



ADB

# ENVIRONMENT OPERATIONAL DIRECTIONS 2013–2020

---

## Promoting Transitions to Green Growth in Asia and the Pacific

Asian Development Bank



# ENVIRONMENT OPERATIONAL DIRECTIONS 2013–2020

---

Promoting Transitions to Green  
Growth in Asia and the Pacific

Asian Development Bank

© 2013 Asian Development Bank

All rights reserved. Published in 2013.  
Printed in the Philippines.

ISBN 978-92-9254-037-1 (Print), 978-92-9254-038-8 (PDF)  
Publication Stock No. RPT135647-3

#### Cataloging-In-Publication Data

Asian Development Bank.

Environment operational directions, 2013–2020: Promoting transitions to green growth in Asia and the Pacific.

Mandaluyong City, Philippines: Asian Development Bank, 2013.

1. Environment. 2. Asia and the Pacific. 3. Asian Development Bank . I. Asian Development Bank.

The views expressed in this publication are those of the authors and do not necessarily reflect the views and policies of the Asian Development Bank (ADB) or its Board of Governors or the governments they represent.

ADB does not guarantee the accuracy of the data included in this publication and accepts no responsibility for any consequence of their use.

By making any designation of or reference to a particular territory or geographic area, or by using the term “country” in this document, ADB does not intend to make any judgments as to the legal or other status of any territory or area.

ADB encourages printing or copying information exclusively for personal and noncommercial use with proper acknowledgment of ADB. Users are restricted from reselling, redistributing, or creating derivative works for commercial purposes without the express, written consent of ADB.

#### Note:

In this publication, “\$” refers to US dollars.

6 ADB Avenue, Mandaluyong City  
1550 Metro Manila, Philippines  
Tel +63 2 632 4444  
Fax +63 2 636 2444  
[www.adb.org](http://www.adb.org)

For orders, please contact:  
Department of External Relations  
Fax +63 2 636 2648  
[adbpub@adb.org](mailto:adbpub@adb.org)

# Contents

<b>Abbreviations</b>	<b>iv</b>
<b>Executive Summary</b>	<b>v</b>
<b>Promoting Green Growth in Asia and the Pacific</b>	<b>1</b>
Promoting Green Growth: Overall Approach	1
Promoting a Shift to Sustainable Infrastructure	4
Investing in Natural Capital	7
Strengthening Environmental Governance and Management Capacity	10
Responding to the Climate Change Imperative	12
<b>Supporting Modalities</b>	<b>14</b>
Mainstreaming Environmental Considerations into ADB Operations	14
Promoting Regional Cooperation	15
Building and Maintaining Strategic Partnerships	15
Developing Knowledge Solutions	16
Implementation Arrangements	17
Mobilizing and Channeling Resources	18
<b>Reporting for Results</b>	<b>19</b>
<b>Conclusion</b>	<b>20</b>
<b>Appendixes</b>	<b>21</b>
1 Key Environmental Challenges and Opportunities in Asia and the Pacific	21
2 Asian Development Bank Experience	25
3 Guidelines for Classifying Projects with Environmental Sustainability as a Theme	27
4 Results Framework, 2013–2020	29

# Abbreviations

ADB	–	Asian Development Bank
CoP	–	community of practice
DMC	–	developing member country
GEF	–	Global Environment Facility
GHG	–	greenhouse gas
NGO	–	nongovernment organization
REDD	–	Reducing Emissions from Deforestation and Forest Degradation
RSDD	–	Regional and Sustainable Development Department

## **ADB Environment Community of Practice**

<b>Chair</b>	N. J. Ahmad, Director, Environment and Safeguards, Regional and Sustainable Development Department (RSDD) concurrently Practice Leader (Environment)
<b>Co-Chair</b>	J. Mir, Director, Environment, Natural Resources and Agriculture Division, Southeast Asia Department (SERD)
<b>Task Manager</b>	D. Ponzi, Lead Environment Specialist, RSDD
<b>Environment Committee Members</b>	R. Barba, Senior Safeguards Specialist, Cambodia Resident Mission H. Gunatilake, Lead Energy Economist, South Asia Department (SARD) M. Kunzer, Principal Environment Specialist, RSDD C. Losenno, Senior Climate Change Specialist, Central and West Asia Department (CWRD) T. Matsuo, Director, Environment, Natural Resources and Agriculture Division, SARD A. Maxwell, Senior Energy Specialist, Pacific Liaison and Coordination Office S. Popov, Principal Environment Specialist, East Asia Department (EARD) F. Radstake, Senior Environment Specialist, EARD P. Ramachandran, Environment Specialist, SERD N. Saito, Senior Urban Development Specialist, SARD

# Executive Summary

In Strategy 2020, its long-term strategic framework for 2008–2020, the Asian Development Bank (ADB) identifies three strategic agendas for Asia and the Pacific: inclusive economic growth, environmentally sustainable growth, and regional integration. These are crucial for achieving poverty reduction and improving quality of life. Strategy 2020 further identifies five core areas for interventions: (i) infrastructure, (ii) environment, (iii) regional cooperation and integration, (iv) finance sector development, and (v) education.

With environment as one of the five core areas of operations and environmental sustainability as a strategic agenda, these dimensions and areas of work are increasingly integrated across ADB operations and form an important part of ADB's assistance programs. In Strategy 2020, emphasis is placed on climate change, livable cities, and a range of complementary and supportive actions to improve environmental governance, policies, knowledge, and management capacity.

In the context of Strategy 2020 and in the follow-up to the United Nations Conference on Sustainable Development (Rio+20), ADB prepared this report, *Environment Operational Directions, 2013–2020*, to provide a coherent overview of ADB environment operations and to articulate how it will step up efforts to help the region achieve a transition to environmentally sustainable growth or green growth. Building on ADB sector and thematic plans, this paper provides a brief review of recent ADB experience in environment operations, and identifies effective approaches for the development of “greener” country partnership strategies, investment projects, and associated knowledge and technical assistance activities.

To promote the transition to green growth, and address the causes and consequences of climate change, four mutually supportive environment operational directions have been identified:

- (i) **Promoting a shift to sustainable infrastructure.** Help developing member countries build infrastructure that contributes to environmentally sustainable and low-carbon development, as well as to increased resilience to climate change and other threats.
- (ii) **Investing in natural capital.** Help reverse the ongoing decline of natural capital to ensure that environmental goods and services can sustain future economic growth and well-being, build climate resilience, and contribute to carbon sequestration.
- (iii) **Strengthening environmental governance and management capacity.** Build sound environmental governance and management capacity for improved environmental and natural resource management including the strengthening of country systems and capacities for environmental safeguards.
- (iv) **Responding to the climate change imperative.** Promote climate change response actions—both adaptation and mitigation—that will cut across the other three directions and be fully integrated within each.

The paper is aligned with key elements of relevant ADB sector and thematic operational plans, particularly for sectors where environmental sustainability is a priority. These include the Sustainable

Transport Initiative Operational Plan, the Urban Operational Plan, the Water Operational Plan, the Energy Policy, and the Sustainable Food Security Plan, as well as the Climate Change Strategic Priorities.

With respect to implementation, the paper identifies six supporting modalities: (i) mainstreaming environment into ADB operations, (ii) promoting regional cooperation, (iii) building and maintaining strategic partnerships, (iv) developing and sharing knowledge solutions, (v) implementation arrangements, and (vi) mobilizing and channeling resources.

ADB's annual development effectiveness review will report on the progress of the environment operational directions, specifically with regard to the environment-relevant indicators in the ADB results framework.



# Promoting Green Growth in Asia and the Pacific

## Promoting Green Growth: Overall Approach

**W**hile economies in Asia and the Pacific continue to grow, the natural environment is under increasing pressure. Major ecosystems are under threat. Loss of biodiversity is massive as life support systems on land and in the oceans are being degraded. The region is the fastest growing source of new greenhouse gas (GHG) emissions in the world; several countries are among the most vulnerable to climate change and natural disasters. Cities in Asia are growing at an unprecedented pace, with 44 million added to city populations every year. The resulting congestion, waste, pollution, and associated health impacts remain key challenges in sustaining urban development.

Expanding demand for natural resources, accompanied by unsustainable and inefficient resource use patterns, has led to converging economic, resource, and environmental challenges. Global and regional concerns about food, energy, and water security are increasing. Food supply, in particular, is being affected by a number of factors, including climate change; rising material and labor costs; competing demands for freshwater; and loss of farmland for housing, industry, and increasingly, biofuel crop production.

The emerging consensus in the scientific community is that because of climate change and other pressures, the world's ecosystems will experience major shifts in their stability and integrity—perhaps in a few generations.<sup>1</sup> Accordingly, critical thresholds or “tipping points” may be approaching, beyond which the environment could enter a new state where significant changes would become accelerated, unpredictable, and irreversible. Several reports also warn of the imminent risks of crossing the thresholds of planetary boundaries.<sup>2</sup>

In addition, the gap between the demand for natural resources and the environment's ability to replenish those resources, or its biocapacity, is widening. In Asia and the Pacific, this gap has important economic and social implications as environmental damage has started to threaten prospects for continued economic growth and poverty reduction. Maintaining natural capital must therefore be a crucial goal for countries.

Given these concerns (Appendix I), the concept of green growth or environmentally sustainable growth<sup>3</sup> has gained increasing attention. The number of high-level policy initiatives supporting green

---

Critical thresholds or “tipping points” may be approaching, beyond which the environment could enter a new state where significant changes would become accelerated, unpredictable, and irreversible

---

<sup>1</sup> A. Barnosky et al. 2012. Approaching a State Shift in Earth's Biosphere. *Nature* 486:52–58. Macmillan. Available at [http://www.stanford.edu/group/hadlylab/\\_pdfs/Barnoskyetal2012.pdf](http://www.stanford.edu/group/hadlylab/_pdfs/Barnoskyetal2012.pdf).

<sup>2</sup> J. Rockström et al. 2009. Planetary Boundaries: Exploring the Safe Operating Space for Humanity. *Ecology and Society* 14(2): 32. Available at <http://www.ecologyandsociety.org/vol14/iss2/art32/>. The authors proposed a framework of “planetary boundaries” designed to define a “safe operating space for humanity” as guidance for the international community and as a precondition for sustainable development.

<sup>3</sup> This paper uses environmentally sustainable growth and green growth interchangeably.

growth, especially in the region, is a concrete sign of this positive trend. Green growth has great potential to provide a clear and focused policy agenda to pursue sustainable economic growth, while improving resilience to climate change and other shocks, and preventing environmental degradation, biodiversity loss, and unsustainable natural resource use.

---

Overall, green growth is about synergizing environmental protection and economic growth, while reducing poverty and ensuring equitable outcomes

---

Green growth is particularly attractive in this developing region for a number of reasons. First, a green growth paradigm supports development that is far more efficient in the use of natural resources—offering a win–win scenario for both environmental and economic dimensions. Second, the market for green technologies is vast and growing, and developing Asian countries (especially the People’s Republic of China, and, increasingly, India and economies in Southeast Asia) account for a growing share of the new markets of green goods and services. Third, many countries can take advantage of the new green jobs that will be created by investing in knowledge and an educated workforce, and developing the competitive edge to succeed in a green marketplace. Countries must ensure an equitable and inclusive transition to green growth; most analysis shows that better environmental quality and ecosystem integrity benefit the poor and vulnerable.

Overall, green growth is about synergizing environmental protection and economic growth, while reducing poverty and ensuring equitable outcomes in terms of human well-being. For developing countries to embrace green growth, they need to be assured that it addresses urgent development needs and contributes to the objectives of poverty reduction and other Millennium Development Goals. In other words, they need to pursue inclusive green growth. In addition, preparing societies to deal with greater risk and unexpected shocks from climate change and other causes is increasingly important. While policy makers are increasing their focus on resilience and adaptive capacity, much more work is required.

Policies and programs that will help foster green growth and achieve higher resilience, including climate resilience, are emerging. Experiences need to be shared, replicated, and scaled up. To achieve this, factoring environmental issues into investment decisions for such areas as infrastructure, agriculture, and natural resources will be increasingly important. Such investments can ultimately provide growing economies with the opportunity to leapfrog unsustainable and wasteful production and consumption patterns.

The United Nations Conference on Sustainable Development (Rio+20) reaffirmed the importance of sustainable development for developed and developing countries.<sup>4</sup> At the Rio conference, participants stressed the need to address the climate change challenge while promoting shifts to sustainable energy, transport, and water infrastructure; green and inclusive urban development; investment in natural capital; and protection of ecosystem services. Arrangements for environmental governance and new tools for measuring progress were also defined. Rio+20 also initiated an intergovernmental process to prepare a set of sustainable development goals as a central contribution to the post-2015 development agenda.

Under Strategy 2020,<sup>5</sup> and consistent with the Rio+20 outcomes, the Asian Development Bank (ADB) seeks to support systemic, long-term, and transformational change toward green growth

---

<sup>4</sup> The United Nations Conference on Sustainable Development (Rio+20), in Rio de Janeiro, Brazil on 20–22 June 2012, resulted in the adoption of a political outcome document titled “The Future We Want.” <http://www.uncsd2012.org/thefuturewewant.html>

<sup>5</sup> ADB. 2008. *Strategy 2020: The Long-Term Strategic Framework of the Asian Development Bank 2008–2020*. Manila.

in Asia and the Pacific. To do this, it has identified four mutually supportive directions for operations based on challenges facing the region, ADB's comparative strengths, and overall consistency with Strategy 2020 (Figure 1):

- (i) **Promoting a shift to sustainable infrastructure.** Help developing member countries (DMCs) build infrastructure that contributes to environmentally sustainable and low-carbon development, as well as to increased resilience to climate change and other threats.
- (ii) **Investing in natural capital.** Help reverse the ongoing decline of natural capital to ensure that environmental goods and services can sustain future economic growth and well-being, build climate resilience, and contribute to carbon sequestration.
- (iii) **Strengthening environmental governance and management capacity.** Build sound environmental governance and management capacity for improved environmental and natural resource management including the strengthening of country systems and capacities for environmental safeguards.
- (iv) **Responding to the climate change imperative.** Climate change response actions—both adaptation and mitigation—will cut across the other three directions and be fully integrated within each, as described in ADB's 2010 climate change strategic priorities.<sup>6</sup>

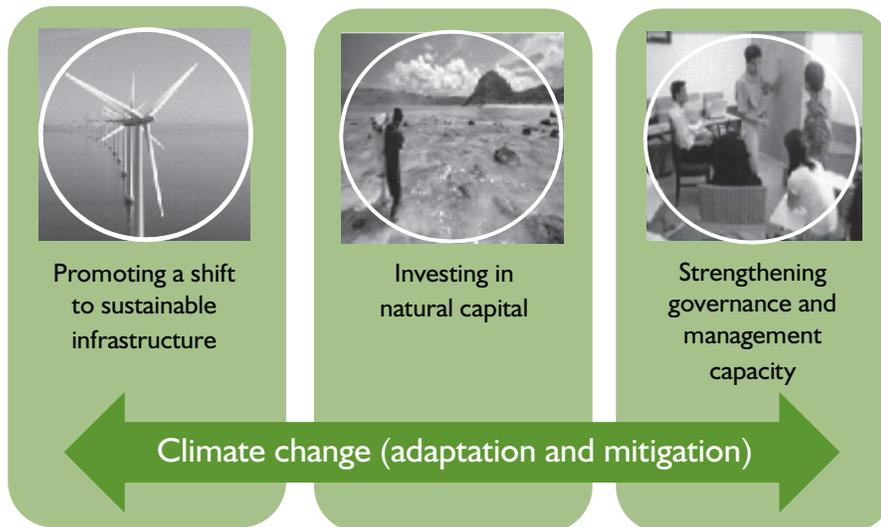
In line with the three pillars of sustainable development and building on its experience with environmental assistance (Appendixes 2 and 3), ADB's approach in all the DMCs will consistently foster poverty reduction, while promoting economic development and improvements in environmental quality. ADB will continue to support the multidimensional approach to poverty

---

About two-thirds of the projected infrastructure investment in the region over the decade 2011–2020—amounting to trillions of dollars—will be for new infrastructure

---

**Figure 1 ADB Environment Operational Directions, 2013–2020**



<sup>6</sup> ADB. 2010. *Focused Action: Priorities for Addressing Climate Change in Asia and the Pacific*. Manila.

reduction embodied in the Millennium Development Goals, which includes the need to improve incomes, as well as health, education, and gender equity. These social dimensions, while not the focus of this paper, must be incorporated into policies and programs that seek to improve environmental sustainability and promote inclusive green growth.

Implementation of the *Environment Operational Directions, 2013–2020* will be based on country circumstances and country demand, and tailored to the specific needs and capacities of the DMCs. Country ownership will be a guiding principle, and the mix and depth of environmental interventions will depend on the country partnership strategy process. In this sense, the directions herein are intended to provide an enabling menu of options rather than a “one size fits all” prescription.

## Promoting a Shift to Sustainable Infrastructure

---

The region  
needs to rapidly  
expand its  
reliance on  
sustainable  
energy  
development

---

A shift to environmentally sustainable, low-carbon, and climate-resilient infrastructure, including the redesign, rehabilitation, reuse, or optimization of existing infrastructure, can help lock in investments in resource conservation and efficiency for many decades. About two-thirds of the projected infrastructure investment in the region over the decade 2011–2020—amounting to trillions of dollars—will be for new infrastructure. This presents a significant opportunity to design, build, and operate infrastructure based on the principles of sustainability and inclusive green growth.

Environmentally sustainable practices include optimizing the use of renewable resources, improving resource use efficiency, minimizing pollution, and reducing other negative impacts on the natural environment. Developing sustainable infrastructure also involves improving access to basic services; more effectively serving the needs of local communities, including the poor; and identifying appropriate roles for the public and private sectors in financing, ownership, and management.

**Clean energy.** The region needs to rapidly expand its reliance on sustainable energy development. Consistent with the Energy Policy (2009), ADB will continue to expand its support for clean energy and greater energy efficiency, and increase efforts to play a catalytic role in advancing the sustainable energy agenda across Asia and the Pacific.<sup>7</sup> Improving energy efficiency and overall energy demand management will include efforts to formulate enabling legislation and efficiency standards, increase public awareness, identify investment options, and provide customized financial assistance and guarantees.

On the supply side, DMCs’ attention will be directed at increasing people’s access to energy in ways that contribute to economic growth that is both inclusive and environmentally sustainable. Emphasis will increasingly be placed on facilitating wider deployment of renewable energy, including wind, solar, geothermal, and small hydropower. The use of off-grid, community-based, and low-carbon electricity supply will be a high priority.

---

<sup>7</sup> ADB. 2009. *Energy Policy*. Manila. <http://www.adb.org/documents/energy-policy>

**Sustainable transport.** Tremendous opportunities are available to improve mobility, while minimizing GHG emissions and local pollution. Following its Sustainable Transport Initiative Operational Plan,<sup>8</sup> ADB will increasingly align its transport operations with Strategy 2020 to support sustainable transport. Sustainable transport systems are accessible, affordable, safe, and environment friendly. A sustainable transport system minimizes the use of land and the generation of emissions, waste, and noise. The plan identifies three main approaches to guide ADB transport operations, namely “avoid–shift–improve.” “Avoid” means reducing the need to travel; “shift” means changing to more energy-efficient modes or routes; and “improve” means using technologies that are less polluting and more energy-efficient.

First, ADB will seek to mainstream sustainability in areas where it already has a track record of effective operations, focusing mainly on roads. Peer reviews of transport sector plans and individual transport project proposals will strengthen the sustainable transport focus of future transport operations.

Second, ADB will introduce new or enhanced operations to promote sustainable transport. Projects in urban transport (e.g., public transport systems, nonmotorized transport, integrated urban transport planning, demand management, traffic management) will be scaled up. Climate change considerations (both mitigation and adaptation) will be addressed, for example, by helping the DMCs shift traffic to modes with lower emissions and energy consumption, such as railways, and mainstreaming climate change adaptation measures into transport operations (footnote 8). Inland waterways and coastal shipping (marine highways) will be supported when feasible and given opportunities for multimodal transport solutions.

Last, transport operations will need to increasingly include work that involves new research and pilot testing. Efforts may include supporting the preparation of sustainable transport development plans, promoting advanced approaches to transport demand management and road pricing, conducting studies to demonstrate the potential for using intelligent transportation systems, and supporting the introduction and take-up of more sustainable vehicle-related technologies.

**Sustainable water management.** The water–energy–food nexus, coupled with climate change impacts, necessitates the transformation of water agendas across the region. Water scarcity, partly resulting from climate change, is becoming a major threat to food and energy security. As articulated in the Water Operational Plan, ADB will continue to mobilize resources for investments in integrated water resources management infrastructure, and services, including water supply, sanitation, wastewater treatment, and irrigation.<sup>9</sup> In these efforts, water will be increasingly addressed in synergy with related sectors. ADB will continue to emphasize water-related policies and regulatory measures that help manage demand and improve water efficiency in urban and rural settings.

Given the range and complexity of Asia’s water issues, ADB will pursue a three-pronged approach. First, it will expand analytical work with clients and partners to determine the best set of measures

---

Tremendous opportunities are available to improve mobility, while minimizing GHG emissions and local pollution

---

<sup>8</sup> ADB. 2010. *Sustainable Transport Initiative Operational Plan*. Manila. <http://www.adb.org/documents/sustainable-transport-initiative-operational-plan?ref=sectors/transport/publications?ref=sectors/transport/publications>

<sup>9</sup> ADB. 2011. *Water Operational Plan 2011–2020*. Manila.

for adoption by individual governments and communities. Second, it will identify policy reforms that will optimally support new and transformed water agendas in the DMCs, as identified in country water assessments. Third, ADB will invest in project and program interventions that help to close demand–supply gaps in the DMCs.

A central design feature for rural and agricultural water services will be the achievement of efficiency gains, whether the project relates to enhancing irrigation productivity (e.g., through genetic crop development or micro-irrigation); developing new irrigation infrastructure (e.g., drainage improvements, artificial recharge); or conserving, managing, and rehabilitating watersheds (e.g., forest protection or restoration, coupled with sustainable management systems).

In urban areas, efficiency gains will be ensured by reducing nonrevenue water losses, reforming tariffs, improving asset management, rehabilitating networks, and restructuring water service providers. Supply-side measures, including developing new water sources, expanding storage capacity, and completing other infrastructure to augment water supplies, will be supported but only when coupled with efficiency gains.

**Sustainable urban development.** The expansion of Asia’s urban population and accompanying congestion, poverty, and pollution present a major challenge. The scale is striking: 44 million people are added to city populations in Asia every year, equivalent to 120,000 each day requiring the construction of more than 20,000 new dwellings, 250 kilometers of new roads, and additional infrastructure to supply more than 6 million liters of potable water.<sup>10</sup>

Following its Urban Operational Plan, ADB may focus on measures to bolster the central role that cities must play in improving national quality of life, including preparing sustainable urban development master plans, fostering efficient transport and land management, adopting decentralized approaches where appropriate, promoting a less carbon-intensive industry sector, improving solid waste management, and undertaking other low-carbon and climate-resilient investments together with new urban area development.<sup>11</sup> In addition, networks of cities—particularly in national and cross-border trade corridors that are increasingly a feature of the Asian economic landscape—must develop resource-efficient logistics and industrial clusters to take full account of city and regional environmental challenges and climate change mitigation opportunities and adaptation measures.

In addition to promoting structural investments and overall environmentally sustainable urban development, ADB may support local system investments, such as introducing city carbon information bases, developing awareness campaigns, building capacity in project preparation, updating environmental and building codes, evaluating climate change risks and adaptation options, and planning for disaster risk management.

**Integrated approaches to sustainable infrastructure.** ADB will seek to promote integration in policy making and investments among basic resource flows and stocks, including materials, energy, water, and land. When focusing on one type of resource, its interaction with others must

The expansion of Asia’s urban population and accompanying congestion, poverty, and pollution present a major challenge. The scale is striking: 44 million people are added to city populations in Asia every year, equivalent to 120,000 each day

<sup>10</sup> B. Roberts and T. Kanaley, eds. 2006. *Urbanization and Sustainability in Asia: Case Studies of Good Practice*. Manila: Asian Development Bank.

<sup>11</sup> ADB. 2012. *Urban Operational Plan 2012–2020*. Manila.

be considered as the production or use of each type of resource places demands on all the others. For example, decisions taken on the type of energy generation can significantly influence water demand and, in the case of biofuels, often displace food production. The way water is sourced, treated, priced, and distributed can raise or lower energy requirements; and the choices made on food and diet influence both water and energy needs. Poverty in the region is increasingly related to environmental factors and resource constraints, with water and energy access playing a big role. The increasing volume of literature on the water–food–energy nexus is a clear sign of the expanding work in this area.

Integrated urban development can help improve urban mobility, access to markets, and public health, while reducing air and water pollution. Multiple benefits are only possible through a range of approaches, including supporting improvements in urban planning, local land use, and transportation patterns; encouraging building and neighborhood designs that are more compact, resource-efficient, and less wasteful; and incorporating plans for reduced GHG emissions and climate resilience when developing or improving infrastructure. Successful urban development will also depend on nonstructural support, such as developing inclusive information bases, tackling slum upgrading, undertaking awareness campaigns, and building capacity. Such forms of assistance enhance the quality of economic growth, reduce stress on natural systems, and improve public health and the investment climate.

## Investing in Natural Capital

To ensure continuous economic progress in Asia and the Pacific, Strategy 2020 highlights the importance of addressing the destruction of natural resources and environmental degradation, including through climate change. The region has some of the largest and most diverse ecosystems in the world. These provide “natural capital,” which supports the region’s economies, delivering a range of ecosystem goods and services that sustain livelihoods, support food production, provide water and energy security, and give resilience to climate change.<sup>12</sup> However, population growth, rapid economic expansion, and unsustainable management practices are driving the rate of biodiversity loss to twice the global average. Few ecosystem goods and services have explicit prices or are traded in the open market; this marginalizes the importance of natural capital in decision-making processes. Without the necessary economic signals, the exploitation of natural capital over the short term is often more financially attractive than nurturing it over the long term, ultimately compromising prospects for sustainable development. Investing in natural capital can have high returns and is typically more cost-effective than restoring degraded ecosystems.

**Integrated landscape approaches.** Integrated landscape approaches for the management of land and seascapes protect biodiversity and support the sustainable management of natural resources nationally and regionally by incorporating broader ecological, social, and economic conditions and trends into management considerations. They can be used to identify green growth opportunities that reflect issues such as climate resilience and the provision of ecosystem services in the context of social and economic constraints. In places such as the Greater Mekong Subregion, the Coral

---

Population growth, rapid economic expansion, and unsustainable management practices are driving the rate of biodiversity loss to twice the global average

---

<sup>12</sup> ADB and WWF. 2012. *Ecological Footprint and Investment in Natural Capital in Asia and the Pacific*. <http://www.adb.org/publications/ecological-footprint-and-investment-natural-capital-asia-and-pacific>

---

Managing land use and forests to maintain or sequester carbon is an important climate change mitigation strategy. The sustainable and resilient management of forest and other natural resources can provide the basis for local livelihoods, clean water supplies, and protection of biological diversity

---

Triangle, and the Heart of Borneo, these approaches are being developed and supported through the use of strategic environmental assessments, multi-criteria spatial planning tools, and the economic valuation of ecosystem services, to inform sector strategies, land-use planning, and the targeting of investments. The development of these approaches can provide a framework for identifying and integrating ADB support to regional programs and various DMC sectors and will support better project safeguards. Integrated approaches to landscape management can be supported through the following methods, which can be implemented individually or in tandem:

- (i) **Integrated water resources management.** Increasing populations, rapid urbanization, and competing demand for water for agriculture, energy, and industrial and domestic use have left water stocks in many Asian countries in a critical state. For river basins, integrated water resources management systems can improve the sustainability and resilience of water resources and reduce vulnerability to floods, droughts, and climate change and variability. The DMCs need support to explore new ways of managing and sharing water resources, improving watershed and wetland conservation, and improving flood and drought management and disaster preparedness using both “soft” and “hard” infrastructure approaches. Incentives for improved upland forests and watershed management could also be considered, including payments for ecosystem service schemes involving water resource users and service providers, such as communities involved in forest management and protection.
- (ii) **Sustainable forest and land use management.** Managing land use and forests to maintain or sequester carbon is an important climate change mitigation strategy. The sustainable and resilient management of forest and other natural resources can provide the basis for local livelihoods, clean water supplies, and protection of biological diversity. To support this, ADB will explore opportunities to help DMCs strengthen sustainable forest management and biodiversity conservation, and establish sustainable financing and incentive mechanisms such as approaches that provide local communities or business with payments for the protection and management of ecosystem services. This includes approaches for Reducing Emissions from Deforestation and Forest Degradation (REDD+), which has been proposed as a financial mechanism for incorporating the conservation, sustainable management, and enhancement of forest carbon stocks in developing countries as part of the post-2012 climate change regime under the United Nations Framework Convention on Climate Change (UNFCCC). These approaches will target the protection and management of the full range of ecosystem services, including carbon and water services, with safeguards for biodiversity, community livelihoods, and indigenous peoples. Ecosystem-based approaches also offer great promise for increasing climate resilience by reducing the intensity of floods and droughts, and improving the resilience of water resources.
- (iii) **Coastal and marine resources management.** Improving the state of oceans, seas, and coasts will be vital in addressing climate change and ensuring inclusive economic growth, food security, and livelihoods in the region. ADB will consider supporting a range of areas, including the restoration and management of coastal and marine ecosystems; community-based fisheries and livelihoods, environment- and society-friendly infrastructure to control erosion and protect shorelines; and ecosystem-based

adaptation. Ridge-to-reef<sup>13</sup> approaches may also be encouraged, including interventions to reduce downstream sedimentation and pollution in coastal areas, such as programs to implement the MARPOL<sup>14</sup> convention, as well as address point and nonpoint pollution sources. In addition, the testing of innovative financing mechanisms and incentive schemes will be important. ADB could work with other partners to develop knowledge and promote innovations such as payments for ecosystem services and blue carbon approaches.<sup>15</sup>

- (iv) **Sustainable supply chains.** Recognizing the links between consumption patterns and agricultural and other land uses, new initiatives could be designed to support the DMCs and the private sector to develop green supply chains. These could include promoting internationally recognized certification schemes for responsible forestry, fisheries, and tourism, such as the Forest Stewardship Council, the Marine Stewardship Council, and the Green Globe (for the travel and tourism industry); and providing investments to implement these sustainability practices.

**Valuation of ecosystem services.** In cooperation with other partners and tied to innovative financing schemes, ADB can help the DMCs develop tools and capacity to improve the economic valuation of ecosystem services. Support may be provided for preparing national and subnational assessments and for linking these assessments to decision-making processes. Pilot initiatives can also support the testing of ecosystem service assessments as part of strategic environmental assessments and environmental impact assessments as a means to better capture and reflect ecosystem services in strategy, program, and project design.

**Biodiversity safeguards.** ADB's Safeguard Policy Statement (2009) aims to ensure that ADB-supported projects use natural resources in a sustainable manner and achieve at a minimum, no net loss of affected biodiversity.<sup>16</sup> The DMCs need support to strengthen country safeguard systems and develop the capacity to better assess and appropriately address potential impacts on biodiversity and ecosystem services at the earliest possible stage in project and program processing. This includes supporting better data and information systems for biodiversity and ecosystems, and improving awareness and technical capacity for good international practices for "smart green infrastructure" that apply ecological considerations to project design.<sup>17</sup>

---

Recognizing the links between consumption patterns and agricultural and other land uses, new initiatives could be designed to support the DMCs and the private sector to develop green supply chains

---

<sup>13</sup> Ridge-to-reef approaches take a holistic view to managing watersheds, and coastal and marine ecosystems from source to the sea, encompassing integrated planning and management and strategic investments.

<sup>14</sup> MARPOL is the International Convention for the Prevention of Pollution from Ships. Adopted in November 1973, it is the main international convention for the prevention of pollution of the marine environment by ships from operational or accidental causes.

<sup>15</sup> Blue carbon refers to carbon stored or sequestered by coastal and marine ecosystems, including mangroves, salt marshes, and sea grasses.

<sup>16</sup> ADB. 2009. *Safeguard Policy Statement*. Manila. <http://www.adb.org/documents/safeguard-policy-statement>

<sup>17</sup> Smart green infrastructure includes a range of planning and design modifications that integrate green or ecological considerations into infrastructure such as roads, hydropower, and urban development. This can include the retention of biological corridors, the inclusion of wildlife viaducts, and measures to maintain natural hydrological cycles and downstream flows.

## Strengthening Environmental Governance and Management Capacity

The transition to green growth requires a policy and governance framework that helps facilitate the reduction of resource use and environmental pressures. Governments across Asia and the Pacific have established policy, legal, and institutional frameworks to promote sustainable development. Most DMCs are also parties to major multilateral environmental agreements.<sup>18</sup> However, even in cases where policy frameworks are sound, actual reforms and implementation often do not materialize due to limited institutional capacity, lack of technical expertise, insufficient funding, and fragmented institutional arrangements.

---

Policy and market failures will need to be corrected to create an enabling environment for innovation and bring about needed changes in behaviors

---

ADB is committed to improving governance, strengthening institutions, and reducing vulnerability to corruption—key ingredients for equitable and sustainable development. Environmental governance can be viewed as a subset of all governance and, as such, includes the elements of predictability, accountability, participation, and transparency.

**Policy and incentive frameworks.** Improved environmental governance implies the enhancement of institutions, policies, and legal and regulatory frameworks that establish the basis for good environmental governance and environmental change.

Policy and market failures will need to be corrected to create an enabling environment for innovation and bring about needed changes in behaviors. A range of approaches is needed, including regulations, market-based instruments, voluntary schemes, certification programs, and information disclosure. The DMCs may wish to explore such measures as reallocating taxes and fiscal expenditure to programs that favor resource efficiency, economic growth, and the poor; enacting the right price signals; and facilitating financial innovations that seek to maximize the economic value of natural resources.

Policies that promote resource inefficiencies, such as perverse incentives and distorting subsidies, should be discouraged. For instance, some governments view fossil fuel subsidies as an important way of providing support to the poor, but these subsidies encourage carbon dioxide emissions and other groups often capture the economic benefits. Many countries finance their subsidies through the general budget, thus diverting money from much-needed social programs.

Local policy and legal reforms in areas such as resource rights are needed to strengthen community empowerment and create incentives for sustainable local resource management. This will require the engagement of civil society, including environment champions and “watchdogs” within civil society.

**Compliance and enforcement.** Many DMCs recognize the need to translate broad framework policies and laws into bylaws and implementing rules and regulations to ensure effective

---

<sup>18</sup> Among the most prominent multilateral environmental agreements are the United Nations Framework Convention on Climate Change, the United Nations Convention on Combating Desertification, the Convention on Biological Diversity, the Montreal Protocol, the Stockholm Convention on Persistent Organic Pollutants, the Convention on International Trade in Endangered Species of Wild Fauna and Flora, and the Ramsar Convention on Wetlands.

implementation and compliance. To promote stronger regulatory governance,<sup>19</sup> the DMCs will need to strengthen and clarify the roles and mandates of environment ministries and agencies, sector ministries and agencies, as well as provincial and local authorities. Efforts may include supporting the integration of environment and climate change considerations into regional, national, and local development plans and actions, including climate change strategies and financing plans, as well as ADB's own regional and country partnership strategies.

Strengthened regional legal and institutional capacity would support improved environmental enforcement. This would include South–South cooperation in knowledge sharing, such as through the ADB-initiated Asian Environmental Compliance and Enforcement Network, established to improve compliance in Asia. DMCs will continue to seek support from ADB in this area, including customized support for enforcement officials (environment, forest, and marine), legal prosecutors, and legal civil society professionals.

Many DMCs recognize the unique and distinct leadership role the judiciary plays in the environmental enforcement chain. ADB will continue to support regional, subregional, and national work to help ensure greater environmental justice throughout the region. Useful examples include the Asian Judges Network on the Environment, which has been helping to develop judicial experience in environmental decision making in the region and strengthen judicial capacity in this area of the law.

Finally, the transition to green growth needs to take place in a fair and equitable manner. Ensuring an equitable transition involves careful consideration of the social dimensions of environmental problems and their proposed solutions, and could include social protection and welfare programs to help the most vulnerable groups. A longer-term solution may include investments in skills development and promotion of sustainable livelihood programs. Targeting women, particularly those in the informal sector, will help ensure gender parity and improve poverty reduction efforts.

**Country environmental safeguard capacity.** Under its Safeguard Policy Statement, ADB will continue to support the strengthening and effective application of DMC country safeguard systems with a focus on the capacity development of borrowers to ensure convergence with international best practice. ADB will help build DMC capacity and facilitate knowledge exchange and dissemination through existing and well-functioning regional networks. ADB will coordinate with other development agencies in supporting and mobilizing resources for country safeguard system capacity development activities. Capacity development will also be pursued together with bilateral and multilateral partners, based on DMC demand.

As pilot regional and subregional initiatives take hold, they can be upscaled into regional programs, such as the Water Financing Program<sup>20</sup> and the Clean Energy Program.<sup>21</sup> As highlighted by the ADB-initiated Clean Air Initiative for Asian Cities,<sup>22</sup> regional cooperation can also take the form of research and capacity building on cross-border issues and regional partnership building through various regional forums, networking, and exchange programs.

<sup>19</sup> Regulatory governance involves the processes, institutions, and relationships through which various stakeholder interests are balanced and relationships are mediated. Strong regulatory governance is a means to achieve an effective policy framework and requires a careful balance of shareholder interests.

<sup>20</sup> See <http://www.adb.org/sectors/water/financing-program>.

<sup>21</sup> See <http://www.adb.org/sectors/energy/programs/clean-energy-program>.

<sup>22</sup> See <http://cleanairinitiative.org/portal/index.php>.

---

Many DMCs recognize the unique and distinct leadership role the judiciary plays in the environmental enforcement chain

---



**Efficient and transparent public financial management.** Another significant challenge in many countries is ensuring the effective management of government financial resources, expenditures, and operating efficiency. Robust budget planning and management systems are needed to efficiently allocate and execute the very large amount of funds expected to flow for green growth, climate change, and other environment-related agendas. To these ends, ADB will continue to apply its risk-based approach to assess public financial management, procurement, and corruption risks in the environment sector.

## Responding to the Climate Change Imperative

Several countries in the region, including small island states such as the majority of ADB's Pacific DMCs, are among the most vulnerable globally to the projected consequences of climate change

Continued economic growth and poverty reduction in Asia and the Pacific will not be possible without proactive efforts to mitigate the causes of global warming and help the region adapt to the expanding impacts of climate change. Asia and the Pacific is the fastest growing source of new GHG emissions (although developed countries still produce far more GHG per capita). Several countries in the region, including small island states such as the majority of ADB's Pacific DMCs, are among the most vulnerable globally to the projected consequences of climate change. Regardless of how the international community responds to threats from climate change, the unmet financing needs for adaptation and mitigation measures, as well as the need for knowledge innovations in a range of sectors and thematic areas, will be enormous. Transformational change will be needed so that the DMCs can move into green growth trajectories that are climate resilient and low carbon.

In response to this challenge, ADB has adopted an integrated approach to address climate change mitigation and adaptation, facilitated by mobilizing financing, generating knowledge, and building partnerships. Priority areas for support are (i) expansion of the use of clean energy; (ii) encouragement of sustainable transport, water management, and urban development; (iii) management of land use and forests for carbon sequestration; (iv) promotion of climate-resilient development; and (v) strengthening of related policies and institutions (footnote 6). A number of planned measures have already been described in paras. 13–29.

ADB efforts build on recent developments in international climate change negotiations related to mitigation, adaptation, financing, and technology. Recent commitments include providing developing countries with greater public and private sources of finance, including market-based and other alternative financing modalities;<sup>23</sup> building climate resilience; and promoting the development and transfer of climate-friendly technologies for the benefit of developing countries. ADB will continue to serve as a channel for external climate funds such as the Climate Investment Funds, and will promote incentives and financing packages that share risks and lower costs, as well as support South–South cooperation for cost-effective technology development and diffusion.

ADB will continue to integrate environment and climate change considerations into regional, national, and local development plans and actions. With respect to mitigation, in addition to its assistance for sustainable infrastructure (energy, transport, water, and urban), ADB will support

<sup>23</sup> This includes a new financial instrument, the Green Climate Fund, which may eventually serve as an important channel for financing mitigation and adaptation actions in developing countries. See <http://gcfund.net/home.html>.

appropriate national mitigation actions and other DMC action plans through technical assistance. It will assist in developing monitoring, verification, and reporting systems to track results of policies and public investments. ADB will continue to expand its adaptation operations at the country level by mobilizing (i) internal resources, including its ordinary capital resources, its special funds (such as the Asian Development Fund), several trust funds, and dedicated funds (such as the Climate Change Fund); and (ii) external resources such as the Global Environment Facility (GEF) and the Pilot Program for Climate Resilience under the Climate Investment Funds. The focus will be on building climate resilience in vulnerable sectors, such as agriculture, energy, water, transport, and health. At the project level, ADB will help the DMCs develop climate-proofed infrastructure (e.g., ports, roads, power plants, water supply, and sanitation), including those financed by ADB, to ensure they are not compromised by climate variability and climate change or by other natural hazards. Climate proofing will be embedded in the project cycle, beginning with preliminary risk screening and, if required, detailed climate impact, vulnerability, and adaptation assessments.

Since climate-related disasters are the most visible links between existing conditions and a future altered by climate change, the DMCs need support to align disaster risk management efforts with climate change adaptation activities. To this end, ADB will continue to build on its current efforts to promote integrated disaster risk management in several countries.<sup>24</sup> ADB efforts will include developing innovative financing and risk-sharing approaches to promote the integration of climate adaptation and disaster risk reduction, including through insurance and other disaster risk finance instruments.

ADB will continue to develop and promote tools and methods to help the DMCs better address current climate variability risks, and anticipate and adapt to future climatic conditions. Approaches must be fine-tuned to meet the needs and match the capacity of individual countries. Web-based rapid screening tools will be developed to enable screening of all ADB projects for climate risks. A regional climate projection consortium and data facility will be established to provide and deliver robust climate data and projections to support climate risk and vulnerability assessments and adaptation planning. The Asia Pacific Adaptation Network, supported by ADB and other partners, will be the primary vehicle for sharing these tools and resources.

Adaptation to climate change, development, and poverty reduction are closely linked and targeted investments in resilience building of poor communities, women, and other vulnerable groups will generate a wide range of immediate benefits with low- or no regrets, while improving resilience. Programs focusing on education, health, gender equality, nutrition, and governance, among others, will form an important part of ADB's efforts to build societal resilience and will have two primary elements: (i) a research agenda, pursued jointly with the disaster risk management community, to improve understanding of the factors that confer resilience under current climate variability; and (ii) application of this knowledge to identify and target investments toward the binding constraints to adaptive capacity in critical sectors and communities within each of ADB's DMCs. These efforts will build on recent ADB studies including climate-induced migration, health, and food security impacts of climate change.

---

**ADB will continue to develop and promote tools and methods to help the DMCs better address current climate variability risks, and anticipate and adapt to future climatic conditions**

---

<sup>24</sup> ADB efforts in this area will be guided by the Disaster and Emergency Assistance Policy (2004), which covers natural, technological, and environmental hazards (including climate-related hazards), as well as health emergencies and country conflict situations.

# Supporting Modalities

Support for green growth will be focused and selective, taking into account comparative strengths in areas such as infrastructure, finance, policy advice, and knowledge

## Mainstreaming Environmental Considerations into ADB Operations

ADB will continue to mainstream environmental considerations into its regional and country programming, technical assistance, and lending operations. Support for green growth will be focused and selective, taking into account comparative strengths in areas such as infrastructure, finance, policy advice, and knowledge. To mainstream environment efforts, the Environment Community of Practice (CoP) will take an increasingly important role in supporting operations departments' efforts to integrate upstream environment inputs into ADB operations, promote environmental knowledge management, and enhance overall environmental quality and safeguard compliance for ADB projects and other activities.

**Upstream environmental analysis.** ADB will further strengthen and enhance the quality of upstream environmental inputs (including climate change issues and opportunities for mitigation and adaptation support) into the regional and country partnership strategy process, and sector and thematic assessments through the development of country environmental analyses and other analytical inputs.<sup>25</sup> It will work to proactively improve environmental sustainability during project feasibility and design to develop high-quality technical assistance, grants, and loans.

In addition to promoting upstream environmental inputs during country programming, ADB will continue to selectively support regional, country, or sector strategic environmental assessments, particularly in conjunction with policy-based loans, sector loans, and multitranche financing facilities. In this effort, ADB can build on its successful support of strategic environment assessment pilots, under the framework of the Greater Mekong Subregion Core Environment Program and as an element of country-specific investment programs.

**Environmental safeguards.** ADB will continue to monitor and assess its overall safeguard performance against the objectives of the Safeguard Policy Statement, and maintain its internal review and compliance monitoring system to assess ADB-wide and project performance. ADB may revise and update the Safeguard Policy Statement as needed to enhance its effectiveness and ensure that it remains relevant to changing client needs and new business opportunities. ADB will continue to support DMC capacity to improve their country safeguard systems.

**Environmental footprint.** ADB will continue its efforts to reduce its environmental footprint, conserve resources, and decrease GHG emissions.<sup>26</sup> These include conserving water, electricity, and paper, as well as expanding the use of videoconferencing and electronic communications to minimize unnecessary travel. ADB is using solar power as a supplementary energy source

<sup>25</sup> For example, the recently introduced country environment notes.

<sup>26</sup> ADB regularly issues sustainability reports that provide information on ADB's corporate footprint and sustainability of its operations.

at its headquarters and is harvesting rainwater. In October 2012, the International Organization for Standardization 14001 and the Occupational Health and Safety Assessment Series 18001 recertified ADB's Environment, Health, and Safety Management System. The management system policy specifically targets ADB headquarters to ensure it complies with internationally recognized management system standards.

## Promoting Regional Cooperation

Since many environmental resources transcend political boundaries, ADB seeks to continually improve the management of regional public goods, as emphasized in Strategy 2020 and supported by ADB's Regional Cooperation and Integration Strategy.<sup>27</sup> Regional cooperation for environmental management will largely take the form of regional and subregional policy dialogue and initiatives to deal with environmental issues such as transboundary air and water pollution, and promote the conservation and sustainable use of biodiversity. In addition, the development of knowledge, such as climate change data and projections that can be applied across countries, may also be promoted as a regional public good. To support such efforts, ADB may consider further promoting regional cooperation and targeted national and subnational investments. ADB is also well positioned to play a key role in mobilizing resources, developing sustainable financing mechanisms, and fostering partnerships among participating countries and other conservation and development partners.

One important area for regional cooperation is protection and sustainable management of large-scale ecosystems. While providing benefits to local economies, large ecosystems transcend national boundaries and require more coordinated management approaches to ensure the continued flow of global and regional public goods. These include places of outstanding human and ecological significance, such as (i) the Coral Triangle, which supports the greatest diversity of coastal and marine ecosystems on the planet, and supports annual international fishery exports of more than \$3.5 billion; (ii) the Greater Mekong Subregion, with globally significant biodiversity, forest, and carbon stocks, as well as the largest inland fishery in the world; (iii) the Heart of Borneo, the third largest rainforest in the world, known as the "lungs of Asia," and (iv) the Himalayan mountain range, one of the earth's recognized biodiversity hot spots and the source of freshwater for more than 1 billion people in the region. In these and other areas, the DMCs are showing great leadership in developing cooperation programs with their neighbors, and capitalizing on shared interests in the sustainable use and management of vital natural ecosystems.

---

Partnerships enable ADB to leverage its experience and expertise in many areas, build on the strengths of its partners, and enhance the effectiveness of its environmental initiatives

---

## Building and Maintaining Strategic Partnerships

Partnerships will remain crucial to advance ADB efforts to promote environmental sustainability in the region. Partnerships enable ADB to leverage its experience and expertise in many areas, build on the strengths of its partners, and enhance the effectiveness of its environmental initiatives. Moreover, in partnership with other organizations, ADB encourages the DMCs to address issues of regional and global importance that might otherwise receive low priority if viewed purely from a national perspective.

<sup>27</sup> ADB. 2006. *Regional Cooperation and Integration Strategy*. Manila.

Partnerships will be maintained and strengthened with international agencies and institutions, including with the GEF and United Nations entities, such as the United Nations Environment Programme, the United Nations Development Programme, and the United Nations Economic and Social Commission for Asia and the Pacific. Regional institutes, such as the Institute for Global Environment Strategies, Japan, and The Energy and Resources Institute, India, will have an increasing role in generating and sharing knowledge. Bilateral agencies also play a vital role in facilitating ADB's environment program through targeted cofinancing, but also increasingly through knowledge, strategic and analytical work, capacity building, and policy reform activities. In the past, such bilateral support enabled ADB to increase DMC support to combat land degradation, improve urban environmental management, conserve biodiversity, mitigate climate change and adapt to its impacts, support poverty–environment improvement projects, and rehabilitate natural and physical resources in disaster-affected areas. Together with bilateral and multilateral partners, ADB will also look for opportunities to further promote capacity development, policy dialogue, and regional initiatives, based on demand from DMCs.

---

**The role of nongovernment organizations (NGOs) and civil society is significant in addressing environment and development challenges**

---

In addition, the role of nongovernment organizations (NGOs) and civil society is significant in addressing environment and development challenges. ADB will continue partnering with them to address strategy and policy issues, as well as implement projects in a variety of ways (e.g., as cofinancier, implementing agency, facilitator of participatory approaches, monitoring and evaluation organization, information provider, and training beneficiary). ADB has successfully collaborated with a number of preeminent international NGOs. It has signed formal cooperation agreements with major NGOs, such as the World Wide Fund for Nature (WWF) and the International Union for Conservation for Nature, and will continue to look for opportunities to deepen and expand such arrangements with several other organizations.

### **Developing Knowledge Solutions**

With the understanding that environment knowledge solutions must play a larger role, ADB developed the *Knowledge Management Directions and Action Plan (2013–2015): Supporting “Finance+ +” at ADB* and more recently established the Knowledge Sharing and Services Center in the Regional and Sustainable Development Department (RSDD). The objective is to advance the knowledge management agenda under Strategy 2020 by prioritizing and implementing knowledge solutions and enriching the knowledge capabilities within ADB and the region.

Following the action plan, ADB will develop and disseminate knowledge—both internally and externally, as well as stimulate regional discussion, in selected areas, including sustainable ecosystem management, environmental governance, climate change, and green growth.

The Environment CoP, in close cooperation with the Environment and Safeguards Division (RSES) and the regional departments, will continue to be a useful mechanism in promoting knowledge management on environmental sustainability in ADB. In its role as the hub of environmental knowledge and expertise within ADB, the Environment CoP will develop knowledge products that respond to DMC demands. Resident missions and representative offices will have an important role.

The Environment CoP will reach out to other networks to enrich the prospects for cross-fertilization and knowledge sharing with and among DMCs. Working closely with others, including with ADB-supported “centers of excellence” and “knowledge hubs,” ADB will endeavor to develop cutting-edge knowledge products, organize workshops and forums throughout the region, and develop country environmental analyses to inform decision making on environmental issues.

Through these efforts, ADB will increasingly work to identify new knowledge solutions and pilot-test innovative approaches for future replication and scaling up. Innovation and pilot-testing will be pursued across a range of areas, such as sustainable land management and REDD+ to support DMC access to emerging carbon markets; advanced approaches to transport demand management and road pricing; and climate resilience approaches in vulnerable sectors (e.g., agriculture, energy, transport, and health).

Finally, the Environment CoP will continue to play a key role in enhancing the knowledge of ADB staff and fostering the environmental consciousness among ADB employees, which is instrumental in the overall effort to mainstream the environment, including climate change, into ADB operations and business processes. Staff will continue to be supported through frequent in-house and external training seminars and workshops, for instance on environmental safeguards processes.

## Implementation Arrangements

ADB’s *Environment Operational Directions, 2013–2020* will be implemented primarily through investment projects, technical assistance, knowledge development and sharing, and policy dialogue in the context of the country partnership strategy process. Efforts by operations departments will be facilitated by RSDD, which promotes regional cooperation, strategic partnerships, innovation in delivering assistance programs, resource mobilization, and knowledge management. It serves as the corporate focal point for the environment, climate change, and safeguards.

The Office of Regional Economic Integration will provide knowledge support on regional cooperation and integration, and the Economics and Research Department will provide support through policy research on key development issues. Other departments and offices, such as the Strategy and Policy Department and the Office of the General Counsel, will play important strategic and supporting roles.

An important role will also be increasingly played by the Environment CoP. Through the leadership of the Environment Committee and with participation from its members, the Environment CoP has been, for several years now, actively engaged in mainstreaming the environment in ADB operations. The Environment CoP will also continue to play a key role in enhancing the knowledge of ADB staff and fostering environmental capacities among ADB staff through support for in-house and external training seminar and workshops.

Reflecting the increased attention to environment and climate change projects and programs, ADB is increasing its staff resources for relevant sector and thematic areas. The Work Program and Budget Framework, 2013–2015 reports that staff expansion during 2010–2012 significantly strengthened ADB’s institutional capacity in safeguards implementation and compliance, and improved the skills mix in priority sectors, such as urban transport, clean energy, climate change, and agriculture and natural resources.

---

ADB’s  
Environment  
Operational  
Directions  
will be  
implemented  
primarily  
through  
investment  
projects,  
technical  
assistance,  
knowledge  
development  
and sharing,  
and policy  
dialogue in  
the context of  
the country  
partnership  
strategy  
process

---



## Mobilizing and Channeling Resources

DMC demand for improved environmental management in the region is likely to continue to expand, in line with the upward trend in ADB support for projects with environmental sustainability as a theme (Appendix 2). While the allocation of ordinary capital resources and special funds such as the Asian Development Fund to support environmental sustainability actions will continue to be a priority, ADB will increasingly play a catalytic role in mobilizing additional financial resources.

ADB is well positioned to continue to help its DMCs gain access to additional concessional resources that will be mobilized from a variety of sources, including internal funds managed directly by ADB, and those managed and implemented jointly with other partners, such as the GEF, for which ADB is an executing agency.

ADB has developed \$240 million in projects with GEF cofinancing. The fifth replenishment phase, from July 2010 to June 2014, makes \$4.25 billion available to developing countries for projects and programs addressing global environmental problems. For the sixth replenishment, ADB is in a good position to leverage additional resources for projects related to the GEF focal areas of biodiversity, climate change, international waters, land degradation, and chemicals. Through the GEF, ADB also has access to financing for DMC climate change adaptation: the Special Climate Change Fund and the Least Developed Countries Fund.

ADB has expanded its role in channeling resources of other multilateral climate funds, and is an implementing entity of the Climate Investment Funds and the Kyoto Protocol Adaptation Fund. It has been fully engaged in the design of the Green Climate Fund. The Climate Investment Funds have become the largest source of cofinancing for ADB's climate change program with an expected total allocation of about \$1.5 billion in grants and concessional financing by 2013. ADB is gaining significant experience in preparing and administering climate change mitigation and adaptation projects cofinanced by the Climate Investment Funds, the GEF, and other multilateral and bilateral financing sources. This experience will help position ADB as a key player in accessing resources from the Green Climate Fund to help its DMCs meet future climate financing needs.

ADB will also look to enhance its role in helping its DMCs gain access to global carbon markets. In this effort, ADB can build on the existing Carbon Market Program and its carbon finance fund mechanisms: the Asia Pacific Carbon Fund and the Future Carbon Fund. This may include developing new carbon finance products and increasing the flow of carbon finance to the region, particularly to countries not well represented in the carbon market during the Kyoto Protocol's first commitment period. ADB will pay more attention to opportunities in the urban and transport sectors, as well as opportunities for REDD+ financing for the conservation, management, and enhancement of carbon stocks in soils and forests. Support will be offered for the development of domestic carbon markets in the larger economies of the region, as appropriate.

---

While the allocation of ordinary capital resources and special funds such as the Asian Development Fund to support environmental sustainability actions will continue to be a priority, ADB will increasingly play a catalytic role in mobilizing additional financial resources

---



# Reporting for Results

A results framework (Appendix 4) for the Environment Operational Directions will guide operations over the period 2013–2020. The ADB annual development effectiveness review (DEFER) will report on progress on the environment operational directions, specifically with regard to the environment-relevant indicators in the ADB results framework.

ADB's Results Framework sets targets for projects with "environmental sustainability" as a theme.<sup>28</sup> In the (2013) ADB Results Framework, these targets have been increased from 25% to 40% (average over a 3-year period) for Asian Development Fund operations and from 25% to 50% for ADB operations. Project classification will adhere to the definitions provided in the relevant staff instructions (Appendix 3). Operations departments will be primarily responsible for ensuring appropriate classification of projects, and the Environment CoP will periodically review progress and summarize findings in its annual reporting to Management.

---

28 See ADB. 2012. *Review of the ADB Results Framework*. Manila. <http://www.adb.org/documents/review-adb-results-framework>

# Conclusion

---

Strategies for achieving green growth and resilience must ultimately reflect the unique natural and cultural settings of Asia and the Pacific's developing economies, and the unique development challenges they face, and ADB stands ready to support them in this necessary process of transformation

---

As Asia and the Pacific continues to face challenges in reducing poverty and attaining environmental sustainability, green growth can be seen as an economic opportunity and risk management strategy. Economies and societies need to prepare for an uncertain and resource-constrained future. Moving forward, policy decisions should be aimed at systemic changes that can dramatically improve resource efficiency, while at the same time building more inclusive and resilient economies. The DMCs will increasingly need to take transformational action for green growth by investing more resources in large-scale innovative programs. These may include sectorwide demonstration projects, aggressive barrier removal policy initiatives, scaled-up deployment programs, and diffusion and transfer of clean technologies.

ADB and its partners will continue to assist the DMCs in meeting the challenges of attaining environmentally sustainable economic growth to achieve ADB's vision of an Asia and Pacific region that is free from poverty. Guided by Strategy 2020, and following the outcomes of the Rio+20, ADB will increase its support to the DMCs to promote green growth, inclusive social development, and good governance. ADB's Safeguard Policy Statement provides additional emphasis on this agenda—promoting the sustainability of project outcomes by protecting the environment and people from a project's potential adverse impacts.

To help the DMCs accomplish the transition to green growth, this paper identifies four environment operational directions for ADB to help its DMCs achieve green growth: (i) promote transitions to sustainable infrastructure; (ii) invest in natural capital; (iii) build sound environmental governance and management capacities; and (iv) respond to the climate change imperative.

In pursuit of these directions, ADB will step up its efforts to mobilize the necessary resources, including financial, technical, and human. ADB will continue to mobilize and leverage additional public and private financial resources to supplement its own resources, including innovative market mechanisms such as payments for ecosystem services, carbon markets, and REDD+. ADB will also deepen and expand partnerships to provide access to complementary knowledge and expertise.

Strategies for achieving green growth and resilience must ultimately reflect the unique natural and cultural settings of Asia and the Pacific's developing economies, and the unique development challenges they face, and ADB stands ready to support them in this necessary process of transformation.

## APPENDIX 1

# Key Environmental Challenges and Opportunities in Asia and the Pacific

Given the soaring growth rates and tremendous development challenges in the Asia and Pacific region, its fundamental dilemma for the long term will be meeting the needs of expanding and increasingly affluent populations while reducing poverty and staying within environmental limits. Some of the most pressing environment-related challenges include climate change; food, energy, and water security; rapid urbanization and industrialization; loss of biological diversity and ecosystem services; and environmental governance.

Addressing these challenges will require far more than incremental improvements, such as making power plants more efficient or planting more trees, although such measures will also be needed. Over the longer term, systemic and structural changes will be needed in production systems (e.g., changing the mix of resource supplies, developing new green industries, and cleaning up polluting sectors) and to transform consumption patterns.

**Climate change.** Anthropogenic climate change poses a grave threat to natural, economic, and social systems. Although the majority of the historical buildup of atmospheric greenhouse gases (GHGs) is the result of emissions from developed countries, Asian developing countries are now the fastest growing source of new emissions. The key drivers of GHG emissions in the region are carbon-intensive energy production (including burning coal for electricity generation), transport systems that are inefficient and run on fossil fuels, rapid and largely uncontrolled urban and industrial development, agricultural intensification, and forest and land degradation. To address these drivers, the need to shift economies onto less carbon-intensive growth trajectories is urgent.

Asian and Pacific countries have much to gain if GHG emissions are successfully reduced. The consequences of climate change are increasingly acknowledged to pose a real threat to the region's expanded economic prosperity and improved livelihoods. Climate change has made the region susceptible to more frequent and intense weather events, such as hazardous typhoons, floods, and droughts. Rising sea level, warmer ocean temperatures, and increasing ocean acidity are threatening the health of coastal and marine ecosystems.

The poorest and the most vulnerable communities are likely to suffer the most, as they often have few assets to help cope with disaster losses. Climate-related disasters can rapidly erase development progress accumulated for decades. Climate change affects food security, water security, habitats, and livelihoods, and may force people to find other places to live. Many small island states, especially in the Pacific, will be directly threatened by sea level rise, which will add to coastal erosion and saltwater intrusion. As sea levels continue to rise, some coastal areas will be permanently submerged; islands that consist only of low-lying coastal areas will disappear.

**Food, water, and energy security.** Shortages of key resources and associated price spikes are contributing to increased insecurity in food, water, and energy supplies. Furthermore, the increasing linkages between these resources offer a growing challenge in the region. Difficult choices are looming at the nexus of the food, water, and energy sectors, as water demand from agriculture and energy production grows in the face of declining water resources in some areas.

Perhaps most significantly, concerns are growing about the adequacy and stability of food supply, particularly given the continuing increase of food prices. Food security is of particular concern, as about 545 million people in Asia and the Pacific still consume less than the global standard of 2,200 calories per day, while many more experience periods of deprivation due to seasonal variation in food availability.

Seasonal shortfalls in the availability of water are a growing crisis in many parts of Asia. While the region has the world's largest share of renewable freshwater resources, it has the lowest availability of water on a per capita basis. Any water shortfall in the region will produce severe ripple effects, given that roughly 70% of all water is consumed by agriculture and 12% by energy production.

Meanwhile, as energy demands mount, countries in the region will become increasingly vulnerable to price shocks, especially countries that import energy and have high energy intensity. Vulnerabilities linked to dependence on importing energy, aggravated by the volatility of energy prices, will continue to have far-reaching implications for the financial ability of countries to meet their energy demands. This will be a major challenge for a region that has a large population without access to modern forms of energy.

**Rapid urbanization and industrialization.** The expansion of Asia's urban population and accompanying congestion, poverty, and pollution form a major challenge for city planning and service delivery. The scale is striking: 44 million people are added to city populations in Asia every year, equivalent to 120,000 each day, requiring the construction of more than 20,000 new dwellings, 250 kilometers of new roads, and additional infrastructure to supply more than 6 million liters of potable water.<sup>29</sup>

Many of the region's key environmental problems are closely linked to waste and emissions generated in urban areas, with the poor often facing the most significant and immediate effects. Up to a third of Asian city dwellers live in overcrowded slums and squatter settlements, often with little or no access to environmental services such as water supply and sanitation. The urban poor typically reside close to crowded roads and polluted waterways, so they face significant health risks due to high concentrations of key air and water pollutants, such as sulfur dioxide, particulate matter, excessive nutrients, and other pollution in terms of chemical oxygen demand.

In addition, as countries in the region develop, they will generate substantially more municipal and industrial waste, which will pose a serious challenge to countries that do not have adequate waste collection, transport, and processing and disposal systems. A particular challenge is managing

---

<sup>29</sup> B. Roberts and T. Kanaley, eds. 2006. *Urbanization and Sustainability in Asia: Case Studies of Good Practice*. Manila: Asian Development Bank.

toxic chemicals and hazardous waste generated from industrial, agricultural, and manufacturing processes. Persistent organic pollutants produced for use as pesticides and industrial chemicals, and through certain chemical and/or combustion processes, pose local and global health threats. Electronic waste, which may contain several toxic heavy metals, is also an increasingly serious issue.

**Natural resource degradation and loss of biological diversity and ecosystem services.** The globally significant biodiversity and abundant natural resources of the Asia and Pacific region provide sustenance for millions of its residents—from seafood and agricultural products to fodder, fuelwood, timber, and medicine—in addition to the vital role that biodiversity and natural resources play in assimilating wastes, recycling nutrients, regulating the climate, and recharging aquifers.

Unfortunately, many vital ecosystem goods and services continue to decline in the region, due to poor natural resource management decisions, growing human populations, and increased per capita consumption. Some specific drivers are (i) deforestation and forest degradation due to changes in land use for agriculture, forest plantations, and other forms of economic development; (ii) loss of mangroves to shrimp aquaculture and coastal development; (iii) destruction of coral reefs from land-based pollution, overfishing, and destructive fishing practices; and (iv) damming of major rivers for irrigation and hydropower. A key factor is the failure of markets to adequately consider the full value of ecosystem services, which has contributed to their being undervalued in decision making.

**Environmental governance.** Governments across Asia and the Pacific have established policy, legal, and institutional frameworks to address the environmental impacts of rapid urbanization and industrial growth and other development. Most countries are also parties to major multilateral environmental agreements.<sup>30</sup> However, even in cases where policy frameworks are sound, actual reforms and implementation do not always materialize due to a number of factors. Despite the recent enactment of important environment policies and legislation, the effectiveness of national environmental protection programs are, in many cases, severely hampered by limited institutional capacity, lack of technical expertise, insufficient funding, and fragmented institutional arrangements. Efforts to build effective governance structures for green growth need to be deepened and expanded.

While many of the adverse environmental consequences of current growth patterns are local in nature, a number of environmental challenges require coordinated regional or even global action. Climate change is arguably the most important of these challenges, imposing adverse impacts on the region's economies and demanding a collective response. Other transboundary environmental challenges include the need for attention to regional global public goods, such as the management of transboundary airsheds and watersheds, biodiversity corridors (including transboundary protected areas), and shared coastal ecosystems. All will require decision-making processes that go beyond the borders of individual nation states.

Several countries in the region have recently pursued and invested in green strategies and policy reform; many have established strategies and policies to support green growth and development that is low in carbon emissions and resilient to climate change. While some progress has been made, green growth and, more generally, sustainable development, is an unfinished agenda and much more work is required.

---

<sup>30</sup> Among the most prominent multilateral environmental agreements are the United Nations Framework Convention on Climate Change, the United Nations Convention on Combating Desertification, the Convention on Biological Diversity, the Montreal Protocol, the Stockholm Convention on Persistent Organic Pollutants, the Convention on International Trade in Endangered Species of Wild Fauna and Flora, and the Ramsar Convention on Wetlands.

Internationally, a more coherent interface among the multilateral environmental agreements would greatly facilitate regional and country action. Regionally, stronger arrangements for facilitating regional cooperation would also be very welcome. For countries, many have adequate environmental laws and regulations, but effective compliance and enforcement continue to be elusive. Governments need to work with communities, industry, and other stakeholders. Improvements are also needed for incentive frameworks for environmentally responsible action; policies, including fiscal reforms; removal of perverse subsidies, such as large subsidies for fossil fuels; and much better valuation of critical ecosystem services.



## APPENDIX 2

# Asian Development Bank Experience

The Asian Development Bank (ADB) has been progressively addressing the environmental sustainability of its operations. Following the 1972 United Nations Conference on the Human Environment, the ADB Board of Directors issued Environmental Considerations in ADB Operations.<sup>31</sup> It made specific recommendations on how a systematic approach to environmental issues might be incorporated into ADB operations, including the introduction of environmental assessments into the project cycle. In 1980, ADB signed the Declaration of Environmental Policies and Procedures Relating to Economic Development as a culmination of a 3-year process coordinated by the Committee of International Development Institutions on the Environment. And in 1988, environmental assessment requirements were formalized in ADB's operations manual.

At the same time, ADB's role in promoting environmentally sustainable growth has broadened beyond building environmental safeguard capacity to include policy, institutional, and investment support to key development sectors, such as energy, water, transport, agriculture, and natural resources. This broadened scope was backed by ADB's environment policy in 2002, which emphasizes the importance of environmentally sustainable growth in ADB's mission to help its developing members reduce poverty and improve living conditions and quality of life.<sup>32</sup>

ADB's Safeguard Policy Statement (2009) consolidates previous safeguard policies on the environment, involuntary resettlement, and indigenous peoples, with enhanced consistency and coherence.<sup>33</sup> The Safeguard Policy Statement deals comprehensively with environmental and social impacts and risks and provides a platform for affected people and other stakeholders to participate in project design and implementation.

The number of ADB projects with environmental sustainability as a theme has increased markedly (Figure A2). From 2001 to 2012, ADB supported more than 290 projects, with a total value of nearly \$30 billion. Based on a 3-year rolling average during 2010–2012, environment-focused lending averaged 45%, a sharp increase from the 3-year rolling average of 22% during 2007–2009 and exceeding ADB's target of 25% for that period. In 2012, environment-focused lending reached about \$6.2 billion, when 53 loan and grant projects had environmental sustainability as a theme (Figure A2).

ADB has complemented these projects with technical assistance activities. The total number of technical assistance projects with environmental sustainability as a theme has sharply increased— to 407 during 2008–2012, with a total value of \$466 million. In 2012, 86 technical assistance projects (\$96 million in total) and 19 grants (nearly \$134 million in total) were approved with environmental sustainability as a theme. These projects continue to be used for capacity development in countries and subregions, project preparation, and policy and advisory activities.

---

<sup>31</sup> ADB. 1979. Environmental Considerations in ADB Operations. Manila.

<sup>32</sup> ADB. 2002. Environment Policy of the Asian Development Bank. Manila.

<sup>33</sup> ADB. 2009. Safeguard Policy Statement. Manila.



Policy and advisory technical assistance projects were utilized for national activities, such as for preparing national climate change and environmental management strategies, strategic frameworks, policy recommendations, and programs with national coordination. Capacity development technical assistance projects were used to strengthen specific institutions under well-defined policy, regulatory, and institutional frameworks by (i) building institutional capacity for planning, budgeting, and implementation; (ii) strengthening the information base for decision making; and (iii) developing specific methodologies. Project preparation technical assistance financed the preparation of proposed projects.

New and ongoing technical assistance projects will continue to support efforts to mainstream environmental sustainability, including (i) integrating environmental objectives into national and sector economic development processes; (ii) introducing policies and regulatory systems for environmental management, including the use of economic instruments; (iii) promoting good governance to ensure compliance and enforcement; and (iv) enhancing education, public awareness, and capacity building in environment-related fields. The emphasis will be on sustainable infrastructure, better management of ecosystem services, and climate change mitigation and adaptation.

In response, developing member countries are demanding several environment initiatives, including on climate change. These include access to the Clean Energy Program, the Carbon Market Program, the Sustainable Transport Initiative, and the Cities Development Initiative for Asia, which together emphasize environmental sustainability in the energy, transport, and urban sectors.

Looking ahead, ADB will continue to pursue the objectives established under Strategy 2020: reducing poverty in the region while promoting environmentally sustainable growth.<sup>34</sup> Much progress has been made, but the challenges in achieving environmental sustainability in the region remain numerous and varied, underscoring the need for ADB to continually assess its progress.

<sup>34</sup> ADB. 2008. *Strategy 2020: The Long-Term Strategic Framework of the Asian Development Bank, 2008–2020*. Manila.

## APPENDIX 3

# Guidelines for Classifying Projects with Environmental Sustainability as a Theme

To ensure consistent application of the criteria for classifying projects for environmental sustainability throughout the Asian Development Bank, projects must strictly adhere to the definitions provided in the staff instructions. Operations departments are primarily responsible for ensuring their projects are appropriately classified, and the Environment Committee will periodically review the classifications to ensure they are consistent with the criteria.

Theme and Subthemes	Definition and Explanatory Notes
Natural resource conservation	Includes activities that address protection, conservation, and sustainable use of natural resources, ecosystems, and biodiversity land conservation, protection, and rehabilitation including control and mitigation of land degradation, desertification, and effects of drought reduction of vulnerability to climate variability and change, and natural disasters through improved natural resource conservation
Urban environmental improvement	Includes activities that address air quality improvement through transport planning and modal shifts, use of cleaner fuels, and vehicle emission monitoring and maintenance solid waste management sanitation and sewage, including wastewater management surface and groundwater quality management
Eco-efficiency	Includes activities that address cleaner production and eco-efficiency energy efficiency and conservation improved environmental management in agriculture, mining, energy, and industrial operations management, treatment, storage, and disposal of hazardous waste oil spill contingency planning and remediation, and rehabilitation of contaminated production sites and surrounding areas

*continued on next page*

table continued

Theme and Subthemes	Definition and Explanatory Notes
Global and regional transboundary environmental concerns	Includes activities that address the following, including implementation of international environment conventions and treaties, climate change mitigation and adaptation transboundary dust storms management of international waters transboundary air pollution persistent organic pollutants and ozone-depleting substances globally significant biodiversity
Environment policy and legislation	Mainstreaming environmental considerations in economic growth includes activities that address environmental regulatory and management institutions environmental legislation, policies, regulations, monitoring, compliance and enforcement, and environmental good governance environmental assessment and management planning financing mechanisms policy reform programs, including economic instruments for environmental management environmental awareness, education, and capacity building.

Source: ADB Regional and Sustainable Development Department.

# APPENDIX 4

## Results Framework, 2013–2020

### Overall Impact: Improved planning, policies, and investments for environmentally sustainable development

#### Operational Direction 1: Promoting transitions to sustainable low-carbon infrastructure

Outcomes	Outputs	Key Activities and Initiatives	Assumptions and Risks
Improved energy efficiency and greater use of renewable energy in DMCS Expanded access to energy in DMCS	<ul style="list-style-type: none"> <li>- ADB investments in energy efficiency and renewable energy expanded</li> </ul>	<p>Under the Clean Energy and Environment Program:</p> <ul style="list-style-type: none"> <li>- Mobilize concessional resources through funds administered or jointly administered by ADB</li> <li>- Catalyze private sector investments in energy and renewable energy projects</li> <li>- Maximize the use of market-based mechanisms</li> <li>- Support the Clean Energy Forum</li> </ul>	<p><b>Assumptions:</b></p> <ul style="list-style-type: none"> <li>- Strong buy-in from countries for increased sustainable infrastructure investments</li> <li>- Governments are committed to implement reform measures for increased investments in sustainable infrastructure</li> <li>- Private sector is mobilized for additional financing</li> </ul>
Increased use of environmentally sustainable transport systems through "avoid-shift-improve" approach <sup>2</sup>	<ul style="list-style-type: none"> <li>- ADB investments in sustainable urban transport and railway projects expanded</li> </ul>	<p>Under the Sustainable Transport Initiative:</p> <ul style="list-style-type: none"> <li>- Mainstream sustainable transport approaches in ADB operations</li> <li>- Establish a Sustainable Transport Partnership Facility</li> </ul>	<p><b>Risks:</b></p> <ul style="list-style-type: none"> <li>- Economic constraints in governments limit sustainable infrastructure investments</li> <li>- Reluctance of government to implement reforms</li> <li>- Private sector participation cannot be stimulated at scale</li> </ul>
Improved water security and enhanced water efficiency and productivity <sup>3</sup>	<ul style="list-style-type: none"> <li>- Increased ADB investments in sanitation and wastewater management, and river cleanups</li> <li>- Efficiency in water use mainstreamed into the design of ADB projects</li> </ul>	<p>Under the Water Operations Program:</p> <ul style="list-style-type: none"> <li>- Mainstream Water Operations Program priorities into lending and non-lending program (integrated water resources management infrastructure and services, including water supply, sanitation, wastewater treatment, and irrigation)</li> <li>- Continue resource mobilization for the Water Financing Partnership Facility</li> <li>- Undertake the Future of Water in Asia Study</li> <li>- Develop approaches that improve efficiency of urban, rural, and agricultural water services</li> </ul>	

continued on next page

table continued

**Operational Direction 1: Promoting transitions to sustainable low-carbon infrastructure**

Outcomes	Outputs	Key Activities and Initiatives	Assumptions and Risks
<p>Increased levels of inclusive urban economic growth and poverty reduction with fewer global and local environmental impacts<sup>4</sup></p>	<ul style="list-style-type: none"> <li>- Integrated urban plans providing a sustainable basis for urban projects</li> <li>- Improved environmental infrastructure using Green City approaches to provide energy-efficient and resilient investments in urban areas</li> </ul>	<p>Under the Green Cities approach (Urban Operational Plan):</p> <ul style="list-style-type: none"> <li>- Link developing member countries to appropriate technologies to support greening activities (e.g., water conservation and waste management)</li> <li>- Maximize climate change mitigation and resilience outcomes of urban investments</li> <li>- Develop tool kit to guide consideration of "green city" issues in program and project formulation</li> <li>- Provide technical assistance for improved planning, governance, and public sector management systems and utility management</li> </ul>	
<p>Improved resilience of urban and rural infrastructure to climate change impacts</p>	<ul style="list-style-type: none"> <li>- Climate-proofing of ADB infrastructure projects, particularly in areas vulnerable to climate change and climate variability</li> </ul>	<ul style="list-style-type: none"> <li>- Formulate an Accelerated Adaptation Initiative to address emerging risks to critical infrastructure, with emphasis on "low regret" interventions</li> <li>- Conduct targeted vulnerability assessments to identify priority adaptation needs in participating developing member countries</li> <li>- Develop an online rapid project risk screening tool</li> <li>- Develop and apply methods and guidance in the economic analysis of decision making</li> </ul>	

continued on next page

table continued

## Operational Direction 2: Investing in natural capital

Outcomes	Outputs	Key Activities and Initiatives	Assumptions and Risks
Improved regional trends in reducing land and forest degradation and sustainable coastal and marine resources management	<ul style="list-style-type: none"> <li>- Increased investments in sustainable natural resource management projects</li> <li>- Improved participation of local communities, including indigenous people, in natural resource management in ADB projects</li> <li>- Improved community livelihood practices mainstreamed into natural resource management projects</li> </ul>	<ul style="list-style-type: none"> <li>- Support sustainable natural resource management programs in key regional landscapes (e.g., Greater Mekong Subregion, Heart of Borneo, Coral Triangle)</li> <li>- Conduct studies that measure the economic value of biodiversity and ecosystem services for improved decision making</li> <li>- Develop and test sustainable financing mechanisms in support of sustainable forest and land use management (e.g., payment for ecosystem services, REDD+) and coastal and marine resources management</li> <li>- Support national programs to certify carbon credits and forest carbon monitoring systems</li> <li>- Ensure participation of local communities, including indigenous people, in ADB project design and implementation</li> <li>- Promote ecosystem-based approaches to improve climate resilience</li> </ul>	<p><b>Assumptions:</b></p> <ul style="list-style-type: none"> <li>- Government commitment to major ecosystem initiatives remains strong, and there is community-based support for associated activities</li> <li>- Financing is secured and is adequate, and other cofinancing is also adequate</li> <li>- Necessary policies are enacted to enable sustainable ecosystem management.</li> <li>- Critical development partners continue to collaborate with ADB on initiatives to improve regional ecosystems</li> </ul>
Accelerated and expanded implementation of integrated water resources management (IWRM), delivering improved water security and enhanced efficiency and productivity	<ul style="list-style-type: none"> <li>- IWRM river basin development, and irrigation infrastructure projects address climate change adaptation, flood and drought mitigation, and water–food–energy security nexus</li> </ul>	<ul style="list-style-type: none"> <li>- Increase investments in IWRM, flood management, watershed and wetlands conservation, etc.</li> <li>- Complete country water assessments for flood and drought mitigation and water–food–energy security</li> </ul>	<p><b>Risks:</b></p> <ul style="list-style-type: none"> <li>- Impacts of climate change may further exacerbate resource constraints and environmental challenges in the region</li> <li>- Governments do not formulate supportive national policies, and/or policies are not supported at the community and local levels</li> <li>- Short-term development and income needs override long-term sustainable development concerns in project areas</li> </ul>
Improved availability of, and access to, adequate and safe food for Asia's poor and vulnerable in a sustainable manner <sup>5</sup>	<ul style="list-style-type: none"> <li>- Improved productivity and resilience to climate change and climate variability</li> </ul>	<ul style="list-style-type: none"> <li>- Mainstream ADB's food security engagement in its core operations</li> <li>- Strengthen partnership with other development agencies to generate synergies in achieving sustainable food security</li> <li>- Support climate-resilient cropping systems and promote climate-resilient water management, emphasizing linkages between water, food, and energy</li> </ul>	

continued on next page

table continued

## Operational Direction 3: Strengthening environmental governance and management capacity

Outcomes	Outputs	Key Activities and Initiatives	Assumptions and Risks
National-level governance for environment and climate change strengthened	<ul style="list-style-type: none"> <li>- ADB support to improved environmental governance and capacities expanded</li> </ul>	<ul style="list-style-type: none"> <li>- Strengthen developing member country environmental monitoring, compliance, and enforcement capacities (e.g., Asian Environmental Compliance and Enforcement Network)</li> <li>- Support national and subnational climate change mitigation plans (NAMAs) and adaptation plans (NAPAs, NAPs) that address possible social impacts (e.g., migration, health, gender)</li> <li>- Support environment mainstreaming in the country partnership strategy and country operations business plan development process</li> <li>- Conduct upstream strategic environmental assessment (SEA) for national, subnational, and sector-level development planning</li> </ul>	<p><b>Assumptions:</b></p> <ul style="list-style-type: none"> <li>- Developing member countries and regional departments see clear value addition in mainstreaming environment in core operations</li> <li>- Governments support process to improve environmental management with appropriate policy and regulatory revisions</li> </ul> <p><b>Risks:</b></p> <ul style="list-style-type: none"> <li>- Support in terms of staff skills and resources may not be adequate for mainstreaming environment in the core operations including payment for ecosystem services</li> <li>- Inadequate financing constrains climate-resilient development</li> </ul>
Country-level environmental assessment capacity strengthened	<ul style="list-style-type: none"> <li>- Environmental safeguard compliance in project planning, preparation, and implementation</li> <li>Project-Related (Environmental Impact Assessment)</li> </ul>	<ul style="list-style-type: none"> <li>- Strengthen country environmental safeguard systems across developing member countries</li> <li>- Conduct environmental assessment training and learning events</li> <li>- Undertake studies to facilitate institutionalization of payment for ecosystem services</li> </ul>	
Regional capacity to address transboundary environmental challenges strengthened	<ul style="list-style-type: none"> <li>- Regional programs and initiatives supported by ADB that enhance capacity to address environment and climate change challenges</li> </ul>	<ul style="list-style-type: none"> <li>- Promote active engagement with regional and subregional institutions that are engaged with environmental issues</li> <li>- Establish strategic partnerships with leading global and regional research institutions</li> <li>- Implement responsive regional programs to combat unsustainable natural resource management and introduce adaptation measures in response to the impacts of climate change</li> <li>- Support the establishment of an Asian Judges Network for the Environment</li> <li>- Support international dialogues on transboundary environmental issues</li> </ul>	

continued on next page

table continued

Outcomes	Outputs	Key Activities and Initiatives	Assumptions and Risks
<p>Disaster and climate risk management capacities improved at the country level</p>	<p>- ADB's scope and effectiveness of its adaptation activities expanded in order to close current knowledge and financing gaps and meet regional climate change adaptation demands</p>	<ul style="list-style-type: none"> <li>- Continue as implementing agency for the Global Environment Facility, the Pilot Program for Climate Resilience, and the Adaptation Fund</li> <li>- Strengthen the Asia Pacific Adaptation Network with the United Nations Environment Programme and others to exchange and disseminate good adaptation practices</li> <li>- Organize regional consortium and data facility to deliver high-resolution climate change projections, documentation, and guidance for use</li> <li>- Coordinate activities with ADB's ongoing initiatives in integrated disaster risk management</li> <li>- Build on recent ADB studies including climate-induced migration and health impacts of climate change</li> </ul>	

Source:

- 1 Energy Policy Results Framework, June 2009.
- 2 ADB. 2010. Sustainable Transport Initiative Operational Plan. Manila. Note that all changes should be measured from a baseline scenario of rapid growth in motorized traffic, and not current levels.
- 3 ADB. 2011. Water Operational Plan 2011–2020. Manila.
- 4 ADB. 2012. Urban Operational Plan 2012–2020. Manila.
- 5 ADB. 2009. Operational Plan for Sustainable Food Security in Asia and the Pacific. Manila.

## ENVIRONMENT OPERATIONAL DIRECTIONS 2013–2020

### Promoting Transitions to Green Growth in Asia and the Pacific

In the context of ADB Strategy 2020 and in the follow-up to the United Nations Conference on Sustainable Development (Rio+20), ADB prepared this report, Environment Operational Directions 2013–2020, to provide a coherent overview of ADB environment operations and to articulate how it will step up efforts to help the region achieve a transition to environmentally sustainable growth or green growth.

Building on ADB sector and thematic plans, this paper provides a brief review of recent ADB experience in environment operations, and identifies effective approaches for the development of “greener” country partnership strategies, investment projects, and associated knowledge and technical assistance activities.

### 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: 1.7 billion people who live on less than \$2 a day, with 828 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.

Asian Development Bank  
6 ADB Avenue, Mandaluyong City  
1550 Metro Manila, Philippines  
[www.adb.org](http://www.adb.org)

 Printed on recycled paper



Printed in the Philippines