

EXPLAINER

# How Carbon Pricing Can Support Green Recovery and Growth



Climate change is caused by increased concentrations of greenhouse gases in the atmosphere. Photo credit: ADB.

*Carbon taxes and emission trading systems can help countries mobilize fiscal resources while enabling green economic recovery from COVID-19.*

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## Introduction

Countries around the world are facing an unprecedented shock due to the coronavirus disease (COVID-19) pandemic. Faced with a shrinking budget and heightened debt vulnerabilities, countries need policies that create much-needed fiscal space while putting the economy on a sustainable growth path.

Carbon pricing, as part of the broader climate policy architecture, is a key policy instrument that can support green recovery and help countries build back better from the crisis. [A study published by the Asian Development Bank \(ADB\)](#) explains how it can increase fiscal stimulus to revive the economy while shifting it away from environmentally and socially harmful investments, expenditures, and consumption.

This article is adapted from the study.

# Why should pandemic recovery strategies be green?

Green or climate-responsible recovery has certain benefits over a traditional fiscal stimulus package. Long-run economic multipliers of climate-positive policies yields a higher return on investment for government spending. Green recovery strategies can build an economy that generates more and better jobs, catalyze capital at scale, accelerate climate resilience, and protect the environment and natural capital. It can also provide important co-benefits, such as reduced negative impacts of local pollution on health, infrastructure, and agriculture.

There is a growing momentum for adopting green recovery strategies. For example, the European Union (EU) has adopted the EU Green Deal to support economic recovery from the pandemic. In Asia, Japan and the Republic of Korea have committed to reduce greenhouse gas (GHG) emissions to net zero by 2050 in pursuing a green recovery. The People's Republic of China (PRC) has also adopted a policy to become carbon-neutral by 2060. More than 130 countries have now set or are considering a target of reducing emissions to net zero by mid-century.

## What makes green recovery implementation challenging?

Unprecedented fiscal pressures have made the implementation of green recovery strategies very challenging. According to the International Monetary Fund (IMF) January 2021 update, the pandemic has caused the global economy to contract by an estimated 3.5% in 2020. The combination of increasing expenditures associated with managing COVID-19-related developments and a collapsing revenue base due to a sharp contraction in economic activity and stimulus measures has put countries under severe fiscal pressure. Governments could be tempted to return to or expand their carbon-intensive development just to recover. But doing so may result in economies being locked onto a high-carbon emissions pathway that contributes to a future with high risks of severe negative climate impacts on economic and social development.

Countries will need to boost both domestic and international sources of finance to tackle the challenges of pursuing a green recovery.

# What is carbon pricing?

Climate change, caused by increased concentrations of GHGs in the atmosphere resulting from human activities, creates widespread and protracted damage to the environment, to economies, and to society. Because climate cost is typically not incorporated into the price of goods and services that result in GHG emissions, there is no economic incentive to reduce emissions. Carbon pricing is a policy instrument that can be used to “internalize” the external cost of climate change, thereby providing such an incentive. It is an integral element of a broader international climate policy architecture and can be adopted domestically in tandem with other policies, such as removing fossil fuel subsidies and creating regulatory conditions that promote private sector investment in renewable energy.

Carbon pricing provides a clear signal but allows GHG emitters to choose between either reducing their GHG emissions or paying to continue to emit. The two main types of carbon pricing policy instruments available to governments are carbon taxes and emission trading systems.

With a carbon tax, a jurisdiction (e.g., a regional, national, or provincial governing entity) imposes a fee per unit of emission, usually a metric ton of carbon dioxide equivalent (tCO<sub>2</sub>e). The fee is typically uniform across the economy or regulated sector, and it increases over time to continue reducing total emissions.

An emission trading system is a cap-and-trade program that typically sets a fixed quantity of emissions allowed from the regulated sector(s). The government then issues emissions permits (or “allowances”) equivalent in aggregate to the cap. These allowances are allocated according to historical emissions in a base year or base period or by auctioning—which may then be bought and sold by regulated entities. At the end of the compliance period, each regulated entity must submit to the government permits equal to its measured emissions or face a fine or sanction.

The use of carbon pricing in Asia and the Pacific is increasing, with six carbon pricing initiatives implemented in the national level, consisting of four domestic emission trading systems and a carbon tax in two jurisdictions. Japan and Singapore employ carbon taxes. Kazakhstan, New Zealand, the Republic of Korea and, most recently, the People’s Republic of China, have launched emission trading systems. In addition, Indonesia, Pakistan, the Philippines, Thailand, and Viet Nam are preparing to adopt carbon-pricing instruments.

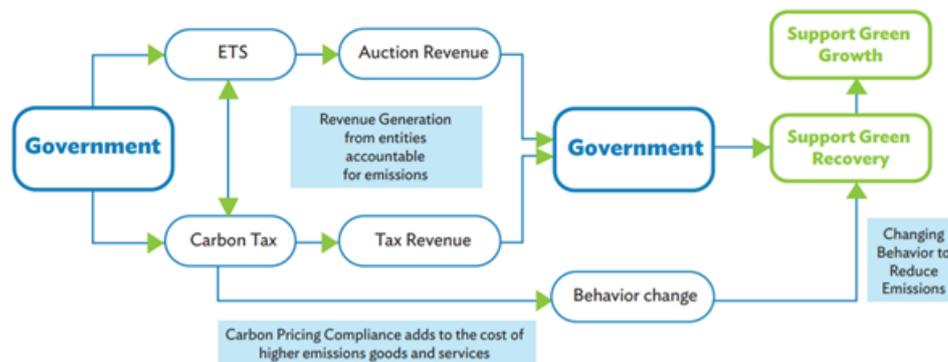
# What are the benefits of carbon pricing?

Carbon pricing provides many benefits specially when designed and implemented properly.

Carbon taxes can be designed to create additional contributions to government revenues or to be revenue-neutral by earmarking tax revenues for use in subsidies directed either toward specific entities or investment. Emission trading systems can also generate public revenue when the jurisdiction sells some or all emissions permits. These revenues can cushion deficit spending during a recession and recovery, support debt repayment in the longer term for green growth, and complement environmental

policies.

**Figure 1: How Carbon Pricing Can Generate Revenue to Support Green Growth and Recovery**



ETS = emission trading system.

Source: Asian Development Bank.

Carbon pricing disincentivizes the use of fossil fuels, making deployment of renewables more attractive. Clear and predictable carbon-price signals in domestic and international markets can enhance the economic competitiveness of low-carbon technologies and help countries achieve climate change targets cost-effectively. It can also improve energy security and reduce vulnerability to international energy price shocks. Dependence on fossil fuel imports, which are usually denominated in foreign currency, exposes countries that are net-energy importers to financial volatility.

When mobilized through bilateral, regional, and international carbon markets, carbon finance can alleviate financial barriers and facilitate cross-border trade of renewable-based electricity, thereby increasing the share of renewables in the overall electricity supply mix while fostering regional integration.

## Recommendation

Carbon pricing must be developed and implemented urgently, smoothly, and sensibly.

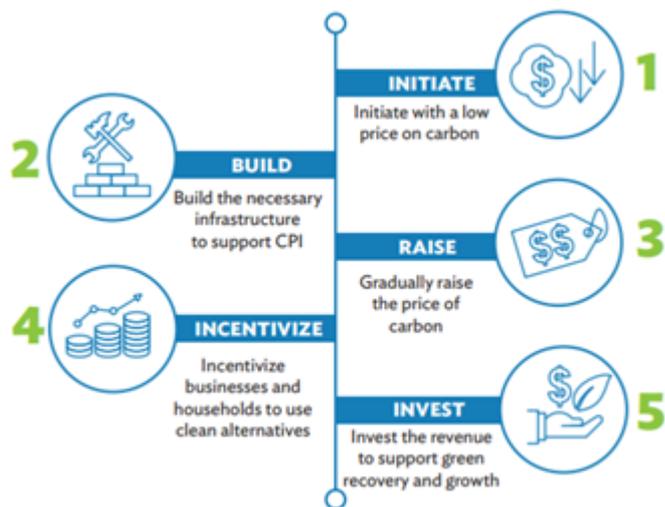
Policies must be designed to mobilize resources in time to support the post-COVID-19 economic recovery. This needs to consider the time it takes to collect and re-deploy revenues generated through carbon pricing and the establishment of financing arrangements.

Carbon pricing schemes should be simple to implement and administer. An emission trading system, for example, is complex and usually requires extensive monitoring, reporting, and verification systems, as well as access to trading platforms and legislative frameworks for trading allowances. The institutional capacity needed to operate these schemes can take years to develop. Building upon existing national policy instruments, such as product taxation, and their systems for collecting and reporting data, must be considered.

Designing carbon pricing instruments must also consider distributive effects and transition costs. For

example, distributing revenues in the form of a fixed “dividend” to family and individuals generates political support for the policy.

**Figure 2: How to Adopt Carbon Pricing**



CPI = carbon-pricing instrument.

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Source: Asian Development Bank.

While carbon pricing instruments can be used to mobilize revenues, collecting new ones while trying to stimulate the economy can be counterproductive and impede growth. To ensure that carbon pricing does not impede recovery, an effective approach would be to initially implement a tax with a low rate or an emission trading system with a high (only slightly binding) cap. This will incentivize the development of much needed policy infrastructure, such as monitoring, reporting, and verification (and registries and trading platforms for emission trading systems) for carbon-pricing instruments, without imposing undue drag on the economy. Policies can then be made more stringent over time to realize both environmental and fiscal benefits.

For carbon pricing to be viable in the long-run towards net-zero emission pathways, there is a need to transform not just the industrial sectors but also emphasize research and development for low carbon technologies as well as incentivize behavioral change. Irrespective of the choice of the carbon pricing instrument and other design considerations, it is critical to ensure that the price of carbon and the policy mix are sufficient to address the costs caused by climate change. Creating an enabling climate policy architecture for carbon pricing to deliver will be important, such as through implementation of carbon pricing in tandem with other policies such as the removal or phasing out of fossil fuel subsidies. Building stakeholder consensus and effective communication are other key elements.

## Resource

Asian Development Bank (ADB). 2021. *Carbon Pricing for Green Recovery and Growth*. Manila.



## Virender Kumar Duggal

Principal Climate Change Specialist, Sustainable Development and Climate Change Department, Asian Development Bank

Virender manages ADB's Future Carbon Fund. He has extensive experience in climate change, carbon finance, trust fund management, and international trade cooperation. He has worked in multilateral, public and private sector institutions in the areas of project development, portfolio management, advisory services, technology transfer and strategic collaborations across Asia, Europe, and Africa.



## Asian Development Bank (ADB)

The Asian Development Bank is committed to achieving a prosperous, inclusive, resilient, and sustainable Asia and the Pacific, while sustaining its efforts to eradicate extreme poverty. Established in 1966, it is owned by 68 members—49 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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