UN Side Event: Carbon Pricing

Organizers: International Monetary Fund and World Bank
Dec 1, 1:15 -2:45, Le Bourget Conference Centre, Paris, Room 10

This session will focus on the role of carbon pricing in meeting mitigation pledges countries are putting forward for Paris and lessons learned from experiences to date.

Welcome Remarks and Moderator
Michael Keen, International Monetary Fund

Presentations
The Honorable Kevin Rudd
Asia Society Policy Institute and former Prime Minister of Australia

Benjamin Delozier
Deputy Assistant Secretary, French Treasury

Ian Parry
International Monetary Fund

Tom Kerr
World Bank Group

Nick Robins
United Nations Environment Programme
Carbon pricing in France - B. Delozier

Nos valeurs : l’ouverture, la loyauté, l’engagement, l’esprit d’équipe
Objectives

◮ European : 2030 Climate and Energy Framework

◮ At least 40 % reduction in GHG emissions compared to 1990 levels:
  ◮ ETS : - 43 % GHG emissions compared to 2005 levels
  ◮ non ETS : - 30 % GHG emissions compared to 2005 levels
◮ 27 % : share of renewable energy consumed in the EU in 2030
◮ 27 % : indicative target on improving energy efficiency compared to projections of future energy consumption based on the current criteria

◮ France : objectives set by the law on energy transition to support green growth

  ◦ Greenhouse gas emissions: -40% between 1990 and 2030, -75% between 1990 and 2050.
  ◦ Renewable share in final energy consumption: 23 % in 2020, 32 % in 2030.
The European Union Emission Trading Scheme was set up to help the Member States achieve their targets by capping CO₂ emissions from the main emissions-producing industries.

Sectors under EU-ETS cover around 45% of the EU’s greenhouse gas emissions (2013)

It is possible to trade quotas, on the basis of a constant maximum allocation.
The EU-ETS: evolutions of prices and reforms

- Evolution of EU-ETS carbon prices
- Two reforms
  - Backloading decision
  - Market Stability Reserve

The current surplus of allocations has a downward effect on prices

<table>
<thead>
<tr>
<th>Energy Efficiency Directive</th>
<th>Kyoto Offsets</th>
<th>Total surplus complementary policies not considered in the cap</th>
<th>Downturn and other abatements</th>
<th>RES over Achievement of the 2020 RES target</th>
<th>Total surplus linked to unforeseeable developments</th>
<th>Backloading</th>
<th>Unallocated EUAs</th>
<th>Total EUA surplus</th>
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<tr>
<td>2014</td>
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<td>2020</td>
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<td>2,124</td>
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Source: I4CE – Institute for Climate Economics, based on European Commission data 2015.
At the French level: a carbon tax

- A CO₂ tax with an increasing path:
  - Introduced on April 1, 2014 on use of gas, heavy fuel oil, and coal; extended to transport fuels and heating oil from 2015 onwards.
  - Taxation based on the carbon content of each fossil energy, added to the existing energy taxes (as a new component)
  - Liables:
    - Applied to domestic use of energy products
    - Exclusion of the plants registered to the EU ETS
  - In 2015: carbon tax of ~4c€/L of fuel and 2,64€/MWh of gas
  - ~90€/year/household (30 € for transport and 60 € for heating)
Carbon tax in France

- A target price for 2020 and 2030 set by the law on energy transition to support green growth

- Consistent with the shadow-price applied for infrastructure projects
  - Reference values have been updated in the report « Socio-economic evaluation for public investments » by E. Quinet (sept. 2013)
  - Initial price = 32 €/ton
  - To reach 100 €/ton in 2030

- Same target CO2 price for private investors and public infrastructure projects

56€/tCO₂eq in 2020  100€/tCO₂eq in 2030
Other carbon pricing instruments – the example of transport

<table>
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<th>Carbon pricing instruments</th>
<th>Objectives</th>
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<tr>
<td>Carbon tax</td>
<td>Economy-wide reduction of carbon emissions</td>
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<td>Shadow-price on carbon for infrastructure projects</td>
<td>Consideration of carbon emissions in public decisions</td>
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<tr>
<td>Subsidies for replacement of old diesel vehicles</td>
<td>Mitigation of social costs of carbon tax</td>
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<td>Emission caps for vehicles</td>
<td>R&amp;D incitation</td>
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Participate to the World Bank “Putting a price on carbon” initiative, 2014
Participate in Carbon Pricing Leadership Coalition, 2015
Support the Friends of fossil fuel reform, 2015
France is among the G20 countries with the lowest level of fossil fuel subsidies (according to IMF definition): 1% of GDP2015.

Fossil Fuel subsidies of G20 countries (according to IMF, as % of GDP2015)
Thank you for your attention.
Four phases:

- 2005-2007 (launch period),
- 2008-2012 (second phase and first Kyoto Protocol commitment period)
- 2013-2020 (new European target set by the 2009 Climate and Energy Package: -21% for ETS sectors compared to 2005)
- 2020 – 2030
Public instruments towards CO₂ emission abatement: a sectorial approach

Transport
- Carbon tax
- Subsidies for low carbon vehicles (« bonus-malus » scheme)
- Emission caps for vehicles
- Compulsory incorporation of biofuel
- Infrastructure projects: shadow-price on carbon (from 32€/tCO₂eq to 100 €/tCO₂eq in 2030)

Residential-tertiary buildings
- Carbon tax
- For new buildings: thermal regulation
- For existing buildings: subsidies, information program, standards

Industry and energy generation
- EU ETS
- Renewable energy subsidies: feed in tariff evolving towards premium
- Emission caps for polluting plants

Agriculture and forestry
- Carbon tax
- Subsidies for energy efficient equipments, practice and biomass energy production

Energy transition in France 20 mars 2015
Objectives

European: 2030 Climate and Energy Framework
- At least 40% reduction in GHG emissions compared to 1990 levels:
  - ETS: -43% GHG emissions compared to 2005 levels
  - non ETS: -30% emissions compared to 2005 levels
- 27% RE: share of renewable energy consumed in the EU in 2030
- 27% EE: indicative target on improving energy efficiency compared to projections of future energy consumption based on the current criteria

France: objectives set by the law on energy transition to support green growth
- Greenhouse gas emissions: -40% between 1990 and 2030, -75% between 1990 and 2050.
- The law also sets a target price of carbon to 56 euros a ton in 2020 and 100 euros a ton in 2030
- Final energy consumption: -50% between 1990 and 2050
- Total fossil energy consumption: -30% between 2012 and 2030
- Renewable share in final energy consumption: 23% in 2020, 32% in 2030 (40% for electricity, 38% for heat, 15% for fuels, 10% for gas).
- Renewable and recycled heat and cold: x5 in 2030
Slide 4 - The recent EU-ETS reforms

- The backloading decision
- The Market stability reserve
Before that, a carbon tax project has been planned twice and then blocked by the French Constitutional Council:

- In 2000 a project of General Tax on Polluting Activities for energy products was rejected (the taxation of electricity consumption was one of the reasons).
- In 2010 it was considered the bill included too many exceptions.
Ecological « Bonus-malus » scheme, enacted in 2007

Financial incentives for the purchase of cars with low CO\textsubscript{2} emissions
- Transport: 40 % of total CO\textsubscript{2} emissions in 2013

Average CO\textsubscript{2} emissions (grams/km) for new registered vehicles (source: CGDD)

- In 2015, additional subsidy (« superbonus ») when the purchase of a low-emission car goes with the scrappage of an old diesel vehicle
  → The total subsidy for the purchase of an electric car can reach 10 000€
European emission standards set limits for exhaust emissions of new vehicles registered in EU member states:

- **Average CO$_2$ emission objectives:**
  - 95 gCO$_2$/km in 2021 for private cars
  - 147 gCO$_2$/km in 2020 for light commercial vehicles

- **“Euro” directives set limits for other exhaust emission pollutants:**
  - Nitrogen oxides (Nox)
  - Total hydrocarbon (THC)
  - Non-methane hydrocarbons (NMHC)
  - Carbon monoxide (CO)
  - Particulate matter (PM)
As part of the Energy-Climate package: intended purpose of 10% renewable energy in transport by 2020.

French national implementation for 2014, minimum biofuels threshold:
- 7.7% for diesel
- 7% for the petrol sector
- Within the limit of 7% 1st generation biodiesel
- Indicative target of 0.5% advanced biofuels benefiting from double counting

2 support tools
- Partial exoneration of TICPE (domestic consumption tax on energy products) - ending in 2016
- Exoneration of TGAP (general tax on polluting activities) if minimum thresholds are met

Inclusion of ILUC effect
A socio-economic assessment takes into consideration all the effects of a given project
- *Shadow prices (in €) are assigned to non-monetary effects*
- *For transport infrastructure, environmental effects such as CO₂ emissions are thus duly valued in the socio-economic calculation*

The shadow price on carbon is coherent with the French political objective on CO₂ emissions (“Factor Four”)
- *Reference values have recently been updated in the report « Socio-economic evaluation for public investments » by E. Quinet (sept. 2013)*
- *Initial price = 32 €/ton*
- *To reach 100 €/ton in 2030, then increasing at the discount rate (Hotelling’s rule)*

The role of socio-economic assessment in decision process has been reinforced by the programming law of public finances 2012-2017, which makes an independent counter-expertise mandatory for each big project.
Major public subsidies for home energy efficient renovations (insulation, high energy-performance equipment):

- Zero rated eco-loan (eco-PTZ) up to 30,000€
- Tax credit for energy saving related works concerning the main residence (former CIDD, now CITE): 30% of private investments
- Lower VAT rate (5.5%) for energy-efficient renovation works
- Renovation housing program targeted at low income families: subsidies (50% of private investments), fixed allowance (€3,000 per household, previously €1,600) and micro-loans

Public information desks: front offices to get personal information about energy efficient renovation works are to be implemented by each local council community.
Regulated sustainability targets for new buildings *via* thermal regulation

**Thermal regulation climate zones**
- **H1** (ex. Paris): regions with continental climate
- **H2** (ex. Nantes): regions with mild climate
- **H3** (ex. Marseille): regions with Mediterranean climate

**Regulation steps of the new regulation implemented in 2012 (RT 2012)**

1. **New constructions (housing and tertiary):**
   - average energy performance 50 kWhep/m²/year (depending on the climate zone)
   - energy consumption cap-level

2. **Renovation of buildings built after 1948:**
   - More than 1000 m², for major renovation: global energy performance targeted
   - Other case: element-by-element minimum performance levels
Feed-in tariff to support renewable electricity generation: electricity bought at fixed price to renewable producer by EDF

- Contracts granted through tenders or on demand
- Difference between feed-in tariff and market price supported by consumers (CSPE: Contribution au Service Public de l’Electricité)

~ 4 Bn€ for 2015 i.e. ~7% of consumer electricity bill and 7.6 Bn€ for 2020

Source: Commission de Régulation de l’Energie and DGTrésor calculation

Impact sur le prix de l’électricité

<table>
<thead>
<tr>
<th>Year</th>
<th>RENe cost via CSPE (M€)</th>
<th>Estimated RENe costs (via CSPE)*</th>
<th>Impact on electricity price (€/MWh)</th>
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<tbody>
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<td>2020</td>
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Source: Commission de Régulation de l’Energie and DGTrésor calculation
Evolution towards premium

- According to the guidelines of the European Commission on states aids related to energy and environment
- Better market integration

Investment aids via a heat fund (Fonds chaleur)

- To support heat generation from renewables (biomass, geothermal system, ...)
- Around 200-250 M€ per year
- To be multiplied by 2 by 2017
Cost* to the community of renewable energy generation (€2013/MWh):

*compared to a combined cycle gas turbine for electricity generation (~85 €/MWh today), gas boiler for heat generation (gas price at ~75€/MWh today) and fossil fuel for transport sector (~1,3c€/L).

Source: DGTrésor calculation
European directive 2010/75/UE imposes to limit air pollutant emissions from large combustion plants, waste incineration or co-incineration plants, and other polluting plants:

- Sulfur dioxide (SO₂)
- Nitrogen oxides (NOₓ)
- Particulate matter (PM)

Article 55 of the draft law for energy transition allows to set a carbon dioxide emission cap for some thermal power plants.
No agreed definition of Fossil fuel subsidies

3 main definitions:

- **IEA**: price-gap approach (*market price vs end-consumer price*). $493 billion in 2014 globally.

- **IMF**: price-gap approach (*market price + externality costs vs end-consumer price*). $5300 billion in 2015 globally.

- **OECD**: fiscal budgetary approach (*sum of tax credit and budgetary support*). $160-200 billion annually over the period 2010-14 in OECD countries and Brazil, the People’s Republic of China, India, Indonesia, the Russian Federation, and South Africa.

4 countries started G20 peer reviews of Inefficient fossil fuel reforms:

- China & US
- Mexico & Germany
CARBON PRICING: AN IMF PERSPECTIVE

Ian Parry
International Monetary Fund
Carbon Pricing Panel, COP 21,
Paris, December 1, 2015
Outline

• Case for carbon pricing

• Basic design issues
  • Domestic
  • International
Pricing vs. Regulation

• Carbon pricing has two advantages
  • Environmentally effective
  • Raises revenue

• Regulatory approaches
  • Less effective
  • Do not raise revenue
  • More complex and costly
Carbon Taxes vs. Emissions Trading

• In theory either is fine if
  • Comprehensive
  • Make productive use of revenues
  • Establish robust and predictable prices

• Trading systems should look like taxes
  • Auction allowances
  • Price stability provisions
Administration

• Upstream: on carbon content of fuel supply
  • Covers all emissions
  • Straightforward extension of road fuel excises

• Downstream: on emissions from large sources
  • Omits small-scale sources (about 50% of CO$_2$)
  • Administratively more complex
Price Level

• Set (on average) to meet INDCs
  • Using emissions projections and their responsiveness
  • INDCs could include minimum prices (e.g., related to the social cost of carbon, > $30 per ton)

• 40 countries have national pricing but
  • Only covers 12 percent of emissions
  • Prices typically below $10 per ton
**Potential Revenue is Substantial**

<table>
<thead>
<tr>
<th>Country</th>
<th>Revenue from $30 Carbon Tax, 2010 (percent of GDP)</th>
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<td>Top 20</td>
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<td>Poland</td>
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Revenue from $30 Carbon Tax, 2010
Revenue Use

• Cutting taxes on labor and capital
  • Contains costs of carbon pricing

• If used for (general or environmental) spending
  • Should generate comparable benefits to cutting taxes
Vulnerable Households and Firms

- Subsidizing energy is inefficient way to help the poor
  - Targeted measures needed

- Subsidizing uncompetitive firms is inefficient
  - Transitory assistance needed
  - Less concern if international action
Pricing is in Countries’ Own Interest

Domestic Environmental Co-Benefits from Carbon Pricing, 2010

<table>
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<tr>
<th>Country</th>
<th>$/ton CO2</th>
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<td>Top 20</td>
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This chart shows the $/ton CO2 for various countries in 2010, highlighting the domestic and environmental co-benefits from carbon pricing.
Carbon Price Floor Agreements

• Advantages
  • Some protection against competitiveness impacts
  • Allow countries to set higher prices than floor
  • Only need agreement on one parameter
  • Precedents include tax floors for VAT, excises in EU

• Challenges
  • Account for broader energy taxes/subsidies (manageable)
  • Enforcement
Carbon Pricing - Global context

IMF/World Bank Group session @ COP21
1 December, 2015

TOM KERR, PRINCIPAL CLIMATE POLICY OFFICER
INTERNATIONAL FINANCE CORPORATION, WORLD BANK GROUP
Leaders call for action on carbon pricing

September 2014: at UN Climate Summit, +1000 companies & investors and 74 national governments signed a statement calling for a price on carbon

December 2014: Convened by the World Economic Forum, the Climate Leadership Group - a coalition of 43 CEOs - calls for pricing carbon

June 2015: Letter from the CEOs of six of the world’s largest oil and gas companies to the UNFCCC and COP President, calling for governments to price carbon

September 2015: Joint declaration by major US banks on climate change states that policy frameworks must recognize the cost of carbon

October 2015: Letter calling for carbon markets in the Paris Agreement from 20 progressive business groups

October 2015: The World Bank Group/IMF/OECD launch a Carbon Pricing Panel consisting of heads of state and government and supported by CEOs

“*Our companies are already taking a number of actions to help limit emissions ... For us to do more, we need governments across the world to provide us with clear, stable, long-term, ambitious policy frameworks. We believe that a price on carbon should be a key element of these frameworks.*”
Expansion of jurisdictions putting a price on carbon

39 national jurisdictions

23 sub-national jurisdictions

12% of global emissions (7 GtCO$_2$e)

The annual value of instruments implemented is just under

US$ 50 billion

Prices used vary from

US$ 1-130/tCO$_2$e

Key developments (2014-15):

- Portugal and Mexico have implemented new carbon taxes
- South Korea started one of the world’s largest emissions trading systems
- California and Quebec linked their cap-and-trade systems, which Ontario will join
- China announces a national ETS

More companies are using internal carbon pricing

1000+ companies disclose the use of an internal carbon price – or intend to do so in the next 2 years

435 global companies currently use an internal carbon price, up from 150 in 2014
Since 2011, China has been experimenting with 7 regional carbon market pilots. 7 schemes cover 18% of China’s population and 28% of its national GDP (Guangdong 3rd largest ETS in the world). At present, prices range from $3.34 to $8.43. National ETS to be launched in 2017.

Counted together, Chinese ETS pilots represent the largest national carbon pricing initiative in the world in terms of volume, putting a cap on 1.3 GtCO2e.

For the compliance year 2014, 24.7 million allowances were traded in all systems combined.

China commits to reducing its carbon dioxide emissions per unit of GDP by 40-45% by 2020, compared with 2005 levels, and increase non-fossil-based primary energy consumption to 15% by 2020.
In July 2012, Microsoft adopted a carbon neutral strategy for its global data centers, offices, software development lab and company air travel.

Microsoft uses an internal carbon pricing program and an investment fund to help cover costs. Microsoft buys certified renewable energy certificates and direct carbon offsets.

Microsoft departments added a budget line item reflecting the financial value of emissions, which translated to new capital for sustainability initiatives. Microsoft makes energy efficiency grants to internal business lines.

- $5/ton carbon price; expected to rise
- $10 million in annual energy savings
- 7.5 million metric tons of CO2e emissions reductions
- 10.2 billion kilowatt-hours worth of new renewable energy investments
Prices and coverage of existing carbon pricing systems are insufficient to put us on a 2-degree path.
What is the Future Carbon Price Pathway?

Sailing to the New World
Global Temperature rises stay below 2°C
National policies and global agreements align. Carbon pricing becomes an important mechanism to cutting emissions and stimulating investment.

Need complimentary policies and private sector efforts:
- Industry and energy efficiency standards
- Infrastructure and renewable energy investments

Sailing into the cliff
Delayed action delivers a 3°C world
- Sustained low prices, followed by sharp, sudden rise
- Strong global agreements not matched by effective national carbon pricing policies.
- Crisis brings radical course-correction.

Stormy waters
Chaotic pricing land a 3°C world
- Prices rise then collapse
- Decarbonisation declines
- Many disjointed schemes, no price convergence
- Some sectors rapidly cut CO₂e but low investor confidence

Running aground
Low ambition produces a 4°C world
- Prices languish at low levels, very few schemes
- Carbon pricing is a “non-starter”
- Low ambition on climate action and no global agreement
- Significant economic damage, social upheaval.
A common set of key issues

- **Competitiveness** and concerns about carbon leakage
- **Distributional impacts** – e.g., higher energy prices for low-income households
- **Alignment** of carbon pricing with other policies
- **Productive use of revenues** – to ease the transition, accelerate technology innovation
- **Linking and networking** different carbon pricing systems
<table>
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<th><strong>FASTER Principles for Successful Carbon Pricing</strong></th>
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<tr>
<td><strong>Fairness</strong></td>
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<tr>
<td>• Reflect Polluter Pays Principle</td>
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<td>• Distribute costs and benefits equitably</td>
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<td>• Avoid disproportionate burdens on vulnerable groups</td>
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<td><strong>Alignment of Policies</strong></td>
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<tr>
<td>• Coexists with mutually reinforcing complementary policies</td>
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<td>• Reforms counter-productive policies</td>
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<td>• Facilitates policy coherence</td>
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<tr>
<td><strong>Stability and Predictability</strong></td>
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<tr>
<td>• Predictable policy framework and strong investment signal</td>
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<td>• Incorporate flexibility to adjust to unpredictable events</td>
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<td><strong>Transparency</strong></td>
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<tr>
<td>• Communicate rationale, objective, shared benefits</td>
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<td>• Monitor and verify emissions</td>
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<td><strong>Efficiency and Cost-effectiveness</strong></td>
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<tr>
<td>• Reduce emissions at least cost fostering flexibility and innovation</td>
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<tr>
<td>• Enhance efficiency, simplify administration</td>
</tr>
<tr>
<td>• Recycle revenues &amp; enhance economic benefits</td>
</tr>
<tr>
<td><strong>Reliability and Environmental Integrity</strong></td>
</tr>
<tr>
<td>• Ensure measurable reductions in harmful behavior</td>
</tr>
<tr>
<td>• Comprehensive coverage</td>
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Carbon Pricing Leadership Coalition

The Carbon Pricing Leadership Coalition is translating support into action by bringing together government, business, and civil society leaders to share experiences with carbon pricing and expand the evidence base for effective carbon pricing systems and policies—leading to successful implementation.

**Results indicators**

- # of governments putting in place new carbon pricing
- # of governments raising ambition on existing carbon pricing
- # of businesses using internal carbon pricing
- Evaluation of effectiveness in delivering environmental & economic results

**CPLC Activities**

- Collect the evidence base
- Mobilize business support
- Convene leadership dialogues
- Increased ambition and action on carbon pricing
Join Our Coalition of the Working
Concluding

• Other policies needed
  • R&D (e.g., for carbon capture and storage)
  • Infrastructure (e.g., transit, smart grids)

• But carbon pricing is critical policy for
  • Mitigating emissions
  • Price signals for redirecting technological change
  • Mobilizing climate finance
  • While also raising revenues

• Finance ministers have key role
The Financial System We Need

Amplifying the impact of carbon pricing

Nick Robins, High-Level Event on Carbon Pricing, 1 December 2015
A systemic approach: Actions within the financial system can complement measures such as carbon pricing.

A quiet revolution: A growing number of policy innovations have been introduced, focusing on the 3Rs: responsibility, risk and reporting.

A moment of opportunity: Systematic action can now be taken to shape a sustainable financial system, amplifying the impacts of carbon pricing.
Advance policy options to improve the financial system’s alignment with sustainable development

**focus**

Financial system rulemakers – ministries, central banks, regulators, standard setters

Dynamic between market and policy approaches

**analysis framework**

Understanding the rationale for action

**findings**

Focusing on country experience and sector priorities

**next steps**

Recommendations for national action and international collaboration

**framework for action**

Packages of policy proposals

**toolkit**

38 approaches in four clusters

Upgraded governance
ALIGNING THE FINANCIAL SYSTEM

FINANCIAL ASSETS & ACTORS

- Banking: US$135 tn
- Bonds: US$100 tn
- Equities: US$70 tn
- Investors: US$100 tn
- Insurance: US$29 tn

PRIORITIES FOR ALIGNMENT

- Real economy regulation & pricing
- Mobilising public spending
- Action within the financial system?

REASONS FOR ACTION IN THE FINANCIAL SYSTEM

- Managing risk
  Inadequate risk management in the financial system may exacerbate environmental & social externalities
- Promoting innovation
  Upgrading the standards and regulations required to catalyze investment, for example, in bond markets
- Strengthening resilience
  Environmental factors can pose risks to assets and system stability
- Ensuring policy coherence
  Ensuring coherence between financial regulation and wider goals, such as long-term investment, access to finance, environmental security.

[Source Inquiry, 2015]
### FINDINGS: A QUIET REVOLUTION

#### Diverse starting points
- Financial inclusion, greening industry
- Air pollution
- Infrastructure investment
- Post-crisis rebuilding of trust in finance
- Climate change

#### Measures in practice
- Integration in prudential banking regulation
- New investor reporting requirements on climate
- Coordinated roadmap led by regulator
- Financial sector compact
- Incentives for clean energy bonds

#### Levers for action
- Enhancing market practice
- Harnessing the public balance sheet
- Directing finance through policy
- Transforming culture
- Upgrading governance

[Source Inquiry, 2015]
• **Corporate use of carbon pricing**: According to the CDP, 435 companies now use an internal price on carbon, up from 150 in 2014. These range from US$5 for GM to US$15 for Essar Oil to US$50 for Vale and US$150 for Enbridge.

• **Investor support for carbon pricing**: Investors with US$24 trillion in assets have called on governments to “provide stable, reliable and economically meaningful carbon pricing that helps redirect investment commensurate with the scale of the climate change challenge”.

•
AMPLIFYING THE IMPACT: THE 3Rs

RESPONSIBILITY: clarifying that environmental and climate factors a key part of prudent financial governance.

RISK: overcoming the ‘tragedy of the horizon’ by assessing climate and carbon risks of financial institutions.

REPORTING: requiring financial institutions to report on their carbon performance and outlook.
RESPONSIBILITY: In 2014, BACEN introduced new responsibilities for banks to manage socio-environmental factors as part of core risk system to improve governance and strengthen soundness.

“Sustainability is a positive asset for financial and monetary stability”
Aloisio Tupinamba, Chief of Staff, Financial Regulation, Central Bank of Brazil
RISK: In 2015, the Prudential Regulatory Authority examined the impact of climate change on the safety and soundness of insurance companies, identifying physical, transition and litigation risks.

“The central bank time horizon is relatively short. But the real challenges to prosperity and economic resilience from climate change will manifest well beyond this. We face a ‘tragedy of horizons’.” Mark Carney, Governor, Bank of England
REPORTING: investors need to report on investment policies, carbon footprint, climate risks and alignment with energy transition (Article 173)

“It is essential that the financial system as a whole takes climate risk into account, anticipates ambitious targets and integrates this into investment decisions.” Laurent Fabius, Foreign Minister, France
STRENGTHENING THE ALIGNMENT

**Setting a carbon price signal:** governments set a voluntary ‘carbon price corridor’ of US$15-20/t in 2020 to US$60-80/t in 2030 (Canfin/Grandjean)

**Building capacity to hear the signal:** governments encourage financial institutions to stress test their portfolios and policies using the signal

**Boosting market transparency:** to enable stakeholders to understand the implications of long-term carbon pricing.
For more information

www.unepinquiry.org
www.unep.org/inquiry/

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