efficient in managing consultants.	Successful
Sustainability	The TA was rated as most likely sustainable. <ul style="list-style-type: none"> The NbS integrated in the 8 investment projects are likely to be implemented. The produced knowledge that is available on the TA website continues to serve as a reference for these projects. Additionally, the Bangladesh: Rural Connectivity Improvement Project will support training and operationalization of bio-engineering. Building on the results from this TA, a new TA for "Mainstreaming Nature-Positive Investments for Green, Resilient and Inclusive Recovery" (TA 10010) will provide support to create an enabling environment for scaling NbS by strengthening nature elements in relevant national plans and strategies as well as ADB pipeline. 	Most likely sustainable

Lessons Learned and Recommendations

Design and/or planning	<ul style="list-style-type: none"> Setting investment proposals as performance indicators with numerical targets has incentivized the support to investment projects that are already at the project design stage (transaction technical assistance) rather than the support to policies and strategies that determine the direction and types of investments and affect a wider range of future projects. Creating an enabling environment at the upstream policy level through the Country Partnership Strategy (CPS) process and the national policy guidance development—supporting the project identification and concept development—can make a far-reaching impact on upscaling natural capital investments. Preparing publications with experiences and lessons learned based on the support and disseminating knowledge through events can also be useful in informing operations broadly. A holistic approach is necessary to create and use knowledge for promoting investments in natural capital. Designing TA activities systematically and synergistically, rather than individually, can improve the effectiveness and efficiency of activities as a whole. Specifically, the strategic design and implementation of a series of activities aiming at both the policy and project levels can be useful. These activities include research and analysis; consultation; peer review; prefeasibility study; pilot demonstration; awareness raising; training; knowledge sharing and brokering (e.g., guide, case study, funding); and hands-on activities, including workshop and study tour.
Implementation and/or delivery	<ul style="list-style-type: none"> To mainstream nature, early engagement with operations is crucial. The support at the CPS process can encourage consideration of natural capital investments. It is also worthwhile to explore opportunities of including the consideration of such investments as part of the standard project appraisal procedure (e.g., climate adaptation screening). While TA activities tend to focus on producing knowledge, its dissemination and use are equally important. Knowledge management and communication strategy can help capture, share, and apply information effectively by providing a framework for collective and focused efforts.
Management of staff and consultants	<ul style="list-style-type: none"> A relatively large, complex, and highly technical TA with diverse areas, sectors, activities, and funding sources requires broad experience and expertise, including ADB business and operations. Systematic support to TA supervising units and lead officers, especially those who are new to ADB, at an organizational level such as mentoring and coaching can be useful with formal training.

	<ul style="list-style-type: none"> • High turnover of staff and consultants in the TA team causes delay in implementation and prevents the accumulation of technical knowledge and institutional memory. Efforts should be made to maintain team members throughout the project period, which may include provision of incentives and flexible arrangements to retain capable and experienced staff and consultants. Engaging consultants with institutional memory in post-TA activities (e.g., follow-up TA) can be helpful. • Hiring firms can simplify the management of consultants. For this TA, there was no single firm that could cover the diverse expertise required, which warranted recruitment of individual consultants.
Knowledge building	<ul style="list-style-type: none"> • ADB already has a wealth of experience in protecting and investing in natural capital; however, such experience is dispersed. Compiling ADB's experience into a publication and using it as a tool can be useful. An online knowledge repository such as ADB Data Room can be a useful way to retain, organize, and disseminate knowledge in the form of publications and events. • In addition to international knowledge, local and indigenous knowledge is necessary to integrate NbS into project design, which must be according to location-specific needs. Local and indigenous knowledge on environment and natural resources can also be a source of innovation.
Stakeholder participation	Stakeholder participation and deep commitment can contribute to making TA activities and outputs effective, efficient, and sustainable. One such example in this TA is that the regular engagement of LGED throughout the entire period has resulted in the successful implementation of relevant activities (e.g., the organization of trainings). This has also led to the high level of client satisfaction and ownership: LGED has committed to leading the training on bio-engineering, as part of the Bangladesh: Rural Connectivity Improvement Project , using the materials produced by the TA.
Partnership and cofinancing	<ul style="list-style-type: none"> • Both formal and informal partnerships can contribute to improving effectiveness and efficiency of TA activities. The support from development partners, including governments and NGOs, in identifying and providing required expertise has led to a successful implementation of the NbS for climate disaster risk management training. The internal cooperation with other relevant sector and thematic groups and operation departments through the One ADB approach have made it possible to maximize existing knowledge and resources in delivering knowledge products and events. • Cofinancing enabled the TA to increase outreach and provide added technical support to DMCs such as the Avian Sensitivity Tool for Energy Planning indicating locations for renewable energy infrastructures with least impact on avian species. Other applications included the Illegal Wildlife Trade Project Map and Database and Wildlife Law Enforcement courses on ADB eLearn.
Replication and/or scaling up	One of the major factors for replication and upscaling is to provide a combination of various project level support activities such as research, training, and study tour in a holistic, systematic, and targeted manner. Another factor is to support the development and updating of CPS and national guidelines which create an enabling environment with positive ripple effects. There are proposed projects (e.g., Flood Management and Coastal Protection in North Java) where the support activities at both the policy and project levels could be replicated and brought to the next stages of upscaling.
Post-TA financial resource	Building on the results of this TA, TA 10010: Mainstreaming Nature-Positive Investments for Green Resilient and Inclusive Recovery will further promote investments in natural capital. Other possible post-TA financial resources may include TA 6574: Support to the Implementation of Strategy 2030 Operational Plans to complement the upstream policy support and the cofinancing from the RVO to conduct study tours. Commitment made between ADB and RVO in establishing the cooperative agreements on "Water Organization Partnerships for Resilience" and "NbS coalition" can further advance ADB's agenda on natural capital and NbS through joint activities.
Other lessons	To mainstream nature into investment projects, additional knowledge on effectiveness and efficiency of "green" investments with NbS in comparison to conventional "gray" investments is necessary. It can also be useful to establish an approach to valuing natural capital and ecosystem services and integrate the approach as part of ADB's standard business procedures into project economic analysis with consideration of the returns and co-benefits of investing in nature (e.g., green jobs).

Follow-up Actions

Building on the knowledge and experience of the TA, follow-up actions are recommended as follows: (i) Launching an NbS program to provide programmatic support to further mainstream investments in natural capital under TA 10010; (ii) Publishing a book with ADB's NbS experiences and best practices under TA 6574; (iii) Developing an online knowledge repository to manage and use knowledge produced by the TA as well as related TAs and projects; (iv) Supporting existing efforts at ADB to incorporate ecosystem valuation into project economic analysis based on the TA's relevant knowledge, including case studies; and (v) Strengthening the collaboration with development partners by establishing formal and informal agreements, including the NbS coalition.

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DESIGN AND MONITORING FRAMEWORK

Impact(s) Natural capital assets of DMCs improved		
Results Chain	Performance Indicators with Targets and Baselines	Achievements
<p>Outcome</p> <p>Commitment of DMCs to invest in natural capital increased</p>	<p>a. At least six new investments supporting natural capital included in ADB pipeline by 2021 (2017 baseline: 0)</p>	<p>a. Overachieved. By the end of KSTA implementation, the following eight investments with natural capital components added by TA were included in ADB pipeline:</p> <ol style="list-style-type: none"> 1. Anhui Huangshan Xin'an River Ecological Protection and Green Development Project (Active and approved 11 December 2022) 2. Rural Connectivity Improvement Project-Second Additional Financing (Proposed) 3. Climate Resilient Livelihood Improvement and Watershed Management in Chittagong Hill Tracts Sector Project (Proposed) 4. Flood Management and Coastal Protection in North Java previously Enhanced Water Security Investment Project (Proposed) 5. Integrated Flood Resilience and Adaptation Project 1 (Proposed) and Integrated Flood Risk Management Sector Project 2 (Proposed), previously Integrated Flood Risk Management Sector Project 6. Integrated Water Resources Management Project (Proposed) 7. Balochistan Water Resources Development Sector Project (Active and approved 31 August 2018) 8. Strengthening Environmental Resilience and Fostering Sustainable Economy for Lake Sevan (Proposed)
<p>Outputs</p> <p>1. Business case for natural capital investments established.</p>	<p>1a. At least eight biophysical and economic assessments of natural capital of five DMCs prepared by 2021 (2017 baseline: 0)</p>	<p>1a. Overachieved. Accomplished fifteen biophysical and economic assessments to inform the preparation of investment projects and strengthen DMC knowledge and capacity to design and implement these investments. The TA supported twelve DMCs in preparing the following assessments and reports:</p> <ol style="list-style-type: none"> 1. Bangladesh - Bio-Engineering Operational Guidelines 2. Bhutan - Wildlife Underpasses along Highway Segments 3. Indonesia - Economic Analysis of Nature-Based Solutions in Flood Risk Management 4. Lao People's Democratic Republic - Species Conservation, Wetland Management, Community-based Conservation 5. Nepal - Smart Infrastructure Planning and Design to Protect Natural Habitats and Biodiversity and The Avian Sensitivity Mapping Tool for Energy Planning (including three other DMCs: India, Thailand and Viet Nam) 6. Pakistan - Historical maps identifying land use change as part of the River Ravi Basin Revitalization Master Plan and Integrated Watershed Management Plan for Siri Toi Watershed 7. People's Republic of China - Piloting Green Finance Mechanisms and Nature-based Solutions - The Case of Xin'an River Catchment 8. Philippines - Biodiversity Assessment Study for New Clark City and Nature-based Solutions in Philippine River Basins 9. Samoa - Assessment of Ecological Effects (Birds and Bats)

Results Chain	Performance Indicators with Targets and Baselines	Achievements
2. Investments in natural capital prepared.	2a. At least eight natural capital investment proposals designed by 2021. (2017 baseline: 0)	<p>2a. Achieved. Closely linked to biophysical and economic assessments of Output 1, the TA assisted operations in preparing investment options in natural capital, which consider innovative approaches such as nature-based solutions (NbS) to address environmental degradation, climate change, and disaster risk management. A total of eight investment options in natural capital had been prepared. Note that the list below is organized according to country and that for Pakistan, there are two proposals prepared: one for the Ravi River and one for the Siri Toi watershed.</p> <ol style="list-style-type: none"> 1. Bangladesh - Piloting bio-engineering techniques at project site for slope stabilization, and mainstreaming standard guidelines at the national policy level. 2. Indonesia - Flood plain widening and developing a river park for reducing flood risks with increased recreation and tourism benefits. 3. Lao People's Democratic Republic - Initial Conservation Action Plans which include potential investments in development planning for infrastructure and zonation of non-conservation land areas, establishment of water user groups and legislations, and development of wetland-friendly livelihoods. 4. Nepal - Identified valued ecological components, stressors, and mitigating measures such as bioengineering and wildlife crossings for biodiversity protection and conservation. 5. Pakistan - Integrated watershed management options for Ravi River and Siri Toi watershed with nature-based solutions components such as constructed wetlands, vegetative barriers, and conservation-based farming. 6. People's Republic of China - Incentive schemes and compensation mechanisms to help fund NbS initiatives, and provide necessary market conditions for financing. 7. Philippines - Room for the river and wetland restoration for managing flood risks, water quality, and biodiversity.
3. Capacity to address illegal wildlife crime enhanced	<p>3a. Draft legal reforms to address wildlife crime issues in the Philippines submitted to government by Q4 2020 (2017 baseline: 0)</p> <p>3b. At least 300 Philippine government officials (30% women) reporting improved capacity to address illegal wildlife crimes by 2020</p> <p>3c. Demand reduction measures implemented for at least two priority species in the Philippines by Q4 2020 (2017 baseline: 0)</p>	<p>3a. Achieved. Draft bill amending the Philippine Wildlife Resources Conservation and Protection Act submitted and approved in the House of Representatives. The TA was also instrumental to the issuance of a Joint Administrative Order and the adoption of the wildlife law enforcement action plan (WildLEAP).</p> <p>3b. Overachieved. The TA developed capacity building programs on illegal wildlife crimes and trained 676 government officials (42% women) in the Philippines. The post-training evaluation of 325 trainees (44% women) revealed an overall average increase in capacity scores by 16% across partner agencies. Virtual training modules for wildlife law enforcers were developed as well on ADB's eLearn platform.</p> <p>3c. Achieved with additional results. Two priority species were also identified (marine turtles and blue-nape parrots), and demand reduction measures were implemented through communication, education, and public awareness activities as documented in the Public Awareness and Demand Reduction Report. In addition, a Sustainable Livelihood Assessment was conducted to provide In addition, a Sustainable Livelihood Assessment was conducted to provide livelihood options such as ecotourism for communities involved in illegal wildlife trade (IWT). The TA also participated in sharing best practices and experiences on global and regional knowledge exchange events on IWT such as:</p> <ol style="list-style-type: none"> 1. Counter Wildlife Trafficking Regional Coordination Meeting 2. Counter Wildlife Trafficking Partnership Coordination Forum II

Results Chain	Performance Indicators with Targets and Baselines	Achievements
4. Knowledge and capacity for natural capital investment strengthened	<p>4a. At least seven knowledge products on natural capital investment prepared and disseminated by 2021 (2017 baseline: 0)</p> <p>4b. At least six regional conferences and five national workshops held on natural capital investments by 2021. (2017 baseline: 0)</p>	<p>3. Preventing Pandemics Through One Health Approach</p> <p>4a. Overachieved. Fifteen publications were produced, including six ADB publications and nine Development Asia Articles and ADB blogs. The TA also produced four web-based tools and audio-visual knowledge products. Additionally, the TA contributed to other publications produced by development partners. The eight publications indicated with an asterisk (*) were considered as ADB official knowledge products.</p> <p>ADB Publications:</p> <ol style="list-style-type: none"> 1. Integrating Nature-Based Solutions for Climate Change Adaptation and Disaster Risk Management: A Practitioner's Guide* 2. Guidelines for Mainstreaming Natural River Management in Water Sector Investments* 3. Nature-Based Solutions for Flood Risk Management: Revitalizing Philippine Rivers to Boost Climate Resilience and Enhance Environmental Stability* 4. Pakistan's River Ravi Eco-Revitalization Master Plan: A Road Map to Rescue and Revitalize the River Ravi and Its Tributaries* 5. Avian Sensitivity Tool for Energy Planning (AVISTEP)* 6. Addressing the Illegal Wildlife Trade in the Philippines* (also available in Filipino and Visayan versions) <p>Development Asia Articles and ADB Blogs:</p> <ol style="list-style-type: none"> 1. The War Against Wildlife is a War Against Ourselves* 2. Investing in Marine Protected Areas is Investing in Our Own Survival* 3. How Nature-Based Solutions Can Help Reduce Flood Risks 4. Managing the Perfect Storm: How Healthy Ecosystems Increase Resilience 5. Declining Natural Capital: High Stakes for Asia and the Pacific 6. Closing Policy and Information Gaps in Wildlife Protection 7. Wildlife Trade Bans: Boon or Bane? 8. Combating Illegal Wildlife Trade: How a Collaborative Approach is Working in the Philippines 9. Avoiding Renewable Energy's Unintended Impacts on Birds <p>Web-based Tools and Audio-visual Knowledge Materials:</p> <ol style="list-style-type: none"> 1. Avian Sensitivity Tool for Energy Planning 2. Combating Illegal Wildlife Trade – A project Map and Database of counter-IWT Projects Worldwide 3. Wildlife Law Enforcement in the Philippines Training Courses 4. Greening linear transportation infrastructure projects audio-visual products: Bridging Futures, Introduction to Natural Capital, Sustainable Linear Infrastructure, Impacts of Linear Infrastructure, and Mitigation Planning for Linear Infrastructure <p>Contributions to articles and publications by development partners:</p> <ol style="list-style-type: none"> 1. Country Profile: Philippines (Global Wildlife Program) 2. Beating the Heat: A Sustainable Cooling Handbook for Cities <p>4b. Overachieved. The TA organized ten regional and eight in-country knowledge and capacity building workshops on natural capital. The TA additionally organized four webinar series with a total of seventeen sessions. The overall outreach was approximately more than 2,000 participants. The events indicated with an asterisk</p>

Results Chain	Performance Indicators with Targets and Baselines	Achievements
		<p>(*) were training activities, while those without an asterisk were awareness-raising activities.</p> <p>Regional Conferences:</p> <ol style="list-style-type: none"> 1. 38th Annual Conference of the International Association for Impact Assessment (IAIA18): Greening the Transport Sector through Smart Plans and Eco-Friendly Designs Workshop* 2. IAIA19: Training on Ecological Solutions and Planning Options for Greening the Linear Infrastructure* 3. ADB Transport Forum 2018: Training on Nature-based Approaches to Designing Transport Infrastructure* 4. Accelerating Adaptation through Building with Nature in Asia* 5. Training on Building Capacity for Conserving and Managing Natural Capital during the Planning and Implementation of Transportation Projects in South Asia* 6. Healthy Oceans Tech and Finance Forum Deep Dive Session: Nature-based Solutions in Natural River Management* 7. 6th Asia Pacific Climate Change Adaptation Forum Session: Resilient Nature-based Solutions 8. 6th Global Environment Facility (GEF) Assembly Sessions: (i) Sustainable Infrastructure (ADB, WWF); (ii) Nature-based solutions; and (iii) Global Wildlife Program 9. Convention on Biological Diversity, 14th Conference of the Parties: Sustainable Infrastructure Day 10. Asia Clean Energy Forum 2022 Spotlight Session: Sensitivity Mapping – an Essential Tool to Speed Up the Renewable Energy Transition <p>National Workshops:</p> <ol style="list-style-type: none"> 1. Group Study Tour on River Basin Management, Hebi City, Henan Province and Beijing, People’s Republic of China* 2. 7th International Conference on Eco-Compensation and Payments for Ecosystem 3. Enhanced Water Security Investment Project Workshop: Capacity building on NbS* 4. Philippines: Capacity building on NbS Workshops 5. Planning and Design of Smart Linear Infrastructure for Biodiversity Protection: Practices and Science based Solutions* 6. Lao PDR Crocodile monitoring field training and knowledge exchange* 7. AVISTEP Technical Demonstrations* 8. Bio-engineering Nature-based Solutions for Linear Infrastructure Slope Stabilization and Protection* <p>Additional Webinars:</p> <ol style="list-style-type: none"> 1. Green Road to Montreal (four sessions)* 2. Nature and Climate Nexus Webinar Series: Promoting Nature-based Solutions for Sustainable Infrastructures in Asia and the Pacific (six sessions)* 3. Greening Transportation Projects (four sessions)* 4. World Environment Day Event Series: The Modern Road Ecologist's Toolbox (three sessions)*

	<p>4c. At least 250 DMC officials (30% women) reporting improved knowledge on nature-based approaches by 2021 (2017 baseline: 0)</p>	<p>4c. Overachieved. The TA trained 672 DMC officials (31% women) on NbS with participants' knowledge and skills improved. The conduct of virtual training events significantly increased the outreach to participating DMC officials. The evaluation of virtual and onsite events is indicative of improved capacities as documented in the following proceedings with technical needs assessment and/or evaluation reports:</p> <ol style="list-style-type: none"> 1. Bio-engineering Nature-based Solutions for Linear Infrastructure Slope Stabilization and Protection Training Report - The technical needs and post-training assessments conducted on approximately 38% of the 90 participating DMC officials indicated increased in knowledge and skills on bio-engineering. 2. Nature-based Solutions for Climate Disaster Risk Management Lecture Proceedings - 23 DMC officials trained out of a total of 171 participants. A post-event survey, responded by targeting 12% of total participants, indicated in the post-event survey that 90% were satisfied with the lecture and 85% learned useful information from the case studies presented. 3. Greening Transportation Projects Proceedings - 28 DMC officials trained out of 209 participants. About 30% of total the participants responded and indicated overall satisfaction with the content and quality of the learning program. 4. Building Capacity for Conserving and Managing Natural Capital during the Planning and Implementation of Transportation Projects in South Asia Training Report - A total of 27 DMC officials were trained. The evaluation of 20 DMC officials indicated 94% overall satisfaction based on content, learning, and overall program quality. 5. Modern Road Ecologist's Toolbox - 82 DMC officials out of 323 participants. The evaluation of 5% of total participants who responded indicated that 93.75% had acquired new skills and knowledge for designing biodiversity friendly transportation infrastructure projects.
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Actual Key Activities with Milestones

1. Business case for natural capital investments established.

- 1.1 Identified and confirmed focal countries, sectors, and projects for assessment (completed).
- 1.2 Developed methodology for biophysical and economic assessments (completed).
- 1.3 Conducted fifteen assessments of biophysical and economic values of natural capital (completed).
- 1.4 Assessed investment needs and priorities for natural capital investments (completed).
- 1.5 Supported the development of a bird e-sensitivity map (completed).

2. Investments in natural capital prepared.

- 2.1 Identified project opportunities (completed).
- 2.2 Provided project design support for eight investments (completed).
- 2.3 Prepared co-finance proposals for eight investments (completed).

3. Capacity to address illegal wildlife crime enhanced.

- 3.1 Reviewed and prepared draft revisions to the Philippines Wildlife Act (completed).
- 3.2 Assessed capacity gaps across the law enforcement chain in the Philippines (completed).
- 3.3 Developed training modules (completed).
- 3.4 Prepared a communications strategy and undertook awareness-raising activities (completed).
- 3.5 Assessed investment areas such as ecotourism and prepared options report (completed).
- 3.6 Participated in at least three global and regional knowledge exchanges on best practice measures to address the illegal wildlife trade (completed).

4. Knowledge and capacity for natural capital investment strengthened.

- 4.1 Prepared a knowledge and communications strategy (completed).
- 4.2 Collected data and case studies to prepare various knowledge products (completed).
- 4.3 Organized ten regional conferences and eight national workshops (completed).
- 4.4 Prepared and delivered training courses (completed).
- 4.5 Disseminated bird e-sensitivity map through an open access online portal and promoted it through a series of regional awareness workshops/trainings (completed).

Actual Inputs

Asian Development Bank: \$868,414.18
Climate Change Fund: \$1,644,708.59
Global Environment Facility: \$1,579,115.36
Republic of Korea e-Asia and Knowledge Partnership Fund: \$484,689.12

Source: Asian Development Bank.

TECHNICAL ASSISTANCE COST

Table A2.1: Technical Assistance Cost by Activity
(\$'000)

Item	Amount ^a		
	Original ^b	Revised ^c	Actual
1. Consultants	2,778	3,547	3,444
2. Goods	12	100	69
3. Training, seminars and/or conferences	470	773	703
4. Surveys	180	270	221
5. Miscellaneous TA administration	57	197	140
6. Pilot Testing	-	-	-
7. Contingency	192	103	-
Total	3,690	4,990	4,577

TA = technical assistance

^a Includes ADB-financed funds and/or ADB fully administered cofinanced funds.

^b Original estimated cost in the TA report.

^c Cost after additional financing during TA implementation.

Source: Asian Development Bank estimates.

Table A2.2: Technical Assistance Cost by Fund
(\$'000)

	Technical Assistance Special Fund	Climate Change Fund	Global Environment Facility	Republic of Korea e-Asia and Knowledge Partnership Fund	Total Cost
1. Original ^a	900	955	1,835	-	3,690
2. Revised ^b	900	1,755	1,835	500	4,990
3. Actual	868	1,645	1,579	485	4,577
4. Unused	32	110	256	15	413

^a Original estimated cost in the TA report.

^b Cost after additional financing during TA implementation.

Source: Asian Development Bank estimates.