

The Road from Paris



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Although there is work still to be done, the Paris COP21 promises to be an important turning point in the fight against climate change and in linking that fight to the broader sustainable development agenda. After years of sharp divisions and stalled actions there is a widely shared recognition of the dangers of delay and greater collective resolve to act at the national and global levels. All major world leaders have signaled their strong support for an ambitious Paris agreement. And it is remarkable that so many of them are coming together on concrete programs of action, including the leaders of the two largest emitting countries—China and the United States.

What can we reasonably expect from Paris?

The foundation of the Paris agreement are the Intended Nationally Determined Contributions (INDCs) that governments agreed to submit last year in Lima, Peru, at the COP20, setting out actions against climate change beyond 2020, including pledges to limit and reduce their annual emissions of greenhouse gases. The Paris COP21 will also seek to agree on a new multilateral instrument that will apply to all countries, set out a transparent and verifiable monitoring mechanism, and provide adequate means of implementation in terms of finance, technology, and capacity building. In particular, the UNFCCC will seek to reach a firm agreement on pre-2020 and long-term finance, notably on the \$100 billion per year by 2020 promised by the rich countries at the COP14 and COP16 in Copenhagen, Denmark, and Cancun, Mexico, to help poorer countries make the transition to low-carbon development and growth, and to become more resilient to those impacts of climate change.

More than 162 countries have now submitted their INDCs. Collectively, they suggest that annual global emissions of greenhouse gases in 2030 are likely to be 55 billion to 60 billion tons of carbon-dioxide-equivalent, compared with about 50 billion tons today. Given that some countries have made pledges in terms of reductions from business-as-usual scenarios and others in reduction of carbon emissions with respect to output, there is some uncertainty on the aggregate outcomes. The 55 billion to 60 billion tons are an improvement on the 68 billion tons that an analysis by the United Nations Environment Program suggests would result in 2030 from a “business as usual” global annual emis-

sions pathway. But these figures are far higher than an emissions pathway that would be consistent with having a 50–66 percent chance of avoiding global warming of more than 2 C. Such a pathway would require annual emissions of about 40 billion tons in 2030, with very sharp further reductions beyond 2030.


As current pledges to limit and cut annual emissions are insufficient, strong efforts are needed to ramp up actions using the commitments at Paris as a foundation. The Paris summit must not be regarded as a one-off opportunity to fix targets. Instead, it must be the first step of many, based on regular reviews of how close we are to meeting the goal of avoiding dangerous global warming. More broadly, the Paris summit is a chance to build an understanding not only of the threats and risks from unmanaged climate change, but also the opportunities that lay in the low-carbon transition—including the path it paves to fight global poverty.

Climate action and sustainable development goals

The ramping up of ambitions must therefore be seen against the broader context of the Sustainable Development Goals that were adopted by world leaders in September and the Addis Ababa Action Agenda from the Third U.N. Financing for Development Conference in July to support their implementation. The sustainable development agenda that has emerged from the intensive deliberations over the past year makes it clear that economic growth, development, and climate responsibility are closely intertwined. As the report on “Better Growth, Better Climate” by the Global Commission on the Economy and Climate pointed out in September 2014, sustainable growth and development support climate action. Portraying economic growth and development as being in conflict with climate action is a misunderstanding of the opportunities presented by the low-carbon transition and creates an “artificial horse race” between them. On the contrary, fighting climate change can promote development and tackle global poverty, and vice versa. We need, therefore, to raise ambitions on both development and climate action, and do so in a mutually reinforcing manner.

Sustainable infrastructure for better development and better climate

A crucial link between economic growth, development, and climate action is the quantity and quality of sustainable infrastructure. Investments in infrastructure can boost demand, raise productivity, and stimulate long-term growth. Massive investments will be required over the next two decades in energy systems, cities, transport corridors, and water and waste management. The magnitude of global investment needed in infrastructure over the next 15 years will be about \$90 trillion—more than the value of the current stock of infrastructure assets—or \$6 trillion per year on average, mostly in the developing and emerging economies. We need the infrastructure to be both of better quality and on a greater scale. A lack of infrastructure remains one of the most pervasive impediments against growth and sustainable development—and consequently in tackling poverty. Good infrastructure unshackles and removes constraints on economic growth and social inclusion. It fosters improvements in educa-



tion and health. Bad infrastructure kills people and puts pressure on land and natural resources. It creates unsustainable economic burdens for the future.

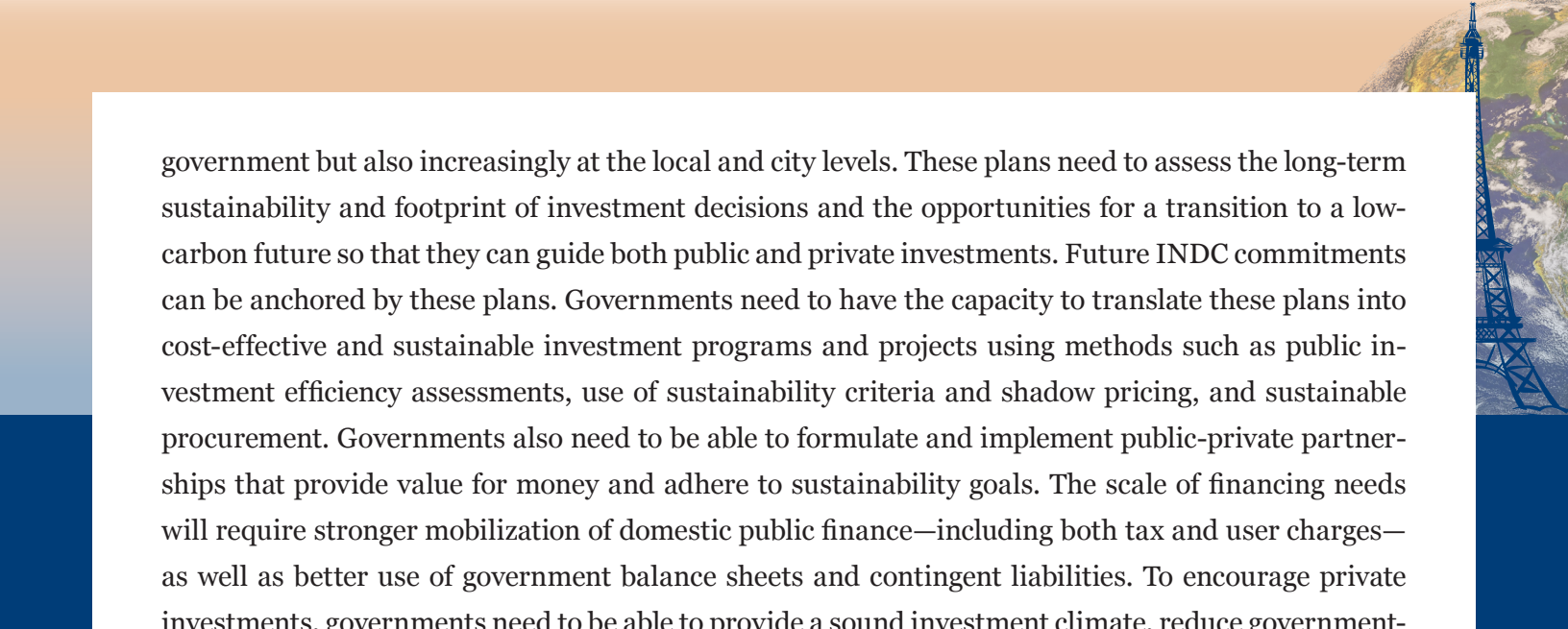
The way in which the massive investments in infrastructure are undertaken will have an enduring impact on climate resilience. The existing stock of infrastructure and its use accounts for more than 60 percent of the world's greenhouse gas (GHG) emissions. The scale of the new investments that must now be made offer a unique opportunity for accelerating the shift to a low-carbon transition, but, if not done well, also pose a great danger of locking in capital, technology, and patterns of economic activity that will last for decades and become progressively unsustainable. An understanding of the importance of and commitment to accelerating the shift towards sustainable infrastructure must therefore be a central goal of the discussions in Paris and a guide for concerted action going forward.

Tackling the impediments to sustainable infrastructure

There are four main areas where a virtuous cycle of action can produce the quantity and quality of infrastructure that can meet the collective ambitions on both development and climate. By addressing policy gaps and drastically reducing the cost of capital we can turn investment opportunities into investment demand.

First, Paris can set the course for bolder actions on the elimination of fossil fuel subsidies and the wider and faster adoption of carbon pricing that together fundamentally distort investment choices and have such a deleterious impact on health and well-being. Subsidies for oil, coal, and natural gas, including the lack of carbon- and pollution-pricing and other instruments to internalize externalities, are pervasive. A recent study published by the International Monetary Fund estimated that subsidies for fossil fuels will amount to about \$5 trillion in 2015, with the failure to price in the costs of local air pollution and climate change making up three-quarters of the total. When the impacts of air pollution and climate change are taken into account, the real cost of using coal is not the approximate \$50 per ton that is charged to acquire it, but well over \$200 per ton. These are not abstract externalities, but deaths and illnesses now and in the future from air pollution and climate change. As Warwick J. McKibbin, Adele C. Morris, and Peter J. Wilcoxon argue in their brief “Pricing Carbon” (see page 14), Paris represents an important opportunity to tackle the greenhouse gas externality through the adoption of carbon pricing, including carbon taxes or cap-and-trade schemes, as well as regulation. The G-20 nations that account for more than 80 percent of the distortionary subsidies need to take the lead in eliminating fossil fuel subsidies and putting a price on carbon.

Second, there is a need to strengthen and modify public investment frameworks since the public sector is responsible for shaping investment decisions and setting the regulatory environment for the building and operation of infrastructure. Given the time horizon, interconnectedness, and externalities (positive and negative) of infrastructure investments, governments need to be able to develop and set out strategic investment plans for sustainable infrastructure not only at the level of the central



government but also increasingly at the local and city levels. These plans need to assess the long-term sustainability and footprint of investment decisions and the opportunities for a transition to a low-carbon future so that they can guide both public and private investments. Future INDC commitments can be anchored by these plans. Governments need to have the capacity to translate these plans into cost-effective and sustainable investment programs and projects using methods such as public investment efficiency assessments, use of sustainability criteria and shadow pricing, and sustainable procurement. Governments also need to be able to formulate and implement public-private partnerships that provide value for money and adhere to sustainability goals. The scale of financing needs will require stronger mobilization of domestic public finance—including both tax and user charges—as well as better use of government balance sheets and contingent liabilities. To encourage private investments, governments need to be able to provide a sound investment climate, reduce government-induced policy risks, and deploy appropriate risk mitigation instruments. There are examples of good practice across all these areas but few examples where a country has integrated all these elements into a sound and forward-looking investment strategy and capability. There is a strong case for concerted actions by each individual country, supported by international cooperation, on knowledge and capacity building led by the multilateral institutions.

Third, there is a need to revamp the financing framework for sustainable infrastructure, especially for developing and emerging economies. Despite ample global savings and record-low long-term interest rates, infrastructure investments in developing and emerging economies are often unable to attract long-term financing, and the costs of financing are relatively high—in some cases prohibitively so. Lowering the costs of financing can make a big difference to the economic viability of the investment, to the affordability of the service provided especially for the poor, and for making sustainable investments more viable. For example, investments in renewable energy are primarily in the form of capital equipment, and the cost of financing will be a major factor in determining the financial viability of the investment. The biggest constraints on financing are at the early stages of the project when there are risks of cost overruns, and greater uncertainties and risks regarding future revenue streams. Costs of financing also reflect the financial standing of the sovereign or sub-sovereign and the project entity. Together, these constraints and risks can make both equity and debt finance relatively costly for many emerging and developing economies. Moreover, banks that are best placed to provide financing in the construction phase are facing constraints because of new regulatory requirements. There is also a huge potential for tapping the large pool of savings intermediated by institutional investors. Of the more than \$90 trillion managed by institutional investors worldwide, less than 2 percent is invested in infrastructure assets. Addressing institutional and regulatory constraints faced by institutional investors and taking steps to develop infrastructure as an asset class such as through standardization of contracts and aggregation can help unlock the potential contribution of this large pool of savings. The capacities of both multilateral and national development banks must be substantially expanded to provide and catalyze finance. These institutions have a comparative advantage in supporting sound project preparation and implementation, mitigating risks and crowding in the private sector, and



creating viable financing packages, including by tapping global capital markets at competitive rates. Climate finance (including the \$100 billion per year that has been committed by rich countries) and official development assistance can act as levers and complements to the trillions that need to be invested each year in infrastructure in developing- and emerging-economy countries over the next two decades. Lowering the costs of financing can make investments both more climate-friendly and pro-poor.

Fourth, there is need to build a stronger platform for cooperation and actions on technology and on building more efficient and sustainable infrastructure. There is tremendous scope to accelerate and benefit from innovation. While the price of solar energy has fallen very rapidly over the last few years, the IEA conservatively projects that it could fall by a further 20–40 percent over the next 5 years. Innovations such as Tesla’s Powerwall to advance the storage of photovoltaic energy, the Cerro Dominador concentrated solar plant in the Atacama Desert that can generate continuous electricity even when the sun is not shining, the Google driverless car, further progress in LED lighting and energy efficiency both in generation and use all hold the promise of a major transformation. Correcting market failures such as the availability of information, developing better networks such as smart grids, and capturing other co-benefits such as clean air and healthy eco-systems will help speed up the process of innovation. There have also been tremendous strides in improving management practices and reducing costs in the building of infrastructure not only in advanced economies but also in countries like China and Turkey that can benefit all countries. Better public support, public-private initiatives, and enhanced international cooperation can help accelerate these and other innovations.

A virtuous cycle of action

Actions in these four areas can unlock a virtuous cycle of action to transition to a low-carbon economy that can meet the aspirations on both development and elimination of poverty as well as manage the risks of climate change. Paris can also give impetus to complementary areas of action such as protecting the world’s forests and restoring degraded land and taking concrete steps to protect the most vulnerable countries and populations from the impact of climate change. By creating a better understanding, the Paris summit should provide the confidence to underpin the ramping up of ambition. It must lead us to recognize that action on the Sustainable Development Goals and action on climate change are part of the same story—and mutually supportive. And it must lead us to bring together and intensify the efforts of all actors: of governments, from ministries of finance to ministries of environments to local governments and mayors; of international institutions, including the multilateral development banks, the United Nations, and the G-20; of the private sector that will have to play an increasingly important and responsible role; and of other non-state actors from civil society, to foundations to the global citizenry at large. We must build on the collective recognition of the threat that climate change poses for humanity and the need for urgent action to address the growing threat. We can then rise to the two defining challenges of our time—overcoming poverty and creating a better life for all, and managing the enormous risks posed by climate change.