



ASIAN DEVELOPMENT  
**OUTLOOK 2016**  
**UPDATE**

MEETING THE LOW-CARBON GROWTH CHALLENGE

**HIGHLIGHTS**

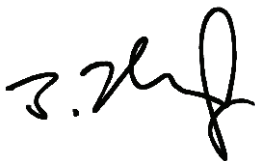
# ADO 2016 Update—Highlights

Growth has held up in developing Asia despite a difficult external environment. The region is expected to grow steadily at 5.7% in 2016 and 2017, the forecasts in this *Update* unchanged from *Asian Development Outlook 2016*.

While global commodity prices have begun to rebound, inflation remains largely subdued. Consumer prices will likely rise by 2.6% in 2016 and 2.9% in 2017.

Continued slow recovery in the United States, the euro area, and Japan presents a clear downside risk to the outlook. Uncertainty about the path of monetary policy in these economies, and the implications this has for capital flows, complicates macroeconomic management in developing Asia. Policy makers globally need to resist moves toward protectionism that would only undermine the recovery.

By transitioning to low-carbon growth, developing Asia is poised to reap outsized rewards as an essential player in the global effort to contain climate change.



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## Developing Asia—staying the course

### *Steady growth in uncertain times*

- **Growth holds up in developing Asia despite stubborn global headwinds.** This *Update* retains the projections previously published in *Asian Development Outlook 2016 (ADO 2016)* in March. Gross domestic product (GDP) in the region is expected to grow at 5.7% in 2016 and 2017, slightly down from 5.9% in 2015. Stymied recovery in the major industrial economies, and drag from slower growth in the United States (US) in particular, has been counteracted by policy-supported domestic demand so far this year in some large economies in the region. Developing Asia is expected to maintain its growth pace into 2017, buoyed by an improving external environment and resilience in the region's two largest economies, the People's Republic of China (PRC) and India.
- » **Recovery in the major industrial economies is delayed.** The preservation of growth envisioned in *ADO 2016* did not materialize in the major industrial economies: the US, the euro area, and Japan. This *Update* pares down its forecast for aggregate growth to 1.4% in 2016, or 0.4 percentage points lower than the *ADO 2016* projection, before seeing it pick up in 2017 to 1.8%. This dour result will continue to hold back global economic activity to the forecast horizon. US growth in the first 2 quarters was softer, with low investment and frail trade. Growth in Japan started well in 2016, but prospects are subdued for the rest of the year as currency appreciation weighs heavily on Japan's exports. While growth in the euro area is maintained this year, heightened downside risks arising from political uncertainty will impinge on growth next year.
- » **Policy tempers the moderation in PRC growth as reform grounds its sustainability.** First-half GDP growth slowed to 6.7% in the PRC as structural reform continued, but it surpassed the March forecast for the year. Private consumption and services generated most of the growth in line with government objectives favoring sustainable growth supported by solid wage growth and urban job creation. While growth is still expected to be lower than in 2015, this *Update* slightly upgrades the March forecasts by 0.1 percentage points, to 6.6% in 2016 and 6.4% in 2017, in view of strong fiscal and monetary stimulus to boost domestic demand while external demand remains tepid.
- » **Steady progress in reform helps India realize its growth targets.** Despite growth moderation in the first quarter of FY2016 (ending 31 March 2017), the *ADO 2016* forecast for growth at 7.4% in 2016 is retained on the strength of improved private consumption after recently approved increases in wages and pensions, and from expectations of a healthy monsoon lifting rural incomes. Recovery in private investment, as corporations successfully deleverage and bank reform boosts lending, will help drive growth to 7.8% in 2017. Legislation to create a national value-added tax should lift investor confidence, as this accomplished a key step toward a much more integrated, productive economy.
- » **Southeast Asia largely met growth expectations in the first half.** Growth in the five large economies in the Association of Southeast Asian Nations (ASEAN) is expected to hit 4.8% in 2016, as projected in *ADO 2016*. Strong first-half

performance in the Philippines and Thailand is offset by downgrades in the forecasts for Indonesia, Malaysia, and Viet Nam. Government investment in infrastructure has played an important role in supporting growth this year, particularly in Indonesia, the Philippines, and Thailand. This countered sluggish export demand and drought that caused agriculture to contract in all these economies except Indonesia in the first half of 2016. Growth is forecast to accelerate to 5.0% in 2017 on expectations of firmer demand from the major industrial economies, higher prices for export commodities, and rising investment in infrastructure.

» **Low oil prices impede Central Asia, as storms and fiscal woes buffet the Pacific.**

This *Update* reduces the growth forecast for Central Asia this year and next. For the top energy exporters, the persistence of low global commodity prices continues to put fiscal spending under pressure that constrains growth. Recession in the Russian Federation exacerbates slowing growth in remittance-dependent economies. In the Pacific, cyclone damage in Fiji in February and fiscal difficulties in Papua New Guinea undercut forecasts for the larger Pacific economies this year. South Pacific economies enjoy upgraded output projections as unexpectedly strong tourism helped pushed growth higher, but not enough to sustain subregional growth prospects this year.

- **Inflation will revive marginally in developing Asia with rising oil prices.** This *Update* revises the forecast for average inflation in the region slightly upward, from 2.5% to 2.6% in 2016 and from 2.7% to 2.9% in 2017. Global oil prices show an uptick since March this year but remain subdued, and food prices will increase marginally despite strong supply. However, variation by subregion is apparent. On the upside, a sharp rise for some foods in East Asia is pushing up otherwise muted inflation, and double-digit inflation is expected in Central Asia this year with sharp currency depreciation. Inflation is lower than earlier projected in almost all of ASEAN, suppressed by soft global food and fuel prices even as drought earlier this year disrupted domestic food supplies in some areas.
- **Investment-related imports rein in the region's current account surplus.** The surplus is expected to narrow from the equivalent of 3.1% of GDP in 2015 to 2.4% in 2016, or 0.2 percentage points lower than forecast in *ADO 2016*. It is expected to drop further to 2.0% in 2017, which recalls its size in 2013 before the sharp drop in energy prices. While tempered energy prices continue to keep import bills low, demand for imports of capital goods and construction materials has surged in some countries. As weak global trade suppresses exports, there is no sign of reversion to the global imbalances that prevailed before the global financial crisis of 2008–2009.
- **Risks to the region's outlook remain clearly tilted toward the downside.** The external environment remains fragile with slow recovery in the US, the euro area, and Japan. Interest rate hikes by the US Federal Reserve, though so far elusive, could disrupt capital flows and complicate macroeconomic management. Political pressures against openness could jeopardize the progress made toward free trade and regional integration. Private debt is on the rise in many Asian economies, which could become unsustainable if economies struggle or interest rates rise sharply. Natural disasters are inherently unpredictable but clearly a mounting risk to the region in view of global climate change.

### *Responding to the trade slowdown*

- **Developing Asia's export growth has slowed since the global financial crisis.** Expansion in the region's export volumes slowed to 4.7% per year in 2011–2015 from an annual average of 11.2% in 2000–2010. In the PRC, which accounts for roughly 40% of regional exports, growth in export volumes slowed from a pre-crisis pace of 18.3% per year to 6.4% in 2011–2015. Yet, even excluding the PRC, export growth has decelerated markedly. The slowdown is more pronounced than the moderation in regional GDP growth. While export growth was 1.5 times the rate of GDP growth before the global crisis, it was only 0.7 times GDP growth in 2011–2015.
- **The export growth slowdown sums a mix of cyclical and structural factors.** Weak post-crisis demand from the advanced economies for imports of Asian goods is a key cyclical factor that should reverse as the major industrial economies recover. Primary among the structural factors is growth moderation in the PRC. Structural adjustments under way there to lessen reliance on exports and investment have weakened demand in the PRC for imports from regional trading partners. The slowing of trade through global value chains as the PRC moves to production with higher value added is affecting trade in intermediate goods. Further, lower commodity prices have reduced real incomes in commodity exporters, crimping their imports as well. In this difficult environment since the global financial crisis, creeping protectionism has become a worrying trend that acts as a further brake on export growth.
- **Despite the slowdown, undue pessimism about trade is unwarranted.** Cyclical factors are gradually lifting with some pickup in real terms of US imports from developing Asia. PRC rebalancing will open up new trading opportunities such as the development of more technologically sophisticated regional value chains in East Asia as the PRC moves up the value chain. Moreover, some regional economies, notably Bangladesh and Viet Nam, are well positioned to take over the labor-intensive segments of cross-border supply chains vacated by the PRC. Trade in services is growing and has potential for further expansion. Fostering new sources of export growth depends critically on implementing structural reform, investing in trade-related infrastructure, and removing barriers that hinder the involvement of small and medium-sized enterprises in global value chains. To turn back incipient protectionism, further work is needed to liberalize trade barriers, improve surveillance on nontariff measures, and conclude global and regional trade agreements.

### *Debt sustainability in Asia*

- **Most public debt ratios in developing Asia are sustainable.** Steady GDP growth and generally prudent fiscal policies combined to keep ratios of debt to GDP under control. Debt ratios have increased mostly where governments borrowed to finance large infrastructure or extractive investment projects. Assuming diligent debt management and the absence of major shocks, even these countries will see debt ratios stabilize and fall back in the future to the extent that their investment projects reach completion and finally boost output, exports, and fiscal revenues.
- **Macroeconomic volatility worsens the risk of debt distress.** With amplified macroeconomic fluctuations, medium-term baseline projections of public and external debt ratios have become less reliable forecasters of debt sustainability. Probabilistic



debt projections for Asian countries with volatile exchange rates and capital flows show that such volatility may translate into significantly higher debt ratios. This is a time for governments to strengthen their medium-term debt management strategies to support investor confidence and mitigate market instability.

- **The deep slump in oil prices has pushed debt ratios higher for oil exporters.** Economies in Central Asia in particular have experienced slowing GDP growth and sharp currency depreciation under stubbornly low oil prices. Countries with large oil funds can use them as financial buffers to support debt sustainability and market confidence, drawing them down to uphold ongoing efforts toward socioeconomic reform and diversification. In Azerbaijan, for example, the local currency depreciated by half against the US dollar from 2014 to 2015, but the country has an oil fund worth nearly \$37 billion, equal to 49% of GDP. It can provide a strong buffer to substitute for debt financing and keep the public debt ratio from rising above 40%, even if oil prices are slow to recover.
- **Burgeoning private debt may end up weighing on national budgets and public debt.** Borrowing by households and nonfinancial corporations are major drivers of the region's total debt. From 2008 to the first quarter of 2016, the average ratio of household debt to GDP in Asia increased by 15 percentage points, while the ratio for nonfinancial corporations rose by 24 points. Corporate sectors in many developing Asian economies carry considerable domestic debt. Nonfinancial corporate leverage reached 174% of GDP in the PRC in March 2016. Borrowing in domestic currency considerably mutes exposure to sudden capital reversals but not exposure to the risks associated with asset bubbles and rising nonperforming loan ratios. Household debt requires careful monitoring in Malaysia and Thailand, where it exceeds 70% of GDP. Excessive household leverage is not likely to set off a severe crisis in Asia as long as interest and unemployment rates are low.

## Outlook by subregion

- **Stable regional growth masks differing subregional fortunes.** Growth projections for this year are unchanged from *ADO 2016* for South and Southeast Asia but revised up for East Asia, which counterbalances downward revisions for Central Asia and the Pacific. Growth projections for 2017 are unchanged for East and South Asia and for the region as a whole.
- **East Asia's outlook is boosted by strong growth in the PRC.** The largest subregion is expected to record mild growth moderation from 6.1% in 2015 to 5.8% in 2016—a slight upgrade from the *ADO 2016* forecast—and further to 5.6% in 2017. Surprisingly fast growth in the first half of this year in the PRC offset sluggishness in the rest of East Asia. Strong fiscal and monetary stimulus helped ease growth moderation in the PRC such that this *Update* raises growth forecasts for both years by 0.1 percentage points, to 6.6% in 2016 and 6.4% in 2017. Faltering domestic demand will deepen growth moderation in Hong Kong, China, while tepid domestic demand and persistent export weakness weigh on prospects for Taipei, China. The forecast for a sharp slowdown in Mongolia is revised up somewhat as mining fared better than previously expected. Inflation in the region is anticipated to exceed *ADO 2016* forecasts with newly deregulated administered prices and rising prices for services bumping up consumer prices in the PRC. Inflation in East Asia is projected to reach 1.9% in 2016 and 2.2% in 2017.

- **South Asia manages to sustain its rapid growth.** This dynamic subregion is expected to realize the *ADO 2016* growth forecasts of 6.9% in 2016 increasing to 7.3% in 2017. India's growth forecast for 2016, maintained at 7.4%, will find support in strong private consumption stemming from double-digit increases in government wages and pensions. Major progress in restructuring bank balance sheets and reducing excessive leverage at large corporations has set the stage for an expected revival in investment that will drive growth higher to 7.8% in 2017. While Bangladesh and Pakistan now see slightly faster expansion in 2016 than anticipated, growth prospects for Sri Lanka edge lower on weak industrial performance and fiscal consolidation. Modest growth prevails in Afghanistan, the Maldives, and Nepal this year but is seen improving in 2017. The *Update* maintains inflation projections of 5.2% in 2016 rising to 5.7% in 2017, with low oil prices and effective macroeconomic management keeping consumer price pressures in check.
- **Southeast Asia is on track to achieve higher growth this year.** Subregional growth is forecast to edge up from 4.4% in 2015 to 4.5% this year, as projected in *ADO 2016*. Strong performance in the Philippines and Thailand is offset by downgrades to forecasts for Indonesia, Malaysia, Singapore, and Viet Nam. Government infrastructure investment is a key contributor to growth in Indonesia, the Philippines, Singapore, and Thailand. For Indonesia, the biggest economy in Southeast Asia, growth is now seen at 5.0% in 2016, improving on 2015 but 0.2 percentage points below the earlier projection because investment is rising at a more moderate pace than anticipated. In 2017, growth in the subregion is still seen trending higher, though the forecast is trimmed by 0.2 percentage points to 4.6%. Inflation is lower than earlier projected, suppressed by soft global food and fuel prices. It is now seen slowing to 2.0% in 2016 before quickening to 2.9% in 2017 on higher global commodity prices and domestic demand.
- **Central Asia stalls as low energy prices stymie growth.** This *Update* cuts the 2016 growth forecast for Central Asia from 2.1% in *ADO 2016* to 1.5%, reflecting more pessimistic projections for energy exporters Azerbaijan, Kazakhstan, and Turkmenistan. Depressed oil and gas prices and low external demand have weakened these economies, as have lower remittances in others, requiring cuts in public investment while limiting increases in social transfers. The 2017 growth forecast is revised down by 0.2 percentage points to 2.6%, with slower growth now projected for Turkmenistan. Severe currency depreciation in Kazakhstan after it moved to a floating exchange rate in August 2015 exacerbated inflation, which averaged 16.4% in January–August 2016. Inflation forecasts for Central Asia are raised from 10.8% to 11.5% in 2016 and from 5.9% to 6.4% in 2017, despite moderating consumer price pressures in Armenia, Georgia, the Kyrgyz Republic, and Turkmenistan.
- **Pacific growth slows more than expected.** Several of the smaller economies in the Pacific are performing better than expected thanks to strong tourism. However, growth in the subregion as a whole is projected to be lower, largely because of fiscal contraction in Papua New Guinea, the predominant economy. Weather also played a role as cyclones damaged Fiji and as the North Pacific suffered drought earlier this year. Aggregate growth is now forecast at 2.7% in 2016—well off the 3.8% forecast in *ADO 2016*—but recovering to 3.5% in 2017. Rising oil prices and currency depreciation in Papua New Guinea have stirred consumer price pressures. Inflation in the Pacific is now forecast to average 4.7% in 2016, marginally higher than the *ADO 2016* projection, and 5.5% in 2017.

## Meeting the low-carbon growth challenge

### *Global call to fight climate change*

- **Climate-related risks to developing Asia are severe.** The current path of rising greenhouse gas emissions and temperatures undermines agriculture and food security in Asia with greater heat stress, shorter rainy seasons, more withering droughts, and worsened pest and disease outbreaks. Longer heat waves and the wider transmission of human diseases threaten the health and productivity of workers in the labor-intensive mining and construction sectors, as well as agriculture. Intense storms occurring with greater frequency can, along with rising sea levels, imperil infrastructure and other fixed assets. If uncontrolled, climate change may lead to economic loss equivalent to 10% of GDP in 2100, reversing many hard-won socioeconomic gains in the region.
- **Asia has joined the global fight to contain climate change.** In the 2015 Paris Agreement, developed and developing countries alike committed to reduce emissions to limit the average rise in global mean surface temperature. The goal is well below 2 degrees Celsius (2°C) above pre-industrial levels. To meet this goal, global emissions of greenhouse gases, especially carbon dioxide, will have to peak in the early 2020s and decline thereafter. More than 90% of economies in developing Asia have submitted their mitigation objectives in their intended nationally determined contributions. The pledges are a clear indication of country aspirations with regard to climate action but must be converted into investment plans if the objectives are to be met. Globally, intended contributions to date put the world on a path toward a temperature rise of at least 2.7°C by 2100, missing the goal by a wide margin. The optimal mitigation path toward the 2°C goal requires that current intended contributions to emissions reductions to 2030 be doubled.
- **Paris Agreement success depends critically on developing Asia.** Emissions from the region have risen rapidly from 25% of the global total in 1990–1999 to 40% in 2012. Without strong climate policies, the region will generate nearly 50% of all greenhouse gas emissions by 2030, and these emissions will double in volume by 2050. According to the World Resources Institute, the 3 most populous Asian economies were among the top 5 greenhouse gas emitters in 2015: the PRC, the US, India, the Russian Federation, and Indonesia. Even in per capita terms, the PRC and Indonesia already exceed the global average. Creating a global low-carbon economy is impossible without Asian engagement.

### *Assessing Asia's low-carbon transition*

- **Asia can do more toward the 2°C global climate goal.** The progressive implementation of national emissions reduction pledges implies that emissions from developing Asia can be halved by 2050 relative to a business-as-usual scenario in which the current paths of energy systems, land-use patterns, and industrial development evolve without future mitigation efforts. However, achieving the goal of limiting warming to 2°C requires reduction by three-quarters. With fossil fuels contributing over two-thirds of developing Asia's emissions, the region's low-carbon transition must start with the energy sector.



- **Rapid emissions reduction requires redirected investment.** Even under business as usual, the region is investing in clean energy. However, achieving the 2°C goal is estimated to require developing Asia to invest through 2050 an additional \$300 billion per year on clean power-supply technology and infrastructure such as renewable power, carbon capture and storage, smart grids, and energy storage. Reduced investment in fossil fuel extraction can offset 20% of this cost. With timely investment redirection, the region can avoid locking itself into a high-carbon development path that would be costly to reverse.
- **The cost of switching to low-carbon pathways can be modest.** A low-carbon transition requires economic adjustment and substantial new investment in energy-efficient infrastructure and low-carbon energy generation. Simulations show that the economic costs for developing Asia under a global scenario of carbon taxation toward achieving the 2°C goal equate to a reduction in its average annual GDP growth rate by 0.1 percentage points. By 2050, this would mean regional GDP that is 4% smaller in size than it would be under the business-as-usual scenario. However, this projection does not take into account any benefits from reduced climate change or the many co-benefits of climate action enumerated below.
- **Emissions trade and coordinated mitigation can reduce economic costs.** If climate action is fragmented, economies that mitigate emissions may lose competitiveness relative to those that do not, and therefore face higher costs. The economic costs of reduced greenhouse gas emissions are lower for an individual region if emissions trading mechanisms allow for mitigation to take place where costs are lowest. Moreover, international emissions trading offers an important opportunity to lower economic costs, especially in regions such as developing Asia where abatement costs that are lower than the global average enable the export of emissions allowances. Emissions trading could halve the region's economic costs for the 2°C scenario relative to the taxation scenario with no trading.
- **Reducing greenhouse gas emissions promises large co-benefits.** Low-carbon growth can deliver environmental benefits by reducing air pollution, making cities more livable, and protecting the natural environment and its ecosystems. Data from the World Health Organization show a number of Asian cities suffer from high concentrations of particulate matter, including Delhi and Beijing. Low-carbon growth can help minimize costly pollution prevention measures.
  - » **Less carbon dependence can provide healthier air to breathe.** Outdoor air pollution in developing Asia caused nearly 3 million premature deaths per year in 2010, including nearly 1.4 million in the PRC alone. Without better protection, air pollution mortality in the region could double such deaths by 2050. Even compared with a scenario of improved air quality regulation, the 2°C scenario will still avoid nearly 600,000 deaths each year.
  - » **It can also preserve environmental resilience.** Mitigation measures can expand forests and their environmental services, including soil erosion control, biodiversity preservation, and pollination for agriculture. Simulations show that limiting warming to 2°C would mean 45 million more hectares of forest in developing Asia than would business as usual, and this forest cover would help to avert those impacts still posed under mitigated climate change.

- **The returns on sound climate policy far outweigh their costs.** Mitigation in the 2°C scenario can eliminate an estimated 2%-of-GDP loss from climate change by 2050 and an 8% loss by 2100. Taking into account significant co-benefits such as better health from improved air quality, each \$1 spent toward the 2°C scenario can generate more than \$2 in gains. Delaying ambitious mitigation by even 10 years slashes the gross benefit-cost ratio by more than 30%.

### *Asia's potential for a low-carbon future*

- **Low-carbon energy generation offers the most mitigation potential.** Nearly half of the region's 2050 mitigation in the 2°C scenario can come from making energy production less carbon intensive, notably by deploying such renewables as wind, solar, and biomass and through carbon capture and storage. An ambitious mitigation effort leaves little room for new coal capacity in Asia that does not include carbon capture and storage. Much of the potential for emissions reduction can be realized through renewables, and technological progress is expected to offer further cost reductions.
- **Energy efficiency can reduce emissions and stimulate economic growth.** Developing Asia's energy intensity, the energy used per dollar of GDP, is similar to the global average. By 2050 under the 2°C scenario, the region will be nearly 35% less energy intensive than it would be under business as usual. Estimates indicate that a third of the region's emissions reductions by 2050 toward the global 2°C goal can come from better energy efficiency.
- **Reducing land-use emissions is a low-cost opportunity for Asia.** Reducing emissions from forest destruction, land degradation, agriculture, and other non-energy activities can contribute nearly 20% of the mitigation in developing Asia's national emissions reduction pledges to 2030. Southeast Asia has a higher deforestation rate than any other major tropical region, and 5 of the world's 10 most endangered forests are in Asia and the Pacific. The region's extensive tropical peat soils offer further opportunities. Their conservation, restoration, and improved management can avoid wildfires—with the consequent haze and release of billions of tons of carbon—and preserve their rich production potential.
- **Asia stands to benefit from new carbon market opportunities.** Economies in developing Asia are already advancing technologies to reduce greenhouse gas emissions, accounting for over 35% of world exports of clean technology and holding 22% of such patents. Whereas the PRC is a leading exporter of solar energy panels, the Republic of Korea leads in patents for energy storage technology, the Philippines exhibits a comparative advantage in efficient lighting, and India shows significant potential for incremental innovation by adapting existing technologies like wind power to local needs.

### *Unlocking the low-carbon transition*

- **Asia can help meet the Paris objectives with a four-pronged approach.** Key policies include putting a price on carbon emissions, instituting appropriate regulations, supporting investment in clean and efficient energy, and fostering international action.
- **Pricing carbon achieves mitigation efficiently.** At the core of the climate change problem is a fundamental market failure to reflect the full social, economic, and environmental costs of greenhouse gas emissions. Land-use arrangements and fossil fuel

prices routinely fail to reflect the cost of damage from resulting carbon emissions, which encourages emitters to ignore their carbon output. In some cases, government subsidies on fuel and land use exacerbate this problem.

- » **Removing costly subsidies is a critical first step.** Many Asian economies subsidize fossil fuels, which encourages their use while undercutting returns on clean energy investments. Likewise, a lack of clearly defined property rights and indiscriminate distribution of rights to logging and other uses can create incentives for deforestation, which emits a lot of carbon. Eliminating these subsidies can set the right incentives for resource use while freeing up public funds to support the low-carbon transition.
  - » **Carbon taxes can force emitters to consider their environmental costs.** Governments can compel firms to pay the costs of their emissions through a carbon tax. This approach is relatively straightforward to implement and makes carbon prices predictable, offering a reliable signal to investors.
  - » **Emissions trading can establish a common carbon price.** Within set emissions caps, trading systems facilitate the buying and selling of emissions allowances, establishing a uniform carbon price that provides an incentive for mitigation. Although the initial allocation of emissions allowances may pose political and distributional challenges, mitigation will be done more efficiently as long as the trading rules are enforced.
- **Regulations are critical to promote clean energy and efficiency.** Carbon pricing should be complemented by an effective set of regulatory standards, as standards can spur the adoption of clean technologies. Governments may mandate—among other initiatives to curtail emissions—the use of renewable energy sources, lower emissions from vehicles, and improved energy efficiency for consumer goods, buildings, and industry. Although developing Asia has made progress toward such regulations, substantial gaps remain in coverage and stringency.
  - **Reducing risk and facilitating finance can spur clean energy investment.** The public sector can help attract private investment in clean energy by reducing risk, in part with consistent policy, and by supporting pilots of new technologies. Toward generating clean power, governments may offer risk guarantees and take equity stakes. To improve energy efficiency, energy service companies may promote technology diffusion. To augment the limited public funds available for investment in climate-compatible investments that are particularly risky because they require outsized initial capital outlays with long payback periods, governments can offer private financiers incentives such as interest subsidies for green loans, public-private partnerships, and guarantees for green bonds.
  - **International action must be rapid to meet the global climate challenge.** Accelerated action is critical because the sooner ambitious mitigation begins, the lower its ultimate cost. Estimates show early action reducing 2050 economic costs for the 2°C scenario by more than a quarter. Cooperative technology transfer can substantially accelerate the deployment of low-carbon solutions. Key to reducing global mitigation costs and distributing them more equitably is to compensate poorer countries that take advantage of their low abatement costs to further reduce their emissions. Achieving the ambitious Paris objectives requires immediate, urgent action from the whole global community.

GDP growth and inflation, % per year										
	Growth rate of GDP					Inflation				
	2015	2016		2017		2015	2016		2017	
		ADO 2016	Update	ADO 2016	Update		ADO 2016	Update	ADO 2016	Update
<b>Central Asia</b>	<b>3.0</b>	<b>2.1</b>	<b>1.5</b>	<b>2.8</b>	<b>2.6</b>	<b>6.1</b>	<b>10.8</b>	<b>11.5</b>	<b>5.9</b>	<b>6.4</b>
Armenia	3.0	2.0	2.0	2.3	2.3	3.7	3.8	1.5	4.0	4.0
Azerbaijan	1.1	-1.0	-2.5	1.0	1.0	4.0	12.0	12.0	5.2	5.2
Georgia	2.8	2.5	3.0	3.5	4.0	4.0	5.0	3.0	4.0	4.0
Kazakhstan	1.2	0.7	0.1	1.0	1.0	6.6	12.6	14.7	4.6	6.0
Kyrgyz Republic	3.5	1.0	1.0	2.0	2.0	6.5	10.0	5.0	8.0	8.0
Tajikistan	6.0	3.8	3.8	4.0	4.0	5.1	8.5	8.5	7.5	7.5
Turkmenistan	6.5	6.5	5.5	7.0	5.5	5.5	6.6	5.0	6.0	4.4
Uzbekistan	8.0	6.9	6.9	7.3	7.3	8.5	10.0	10.0	11.0	11.0
<b>East Asia</b>	<b>6.1</b>	<b>5.7</b>	<b>5.8</b>	<b>5.6</b>	<b>5.6</b>	<b>1.3</b>	<b>1.6</b>	<b>1.9</b>	<b>2.0</b>	<b>2.2</b>
China, People's Rep. of	6.9	6.5	6.6	6.3	6.4	1.4	1.7	2.0	2.0	2.2
Hong Kong, China	2.4	2.1	1.5	2.2	2.0	3.0	2.5	2.4	2.7	2.5
Korea, Rep. of	2.6	2.6	2.6	2.8	2.8	0.7	1.4	1.1	2.0	2.0
Mongolia	2.3	0.1	0.3	0.5	1.4	6.6	3.0	3.2	7.0	5.4
Taipei, China	0.6	1.6	0.9	1.8	1.5	-0.3	0.7	1.3	1.2	1.5
<b>South Asia</b>	<b>7.0</b>	<b>6.9</b>	<b>6.9</b>	<b>7.3</b>	<b>7.3</b>	<b>4.9</b>	<b>5.2</b>	<b>5.2</b>	<b>5.7</b>	<b>5.7</b>
Afghanistan	0.8	2.0	2.0	3.0	3.0	-1.5	3.0	4.5	3.5	6.0
Bangladesh	6.6	6.7	7.1	6.9	6.9	6.4	6.2	5.9	6.5	6.1
Bhutan	5.9	6.4	6.4	6.1	6.1	6.6	4.0	3.3	5.0	4.6
India	7.6	7.4	7.4	7.8	7.8	4.9	5.4	5.4	5.8	5.8
Maldives	2.1	3.5	3.5	3.9	3.9	1.0	1.2	1.2	1.4	1.4
Nepal	2.3	1.5	0.8	4.8	4.8	7.2	10.5	9.9	8.2	8.5
Pakistan	4.0	4.5	4.7	4.8	5.2	4.5	3.2	2.9	4.5	4.7
Sri Lanka	4.8	5.3	5.0	5.8	5.5	3.8	4.5	4.5	5.0	5.0
<b>Southeast Asia</b>	<b>4.4</b>	<b>4.5</b>	<b>4.5</b>	<b>4.8</b>	<b>4.6</b>	<b>2.7</b>	<b>2.6</b>	<b>2.0</b>	<b>2.9</b>	<b>2.9</b>
Brunei Darussalam	-0.6	1.0	1.0	2.5	2.5	-0.4	0.2	-0.6	0.4	0.4
Cambodia	7.0	7.0	7.0	7.1	7.1	1.2	2.5	2.8	3.0	3.4
Indonesia	4.8	5.2	5.0	5.5	5.1	6.4	4.5	3.5	4.2	4.0
Lao People's Dem. Rep.	6.7	6.8	6.8	7.0	7.0	1.3	1.8	1.6	2.5	2.3
Malaysia	5.0	4.2	4.1	4.4	4.4	2.1	2.7	2.1	2.5	2.5
Myanmar	7.2	8.4	8.4	8.3	8.3	11.0	9.5	9.5	8.5	8.5
Philippines	5.9	6.0	6.4	6.1	6.2	1.4	2.3	1.8	2.7	2.8
Singapore	2.0	2.0	1.8	2.2	2.0	-0.5	-0.6	-0.8	0.4	0.8
Thailand	2.8	3.0	3.2	3.5	3.5	-0.9	0.6	0.4	2.0	2.0
Viet Nam	6.7	6.7	6.0	6.5	6.3	0.6	3.0	2.5	4.0	4.5
<b>The Pacific</b>	<b>7.2</b>	<b>3.8</b>	<b>2.7</b>	<b>3.1</b>	<b>3.5</b>	<b>3.9</b>	<b>4.5</b>	<b>4.7</b>	<b>4.7</b>	<b>5.5</b>
Cook Islands	4.8	0.0	4.2	0.2	4.0	3.0	1.8	0.7	2.0	2.0
Fiji	4.0	2.7	2.4	4.5	4.5	1.4	3.0	3.5	3.0	3.0
Kiribati	3.0	1.8	1.8	2.0	1.5	1.4	0.3	0.7	0.8	2.0
Marshall Islands	0.5	1.5	1.5	2.0	2.0	-2.2	2.0	-1.3	2.5	1.0
Micronesia, Fed. States of	1.4	2.5	2.0	3.5	2.5	-1.1	-0.3	-0.3	0.3	1.5
Nauru	-10.0	3.0	3.0	15.0	15.0	11.4	6.6	6.6	1.7	1.7
Palau	9.4	3.0	2.0	7.0	5.0	2.2	1.5	1.5	2.5	2.5
Papua New Guinea	9.9	4.3	2.2	2.4	3.0	6.0	6.0	6.5	6.0	7.5
Samoa	1.6	2.0	5.0	0.5	2.0	1.9	2.0	0.1	2.0	2.0
Solomon Islands	2.9	3.0	2.7	2.8	2.5	-0.3	4.4	3.3	5.7	4.5
Timor-Leste	4.1	4.5	5.0	5.5	5.5	0.6	2.0	1.2	3.0	3.0
Tonga	3.4	2.8	3.1	2.7	2.6	-0.7	-0.3	2.0	0.5	1.9
Tuvalu	3.5	3.5	3.0	3.0	3.0	3.5	3.5	2.0	2.0	2.0
Vanuatu	-1.0	2.5	3.5	3.8	3.8	2.5	1.9	1.9	2.4	2.4
<b>Developing Asia</b>	<b>5.9</b>	<b>5.7</b>	<b>5.7</b>	<b>5.7</b>	<b>5.7</b>	<b>2.1</b>	<b>2.5</b>	<b>2.6</b>	<b>2.7</b>	<b>2.9</b>





## **Asian Development Outlook 2016 Update Highlights**

*Meeting the Low-Carbon Growth Challenge*

The full report is available on the ADB website at <http://www.adb.org/ado2016-update>

### **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 half of the world's extreme poor. 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.



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