THE CLIMATE CHALLENGE – AN OECD PERSPECTIVE ON POLICIES AND FINANCE

Dr Simon Buckle
Head of Climate, Biodiversity & Water Division, Environment Directorate, OECD
Outline

1. Context: climate and infrastructure
2. Mitigation
3. Key policy tools
4. Adaptation
5. The role of public interventions in:
   a. Climate finance & the USD 100 billion goal
   b. Green finance and investment
What sort of climate do we want?

Low-carbon transition?

Source: IPCC 2013
The central role of infrastructure in sustainable development

- Human wellbeing
- Infrastructures and systems
- Ecosystems and the environment

Based on Waage et al 2015, http://dx.doi.org/10.1016/S2214-109X(15)70112-9
Achieving the Paris temperature goal

- “Carbon budget” for well below 2°C is around 15-30 years of current energy-related CO2 emissions
- Global GHG emissions must peak as soon as possible
- Net CO2 emissions must approach zero or become net negative in the second half of the century

- Scale of the transformation required depends heavily on future emissions from agriculture, forestry and land-use (AFOLU):
  - CO2 emissions from land-use change
  - Non-CO2 GHG emissions, particularly methane and nitrous oxide from agriculture
Countries’ low-emissions pathways will vary depending on socio-economic context.

Based on 66% chance of staying below 2°C, IEA 2017
G20 countries face different challenges in forging low-emission pathways

CO₂ intensity of energy and energy intensity of GDP are key determinants of CO₂ emission

http://dx.doi.org/10.1787/9789264273528-en
An ambitious 2°C scenario requires a 10% increase in infrastructure investment...

Increased expenditures are needed in energy demand and electricity.
The Paris Collaborative on Green Budgeting

- launched at One Planet Summit, 12 Dec 2017 in Paris
- convened by OECD, working in close partnership with governments, OECD working groups and experts
- to develop and refine new methodological approaches and pragmatic green budgeting tools
Building on existing OECD work streams

• Budgeting for inclusive and sustainable growth
• Long-term fiscal sustainability
• Environmental cost-benefit assessments
• Environmental fiscal reform
• Carbon pricing and reform of potentially harmful subsidies
Effective carbon rates remain too low to drive deep decarbonisation in line with Paris Agreement targets.

- Effective carbon rates consist mainly of fuel excise taxes but emissions trading is important for electricity.
- The carbon pricing gap declines from 83% in 2012 to 76.5% in 2018.
- Rates differ strongly between and within sectors but the carbon pricing gap is large in all sectors other than road transport.
The carbon pricing gap in 2018 is 76.5%
The carbon pricing gap differs across countries

Gap in 2015 in %

100 % gap

No gap

20%

40%

60%

80%

100 % gap

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42
The carbon pricing gap differs by sector

<table>
<thead>
<tr>
<th>Sector</th>
<th>Carbon Pricing Gap at EUR 30/tCO₂</th>
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</thead>
<tbody>
<tr>
<td>Agriculture &amp; fisheries</td>
<td>64%</td>
</tr>
<tr>
<td>Electricity</td>
<td>84%</td>
</tr>
<tr>
<td>Industry</td>
<td>91%</td>
</tr>
<tr>
<td>Offroad transport</td>
<td>56%</td>
</tr>
<tr>
<td>Residential &amp; commercial</td>
<td>87%</td>
</tr>
<tr>
<td>Road transport</td>
<td>21%</td>
</tr>
</tbody>
</table>
Environmental cost-benefit assessments

- important to consider the full social costs and benefits of all budgetary measures – including taxes, tax reductions and public expenditures.

- standardised approaches for application of environmental CBA and other assessment techniques

- particular on a proportionate and risk-based approach to applying such evaluative tools to different types of policy initiatives and environmental issues

- building on the latest OECD research
Cost-benefit Analysis and the Social cost of carbon

How mitigation can reduce climate risks

Notes: (1) Refers to RCP8.5 scenario. (2) Emissions capped at 55.1 GtCO₂e, consistent with the NDCs, with no backtracking. (3) Strong further action for a 50% chance of meeting the 2°C target: emissions of 55.1 GtCO₂e in 2030, with further large reductions in GHG emissions to meet 2°C by 2100. Source: AVOID2 (2015).
Adaptation: climate resilient pathways

- **Impacts** even at 2°C
- **Uncertainty** - not just in future climate projections
- Flexible, forward-looking and iterative approaches to **decision making** needed
- **Coherence** across sectors, levels of government (National Adaptation Plans, engagement)
Adaptation and insurance

- Risk-based flood insurance should incentivise policy holders to address the underlying physical risk(s). In practice, this is not widespread for flood (inland or coastal) risk management.
- The main barrier is that most countries don’t have adequate risk-based pricing - and risk-based pricing can conflict with affordability of coverage.
- Even when risk-based pricing is applied there are barriers that prevent the connection with incentivizing behaviour.
UNFCCC: Estimating climate finance: channels

- **PROVIDER COUNTRY**
- **MULTILATERAL INSTITUTION**
- **RECIPIENT COUNTRY**
- **PRIVATE PROVIDER**

**Bilateral flow**

- Core contribution
- Multilateral (out)flow
- Attributable to developed countries

- Point of measurement
Aggregate estimates of progress

Climate finance provided and mobilised by developed countries for climate action in developing countries (2013-14, USD billion)

2013
- 22.5 bn
- 15.4 bn
- 12.8 bn
- Total: 52.2 bn
- 1.6 bn

2014
- 23.1 bn
- 20.4 bn
- 16.7 bn
- Total: 61.8 bn
- 1.6 bn

Average 2013-14
- 22.8 bn
- 17.9 bn
- 14.7 bn
- Total: 57.0 bn
- 1.6 bn

2020 projections based on public pledges: a range of potential outcomes

With $P = 67\text{bn}$

<table>
<thead>
<tr>
<th>Share of projects with direct mobilisation potential</th>
<th>Private-public finance ratio for projects with a direct mobilisation potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>25%</td>
<td>77  80  83  87  90</td>
</tr>
<tr>
<td>50%</td>
<td>85  92  98  105 112</td>
</tr>
<tr>
<td>75%</td>
<td>93  103 113 123 133</td>
</tr>
</tbody>
</table>

Illustrative variations in level of $P$

Scaling up climate finance: some issues

- Scale of overall MDB finance
  - Concessional, non-concessional & diversity of MDBs
  - Strength of balance sheets & capital market borrowing
  - Bilateral “core” contributions

- Composition of portfolio
  - Project funding vs. longer term action
  - Balance of mitigation projects vs. adaptation
  - Financial instruments used to mobilise private climate finance

- How can we best use the USD 100 billion a year to create the conditions for the trillions?
How to mobilise green investment

- Achieve scale, reduce transaction costs
- Create an enabling environment
- Public finance interventions, e.g. regional and green investment banks
- Policy regimes: transparent, stable, credible
- Market transparency & standardisation
- Financial deepening & innovation
- Help develop risk mitigants
Effects of public interventions on private finance

Enabling conditions

- Climate policies not resulting in financial support
- Capacity building for policy
- Capacity building for projects

Financial support as a result of climate policies

Public climate finance

- Intermediated - direct
- Financial Incentive
- Indirect
- Catalytic

Key considerations
- Boundaries
- Causality
- Attribution
Applying INVEST

Publicly-mobilised private finance for climate action in South Africa attributed to public interventions (2010-15, USD billion)

- Domestic public actors play key mobilisation role through policies and, to a lesser extent, co-finance
- INVEST does not assess the role of upstream capacity building (often by international actors)

A lack of consistent infrastructure planning
Thank you