



# OECD: Contributions to Low-Carbon Society Research & Understanding

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# Overview: OECD work on LCS

1. OECD - structure, working models, how work gets done
2. Ongoing work on climate policy
3. Events/outreach
4. Examples of analytical results

## OECD work on climate change:

- Committee for Agriculture
- Committee for Information, Computers & Communications Policy
- Committee on Fiscal Affairs
- Economic and Development Review Committee
- Economic Policy Committee
- **Environment Policy Committee**
- Development Assistance Committee
- Fisheries Committee
- Investment Committee
- Public Governance Committee
- Trade Committee

### And at associated bodies:

- IEA, Nuclear Energy Agency, International Transport Forum
- Roundtable on Sustainable Development, Africa Partnership Forum, Heiligendamm Process...



*Unique opportunity for policies across government*

# OECD: a variety of policy analyses & dialogue processes

- Country peer reviews, data & indicators:
  - *Environmental Performance Reviews* - international co-operation, including climate [2009: Gr, Fin, Lux, Ire]
  - *Economic Reviews* - selected countries with sections on climate change policies [e.g. New Zealand, EU]
  - Collection and harmonisation of climate-relevant data and statistics - including in agriculture, work on embodied carbon, etc. [energy data with IEA]
  - OECD patents database - analysis of policies and innovation, including transfer of technological know-how
  
- Roundtable on Sustainable Development:
  - Ministerial/ CEO Roundtable discussions on sectoral approaches (March) and Border Tax Adjustments (Summer)

## Trade :

- Facilitating trade in cc technologies in the electricity generation & heavy-industry sectors
- Counting carbon in marketplace - trade & carbon footprint; trade, transport & climate change

## ■ Science, Technology & Industry:

- OECD Innovation strategy [2010] → work on eco-innovation; green innovation\*

## ■ Investment:

- Public policy frameworks to support private investment in climate-friendly infrastructure (with ENV) [2009-2010]

## ■ Tax:

- Case studies on tax, innovation & environment (e. g. Turkey' s fuel taxes, UK Climate Change Levy) [2009-2010]

## ■ Regulatory reform:

- work on regulatory impact assessment as tool for policy coherence, focus on climate change

## ■ Biodiversity & REDD

- 2009–2010: Will look at potential  synergies between REDD and achieving biodiversity benefits, and limitations

## ■ Agriculture & fisheries:

- Policy implications of agriculture's role in mitigating GHG emissions; agricultural policies and adaptation
- Fisheries & cc (to be a chapter in biennial Review of Fisheries)

## ■ Other:

- Global Forum on Transport (10–12 Nov 2008)
- Waste policies & cc
- ...

## ■ Development Co-operation:

- Work on **adaptation & development co-operation** (with ENV)
- **Rio markers development finance statistics**: tracks ODA to climate mitigation [ongoing]; examining possible markers for adaptation
- Include cc in DAC peer reviews

## ■ Integrating adaptation into development co-operation – DAC Guidance

- **Integrating at national level, sectoral level, project level, local level**
- 28–29 May 2009 - Joint High Level Meeting of Environment Policy and Development Assistance Committees
- 2009–2010: programmatic approaches; thematic/ sectoral; harmonised frameworks for risk assessment; evaluating progress...

## ■ Cities & Climate Change

- **Economics of Impacts & Policy Benefits at Local Scale:**
  - Available: literature review, port cities ranking by vulnerability to sea-level rise & storm surge (now & in future) , concept study, Copenhagen study, preliminary Mumbai study
  - On-going: update of port cities ranking; completion of Mumbai study; special issue of academic journal & OECD publication
- **Multilevel governance and climate change (joint ENV/ GOV)**
  - On-going: working paper on horizontal & vertical linkages, integrating decision-making on mitigation, adaptation into urban development planning, understanding co-benefits at city/ local scale
- **Outreach activities - as part of the project:**
  - OECD Roundtable on Urban Development, research networks, collaboration with World Bank, side-events UNFCCC & ICLEI

# Economics of Adaptation, Impacts, Policy Benefits

- Available: **Cost of Policy Inaction** (OECD book); literature review on economics of impacts; **co-benefits**; local scale impact and benefits assessment; **IA modelling of adaptation costs and benefits**
- 2009–2010: Further developments with IA modelling & adaptation; work on **policy instruments** to incentivise adaptation; water & adaptation; further work on **local scale impact & policy assessment** (e.g. Mumbai case) & co-benefits

## ■ Economics of Mitigation\*

- Explore **economic implications of alternative mitigation pathways**
  - **Macro-economic modelling** - ENV-Linkages model
  - **Global mitigation costs** and their national / regional distribution of costs
  - **Structural change** implications of low-carbon global mitigation goals, simple climate implications of alternative scenarios for participation & levels of effort
  - **Alternative policy packages** (i.e. global markets vs fragmented markets)

## UPCOMING OECD EVENTS:

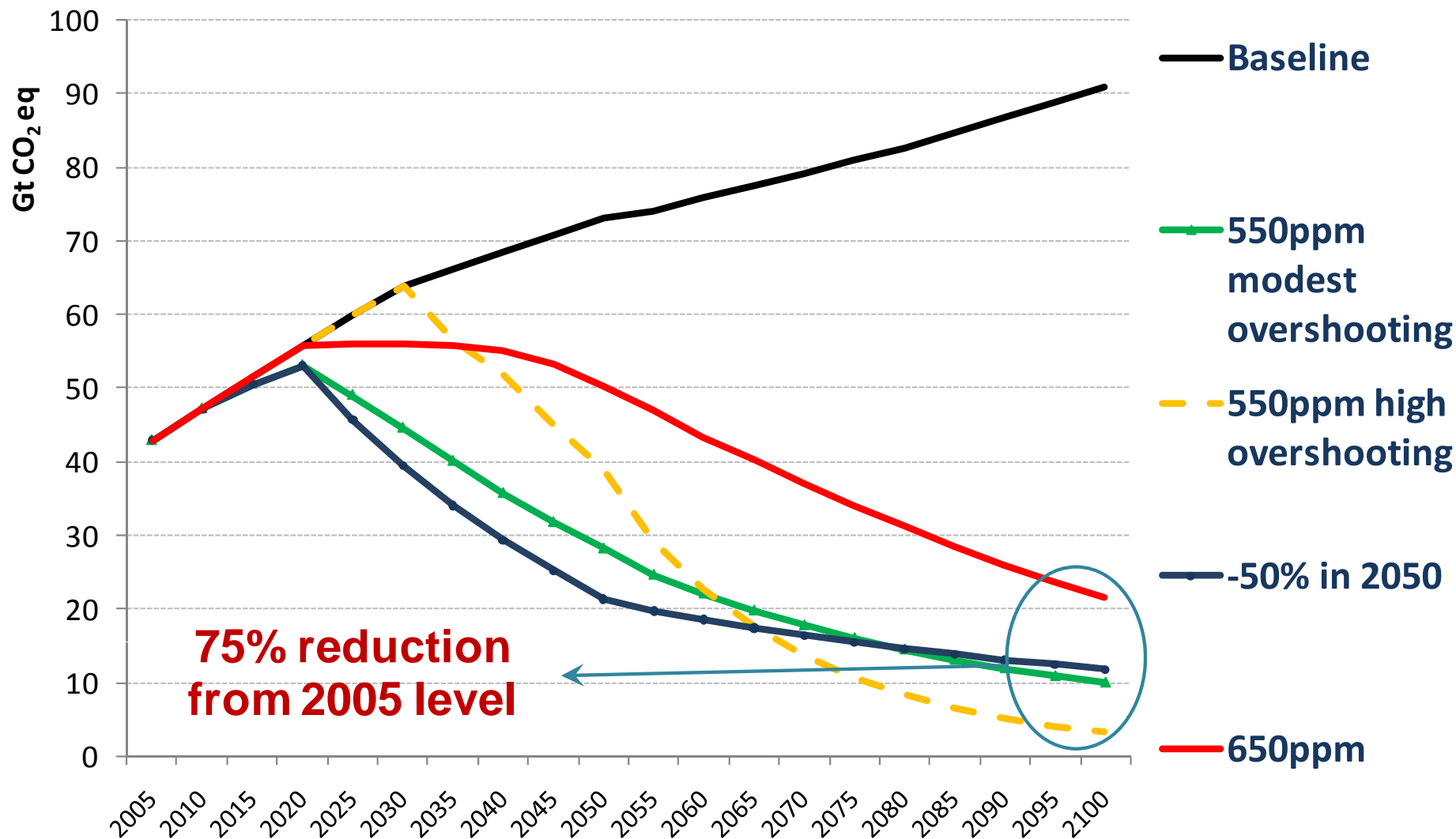
- 13 March - RT SD Ministerial discussion on sectoral approaches
- 20 May - Working Parties review phase 2 work on economics of mitigation
- 27–28 May (DK) - Conference on the ICTs, the Environment, and CC
- 28–29 May - Joint High Level Meeting of Development and Environment [adaptation financing; low carbon development]
- 9–10 June - Global Forum on Trade: Trade & Climate Change
- 11 June (SP) - Workshop on Green Cities: New Approaches to CC
- 15 June - Conference on Corporate Responsibility [session on energy & cc]
- June (FR) - World Bank Symposium on Cities [OECD session]
- 24–25 June - OECD Ministerial Council Meeting [green recovery; cc progress]
- 18 September - OECD Conference on Economics of Climate Change
- 4–5 November - Global Forum on Eco-Innovation

## Main OECD Input to COP15

- OECD is an observer in negotiations → main input is providing analysis and a forum for discussion to support OECD country negotiators prepare for COP15.
- Main areas of analysis/ forthcoming products of relevance:
  - Annex I Expert Group (AIXG) analysis of key negotiating issues e.g. financing, MRV, sector approaches
  - Economics of Mitigation (ECO-ENV project), with the September Conference and Autumn release of publication.
  - OECD Policy Guidance on integrating adaptation into development co-operation, and High Level Meeting of OECD Environment Policy and Development Assistance Committees in May 2009.
  - Analysis on green recovery & climate change
- Side-event at COP15, publications stand, participate in others' side-events, intervene in High Level Segment.

# Economics of Mitigation: Policy Simulations

GHG emission paths under alternative world carbon price scenarios



Source: OECD, ENV-Linkages model.

# Economics of Mitigation [Phase 1]

- Costs, GHG emissions, and distributional effects of policies

- Ambitious action to reduce emissions is economically rational
- Distribution of costs & benefits are very uneven

- Policies to incentivise technological change

- Pricing emissions will give incentives for technology development & deployment (550ppm scenario → 4-fold increase in R&D spending)
- But uncertainty and market failures may discourage investors, so need specific R&D policies... so need a policy mix.

- Incentives for action: air pollution & health co-benefits →

- Significantly offset costs of mitigation action in some areas, but not fully

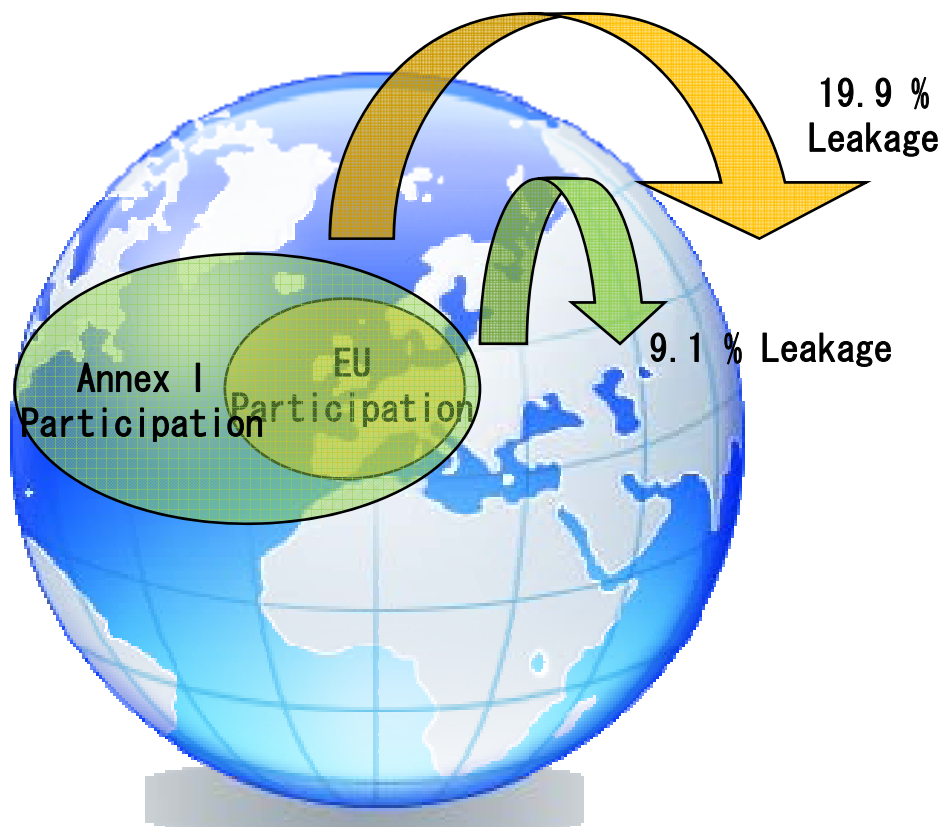
# Economics of Mitigation [Phase 1]

- Impacts of limited country/ sectoral/ GHG participation
  - If leave out energy-intensive industries, 550 ppm costs over 50% more.
  - New growth in emissions in China & India to 2050 will be larger than total AI emissions today.
  
- Measures to address carbon leakage & competitiveness
  - As the coalition of acting countries increases, the leakage rate falls rapidly.
  - Border Tax Adjustments : Costly! can reduce leakage, but at a cost to both the country applying BTA and trade partners
  - Sectoral Approaches: if possible, link them to ETS to keep costs low

[www.oecd.org/env/cc/econ](http://www.oecd.org/env/cc/econ)

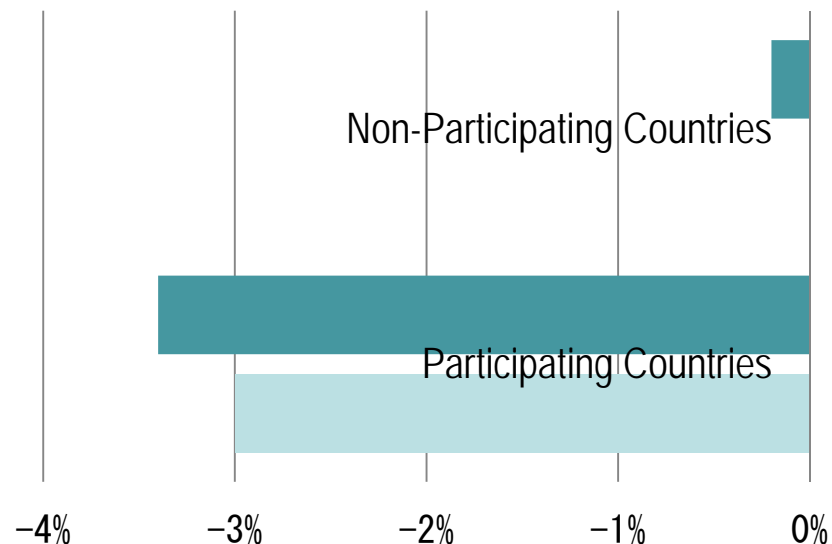
# Carbon Leakage and Countervailing Import Tariffs

Participating countries achieve 50% emission reduction in 2050



**Carbon Leakage Rates in 2050  
Without a Countervailing Tariff**

**GDP Effect in 2050  
EU Countries Participate**



- With a Countervailing Tariff
- Without a Countervailing Tariff

## ■ Economics of Mitigation

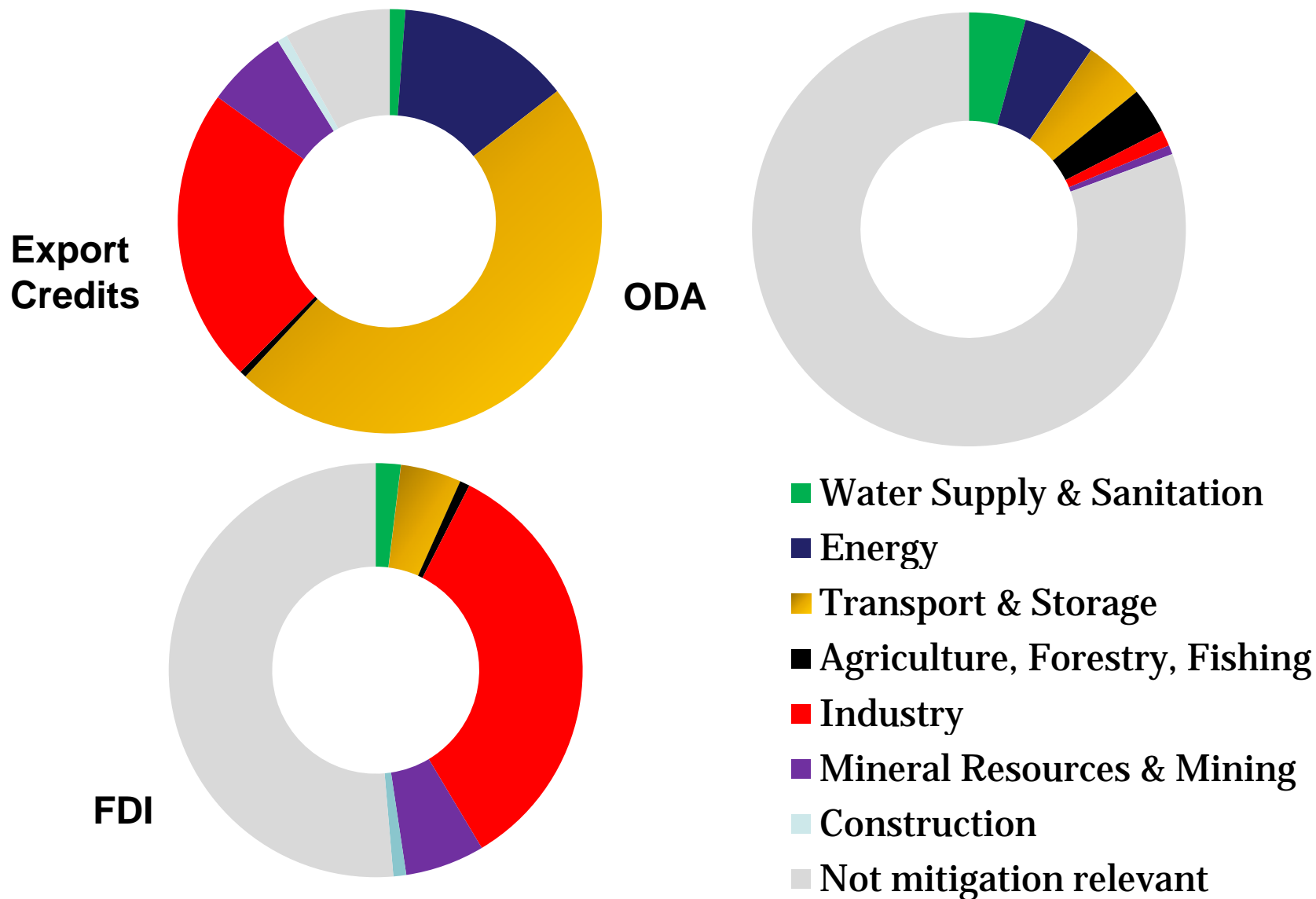
### Phase 2 work [mid-2009]

- Carbon leakage & competitiveness - political economy issues
  - Incentives for participation (distribution of benefits & costs, financing)
  - Gradual build-up of carbon markets
  - Energy subsidies removal (with IEA)
  - Contribution of forest sector & land use
- 
- Progress report: OECD Council at Ministerial Level [June, 2009]
  - Synthesis report of Phase 1 & 2 work [Autumn 2009]
  - Conference on Economics of Climate Change [September, 2009]

## ■ AIXG – analysis to support negotiators

- OECD & IEA provide the Secretariat to support an Annex I Expert Group on climate change (AIXG).
- The AIXG meets twice a year to allow negotiators a place off-line to discuss analysis of key issues on the negotiating agenda → critical role where misunderstandings or lack of clarity on technical issues.
- Priority work areas for AIXG analysis are :
  - Interpretation & implementation of the Bali Action Plan references to “measurable, reportable, and verifiable” actions, commitments, and support for actions.
  - Possible Registry or Register of Nationally Appropriate Mitigation Actions (NAMAs) by developing countries.
  - Financing flows to support developing country mitigation actions.
  - Sectoral approaches - how they might work in a post-2012 framework.
  - How actions and support might be differentiated amongst

# Mitigation relevant ODA, export credits, FDI (average 2003 - 2005)



# Different qualities and availability of finance for mitigation information – a basis for a more comprehensive framework?

Financial Data Sources	Mitigation-specific				Mitigation-relevant		
	Bilateral climate support	ODA bilateral	ODA multilateral	CDM	ODA bilateral	ODA multilateral	FDI
Data type	National communications	Rio markers – OECD CRS	MDB	UNEP-Risoe World Bank	OECD CRS	OECD CRS	UNCTAD
by source country	+	++	-	-	++	+	++
by recipient	+	++	-	+	++	+	++
by purpose	+	++	-	+	+	+	-
by endpoint	+	++	-	+	++	+	+



# Innovation in Environmentally Sound Technologies : OECD Project\*

- Develop indicators of EST innovation to be included in OECDSTAT - alongside indicators of nanotech, biotech and ICT
- Develop indicators of EST technology transfer and internationalisation of innovation (co-invention and knowledge spillovers)
- Analyse the determinants of EST innovation and international transfer empirically using econometric techniques

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ENV/EEI

[www.oecd.org/env/cpe/firms/innovation](http://www.oecd.org/env/cpe/firms/innovation) ; (Nick.Johnstone@oecd.org)

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## Innovation EST: Areas Covered by Project

- Air pollution control (stationary and mobile)
- Water and wastewater treatment
- Solid waste management, recycling and prevention
- Noise control
- Monitoring technologies
- Renewable energy
- ‘Clean’ coal (i.e. IGCC, CCS, FBC)
- Fuel cells
- Building and lighting energy efficiency
- Hybrid/electric vehicles
- Green chemistry
- etc...

# Cities & Climate Change: the Inventory Challenge to Assess Performance

- National-scale IPCC / FCCC, AIP Harmonization Complete
- Range of technical and data issues complicates local measuring
- Local competing protocols, none of which officially sanctioned internationally:
  - ICLEI
  - CCAR
  - The Climate Registry
  - Bilan Carbone (ADEME)



Source: Corfee-Morlot, Cochran, Teasdale (2009) Cities and Climate Change  
Harnessing the Potential for Local Action

# Cities & Climate Change: Regional Science & Impact Assessment

- Local science–policy dialogue to assess impacts, understand & manage risk
- Variety of institutional delivery models
  - Examples: IRI, UK CIP, ViTeCC, Ouranos
- National/sub–national public funding, also private funding for regional science



Build on local/regional research capacity, universities, institutes

Source: Corfee-Morlot, Cochran, Teasdale (2009) Cities and Climate Change

- Harnessing the Potential for Local Action
- Suppliers and customers of information - interaction is valuable

# Follow-up

- For more information see:  
[www.oecd.org/env/cc](http://www.oecd.org/env/cc) & [www.oecd.org](http://www.oecd.org)
- Thank you!