A new global agenda and sustainable infrastructure: the future of growth and development

- The global community faces three simultaneous challenges:

  - Reignite global growth
  - Deliver on the SDGs
  - Drive strong climate action

- Delivering on sustainable infrastructure is at the centre of all three challenges.

- Well-designed infrastructure can be pro-growth, pro-poor, and pro-climate.
Sustainable infrastructure and Sustainable Development Goals

End poverty in all its forms everywhere
End hunger and achieve food security and improved nutrition
Ensure healthy lives and promote well-being for all
Ensure quality education and learning opportunities for all
Achieve gender equality
Ensure availability of water and sanitation for all
Ensure access to affordable and clean energy for all
Make cities and human settlements resilient and sustainable
Ensure sustainable consumption and production patterns
Take urgent action to combat climate change and its impacts
Ensure sustainable consumption and production patterns
Revitalize the global partnership for sustainable development
Promote peace and inclusive societies
Reduce inequality within and among countries
Promote resilient infrastructure, sustainable industrialization and foster innovation
Promote productive employment and decent work for all
Promote sustainable use of terrestrial ecosystems
Promote sustainable use of marine resources
Supports inclusive growth
Enhances access to basic services
SUSTAINABLE INFRASTRUCTURE

Promotes environmental sustainability

Supports inclusive growth
Reigniting global growth: a fourth way

• Monetary policy reaching limits.

• Fiscal policy: those with fiscal space seem reluctant to use it; those without are tempted.

• Structural reform (supply-side: yes, but takes time).

• Fourth way: public-private sustainable infrastructure, including with MDB support.

Yields: (i) short-term growth impetus; (ii) innovation, creativity and growth in the medium term; (iii) only feasible longer-run growth on offer. This **is** the growth story.
Next twenty years are of crucial importance

- **Long-lasting infrastructure investments on scale** will need to be made in our cities, energy and water systems and in transport systems.

- These huge anticipated investment needs for sustainable infrastructure over next 15 years driven by: a) aging infrastructure in advanced economies; b) higher growth and growing weight of EMDCs in global economy; c) structural change in EMDCs including rapid urbanization from around 3.5bn now (50% of 7+bn) to 6.5bn by 2050 (70% of 9+bn). *Once in history transition.*

- Altogether $90 trillion in infrastructure investments must be made over next 15 years—more than the current existing stock. One way or the other most of this infrastructure will get built, but how it is done will have a crucial bearing on outcomes for growth, development and climate.
Urgency and opportunities for ramping up ambition

• The **window for making the right choices is uncomfortably narrow** because of lock-in of capital, technology and emission patterns for decades and because of a shrinking carbon budget (ratchet effect of flow-stock process, i.e., emissions to concentrations).

• On the other hand, much clearer recognition now, as evidenced in Paris, of both the immense risks and great attractions and **opportunities that lie in low-carbon climate-resilient growth** (Better Growth, Better Climate 2014).

• **Time is opportune**; low interest rates, rapid technological change (energy production and use, digital, materials, biotech, construction) and the opportunity to shape the new infrastructure.

• **BUT if we do not take the opportunities now, 2°C target will be out of reach with all the grave consequences.**

• Next twenty years will be **decisive in world history**: deep responsibility as well as great opportunity.
Projected cumulative infrastructure demand, 2015-2030

2014 US$, trillions

Source: Bhattacharya, Chattopadhyay, and Nagrah (forthcoming)
Impediments to sustainable infrastructure: a vicious cycle

Policy and Institutional Gaps
- Investment climate (including legal framework, governance and regulatory risk)
- Investment planning and prioritization
- Subnational and municipal institutional capacity and finance
- Project preparation and project pipelines
- PPP design and implementation
- Fiscal space, debt sustainability and management of contingent liabilities

Financing Gaps
- Sovereign, sub-sovereign and project risk ratings
- Lack of risk mitigation instruments over the project cycle
- Regulatory constraints on banks and institutional investors
- Lack of well established investment vehicles and structures

Sustainability Gaps
- Fossil fuel subsidies and absence of carbon pricing
- No sustainability criteria in investment strategies
- Addressing climate risk in financial regulation
- Limited use of sustainable procurement

Project Development Gaps
- Intrinsic constraints and risk characteristics of infrastructure
- Lack of effective and contestable project developer capacity

Higher Project Costs

Higher Sustainability Costs

Higher Financing Costs
The challenge of financing sustainable infrastructure

- Most investments in EMDEV countries are greenfield projects, with large upfront costs and high initial risks during the construction phase followed by greater certainty but long payback period during the operating phase. Need therefore the right finance at the right time. In particular, need for large up-front debt finance at reasonable cost. But also need take-out financing once the project reaches an operational stage.

- Long-term finance at both stages lacking in EMDEV countries because of capital market imperfections and policy barriers. Need both banks and other long-term debt providers as well as institutional investors who can allow for bond take-outs and new equity infusions.

- Mobilising both long-term debt finance and the large pool of institutional investor assets can boost confidence and mutually reinforce.

- Costs for many EMDEV countries are prohibitive and tilt incentives against sustainability. For example, in India or Brazil, they are often in the region of 8 or 9 percent real at project level.

- Withdrawal of MDBs from infrastructure finance has also been a constraint. Has been made up to some extent by other flows but to the likely detriment of sustainability.

- Very little of ODA has been directed to sustainable infrastructure and the very small and fragmented pool of climate finance has limited ability to enhance sustainability on scale, especially in low and lower middle-income countries.
Risk and financing considerations during infrastructure projects

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<thead>
<tr>
<th>Description</th>
<th>Preparation</th>
<th>Construction</th>
<th>Operation</th>
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<tbody>
<tr>
<td>Developer/government organizes feasibility studies; models cash flows, finances; organizes contracts with utilities, operators and construction firms</td>
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<td>Construction firms build the project to specifications</td>
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<td>Separate operating company takes over operation and maintenance of the project</td>
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<tr>
<th>Main risks</th>
<th>Preparation</th>
<th>Construction</th>
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<tr>
<td>Macroeconomic &amp; political risks</td>
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<td>Technical risks to project viability</td>
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<td>Environmental and planning risks</td>
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<td>Macroeconomic &amp; political risks</td>
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<tr>
<td>Construction risks (e.g., overrun, delay)</td>
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<td>Macroeconomic &amp; political risks</td>
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<td>Demand / traffic risks</td>
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<td>Operating risks</td>
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<td>Policy risks (e.g., tariff changes)</td>
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<th>Cash flows (stylized)</th>
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<td>Large risks and uncertainty over revenue streams</td>
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<th>Financing moments</th>
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<td>During project preparation and feasibility studies the developer seeks patient capital or, often, public funds</td>
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<tr>
<td>Once project is ‘bankable’ the developer will seek equity investors and debt providers to finance the project</td>
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<td>Once construction is complete and started to operate project can be refinanced to reflect the changing risk profile</td>
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Four Pillars of Action

- Addressing 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 that can improve incentives and generate revenues to enable the investments needed in sustainable infrastructure.

- Second, to strengthen investment frameworks that can help deliver a concrete pipeline of viable and sustainable projects, reduce the high development and transaction costs and attract the private sector.

- Third, to address the gaps in the availability and costs of long-term finance both in the upfront and operating phases. Mobilising both long-term debt finance and the large pool of institutional investor assets can boost confidence and mutually reinforce.

- Fourth, to strengthen cooperation on technology development and deployment especially on clean energy and energy efficiency.
What Role for the G20?

The G20 can play a leadership role on this agenda on several key elements:

• Ambitious timeline for elimination of fossil fuel subsidies and promoting adoption of a carbon price corridor.

• Strengthening of investment frameworks including links to NDC commitments and strategies.

• Support better articulation and transparency of project pipelines including for regional projects.

• Promote infrastructure as an asset class.

• Scale up role of development banks.

• Transparency and regulatory reform with respect to climate risk.

• Promote green finance.
The Catalytic Role of Development Banks

• There is no shortage of world savings but 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.

• Development banks are well suited to address both policy and institutional constraints that hinder the preparation of a pipeline of viable projects and help mobilize the private sector in the delivery and financing of sustainable infrastructure.

• The presence of a development bank imparts confidence, reduces risks, brings relevant instruments and encourages participation of other sources of financing both at the initial phase and once the project reaches maturity.

• As honest brokers they can help bring together governments, the private sector, investors and civil society and help establish replicable and scalable models.

• MDBs can also help to catalyze change to make infrastructure more sustainable.

• Meeting financing requirements on the scale envisaged implies a significant expansion and transformation in the roles of MDBs.
Better infrastructure can deliver on growth, sustainability and poverty reduction

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<th>From BAU</th>
<th>To better infrastructure</th>
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<tr>
<td><strong>Inadequate investments</strong> in sustainable infrastructure in most countries constraining growth and development</td>
<td><strong>Scaled investment</strong> in sustainable infrastructure globally, leading to improved economic development and growth</td>
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<td><strong>Inadequate provision of affordable infrastructure</strong> for poor people, risking reversal in fight for development and poverty reduction</td>
<td>Increased infrastructure <strong>access and affordability</strong> for the poor, leading to improved development outcomes</td>
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<tr>
<td><strong>High proportion of high-carbon infrastructure investments</strong> and inefficient use of infrastructure, creating danger of lock-in and irreversible climate change</td>
<td>Increased preference for investments in <strong>low-carbon infrastructure</strong>, mitigating climate change to below 2 degrees</td>
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<td><strong>Low resilience</strong> infrastructure, creating vulnerability to risks of climate change (esp. among poor people)</td>
<td><strong>More resilient infrastructure</strong> that accounts for climate risks and protects populations most vulnerable to climate change</td>
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