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11 GLOBAL DEBATES

Can the ambitions of the Paris Climate Agreement be met?

Coping with climate change
and delivering on development

by
Amar Bhattacharya



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1.1

What's the Issue?

The Paris Agreement on climate change overcame the notion of a "horse race" between development and climate responsibility. At its core is a promise to keep global warming to "well below 2 degrees Celsius" and to "pursue efforts for 1.5 Celsius or lower." The agreement forms the basis of new international, cooperative, long-term climate change action plans with a shared sense of direction and responsibility.

Yet without ramped up ambition, the Paris Agreement cannot be realized. This hits home when one considers the alarming climate effects already evident around the world—from the Middle East where the number of extremely hot days have doubled since 1970, to small islands that have already had to move entire communities due to rising seas.

Current pledges for national action as reflected in the intended nationally defined contributions of each country that signed onto the Paris Agreement would yield emissions of around 55-60 gigatonnes of equivalent carbon dioxide (GtCO₂e) per annum in 2030, an improvement on a business-as-usual scenario estimated at 65-68 GtCO₂e per annum. However, to hold global warming to no more than 2 degrees Celsius, we would need to lower greenhouse gas emissions to a level of 40 GtCO₂e per year or lower by 2030.

By implication, peak emissions must be reached as soon as possible.

Also hammered out in Paris were conventions for measurement and verification as well as an agreement to meet every five years to assess progress towards meeting nationally defined contributions with a view to enhancing levels of ambition.

1.2

What's the Debate?

The three central challenges now faced by the world community, as crystallized in 2015, are how to reignite global growth, deliver on the sustainable development goals, and invest in the future of the planet through strong action on climate change. Investing in sustainable infrastructure is at the heart of all three tasks. Scaling up such investments is the only viable route to fostering inclusive growth, reducing poverty and raising living standards, and protecting the future of the planet. Now is an opportune time to ramp up such spending, given today's uncertain global macroeconomic context, a persistent slowdown in growth, and declines in investment in all regions. In the near term, spending on sustainable infrastructure—from solar energy to mass transit to flood prevention—can stimulate demand at a time when many countries have been hit by economic contraction and the recent crash in commodity prices. In the medium term, sustainable infrastructure investment can spur innovation and improve the efficiency of energy, mobility and logistics—thereby boosting productivity and competitiveness in all sectors and fueling domestic growth. And such spending underpins the only sustainable long-term growth path on offer.

2°
Celsius

the upper limit of global warming Paris signatories agreed to

While the next 20 years are of crucial importance, the time frame for acting is even shorter, otherwise the 2 degree Celsius target will become out of reach, with dire planetary consequences. Massive long-lasting infrastructure investments are needed in cities, energy, water supply networks, and transport systems. This is driven by aging infrastructure in advanced economies; higher growth and the growing weight of emerging market and developing countries in the global economy; and rapid urbanization. Indeed, urban dwellers will swell from around 3.5 billion now (50 percent of 7+ billion people) to around 6.5 billion by mid-century (70 percent of 9+ billion people).

**\$90
trillion**

the estimated cost of infrastructure investment needed globally over the next 15 years

Around 70 percent of these investments (between \$3.5-\$4.5 trillion per year) will be required in emerging markets and developing countries. One way or another, most of it will get built, but how it is done will have a crucial bearing on outcomes for growth, development, and climate.

On the one hand, the window for making the right choices is uncomfortably narrow because of high upfront financing and since any technology built over the short- to medium-term will lock-in emission patterns for decades, all at a time when the carbon budget is shrinking. One must factor in the lock-in effects of dirty and long-lasting infrastructure and the ratchet effect of flow-stock processes whereby cumulative emissions of carbon dioxide contribute to ever-greater concentrations.

On the other hand, the Paris Agreement recognized not just the immense risks posed by climate change but also the great attractions

and opportunities that lie in low-carbon, climate-resilient growth. The time for such investments is opportune, with low interest rates in many wealthy economies, rapid technological change, and an unprecedented change to shape the new infrastructure.

Delivering on the quantity and quality of investment needed requires overcoming impediments in both policy and finance. Countries need to develop policies and institutions that set a clear direction for future investments and that will in turn generate a viable pipeline of projects such as rapid-transit systems, wind farms, or energy efficiency programs. Availability and costs of long-term financing for infrastructure also pose a constraint, especially in emerging markets and developing countries. Given the long-term profile and capital intensity of infrastructure investments, the cost of capital can pose a major constraint. Many countries, including several emerging market economies, face real interest rates that are in double digits. Additional impediments tilt incentives against more sustainable infrastructure. The most important are pervasive fossil fuel subsidies and the absence of carbon pricing. Investment strategies are mostly disconnected from climate and sustainability, and there is limited use of sustainable procurement.

Tackling these impediments will require concerted and mutually reinforcing actions on four dimensions of policy and finance:

First: to eliminate pervasive fossil fuel subsidies and adopt carbon pricing, thus improving incentives and generating revenues to enable the investments needed in sustainable infrastructure.

Second: to provide a stable policy environment and strengthen investment frameworks thus helping to deliver a concrete pipeline of viable and sustainable projects, reducing the high development and transaction costs and attracting the private sector.

Third: to tackle the gaps in the availability and costs of long-term finance both in the upfront and operating phases.

Fourth: to strengthen cooperation on technology development and deployment especially on clean energy and energy efficiency.

The massive scale of investments that will be required, rapid technology change and the large pools of available savings including the more than \$100 trillion held by institutional investors together provide a unique opportunity to accelerate the

transition to a low-carbon economy. However, major obstacles in transforming investment opportunities into real investment demand and major difficulties in bringing forward the right kind and scale of finance at the right time are slowing progress. Getting things moving requires strong government policy; as well as strong actions by multilateral development banks (MDBs) that are uniquely positioned to support such investments.

Development banks—national and international—have deep experience and the credibility to act as trusted conveners. They can help increase the supply of viable projects. Their presence in a project can radically reduce risk. Crucially, their involvement lowers the cost of capital. They can take initial risk and provide long-term capital at early stages. They can then pass on stable assets to other long-term investors such as pension funds. They have potent multipliers in that they draw in banks and institutional investors and demonstrate the power of the example. Thus, we should welcome the new development banks and act urgently to expand strongly the balance sheets of existing MDBs.

\$3.5-
\$4.5
trillion

is how much emerging market and developing countries will need to invest in infrastructure each year over the next 15 years

1.3

What to Watch out for?

The world is on the verge of transformative change and the opportunity to create a virtuous cycle of concerted and mutually reinforcing actions with collaboration and commitment from many parties—from countries to cities to the private sector and civil society—is unprecedented. International institutions (the U.N., the G-20, the IMF, the Organization for Economic Cooperation and Development, and the MDBs) are now all committed to help accelerate the low-carbon transition and build climate resilience. China, the United States, and India are in different ways changing the course of their carbon paths. Cities are increasingly playing a leading role by learning from each other. And there are impressive examples of leadership and commitment from the private sector. Decisive actions now to invest in sustainable infrastructure can unlock growth, deliver a better quality of life, and ensure a sustainable future for all people and the planet.

REFERENCES

This essay is based on joint work with Lord Nicholas Stern, including a forthcoming paper, "Delivering on Sustainable Infrastructure for Better Development and Better Climate," by Bhattacharya, Meltzer, Oppenheim, Qureshi, and Stern (2016).

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