

The United Nations Framework Convention on Climate Change and its Kyoto Protocol: Targets and Implementation Issues

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Energy Efficiency and Climate Change Mitigation
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Overview of the presentation

- Introduction
- The Climate Change Convention, its objective and related policies
- The Kyoto Protocol and its emission reduction targets
- Innovative approaches for international co-operation: ET, CDM and JI
- Outlook: impact of the Climate Change Convention and the Kyoto Protocol, and next steps
- Conclusion

Introduction



Climate is changing...

- Impact on developing countries is the most visible
- Impact in Europe from extreme weather events ...
 - UK flooding – Boscastle 2004
 - £50m early estimate of costs
 - European heatwave 2003
 - ~30,000 deaths
 - \$13.5bn direct costs
 - European floods 2002
 - 37 deaths
 - \$16bn direct costs
 - UK floods, autumn 2000
 - Insurance pay-out £1bn



The Climate Change Convention, its objective and related policies



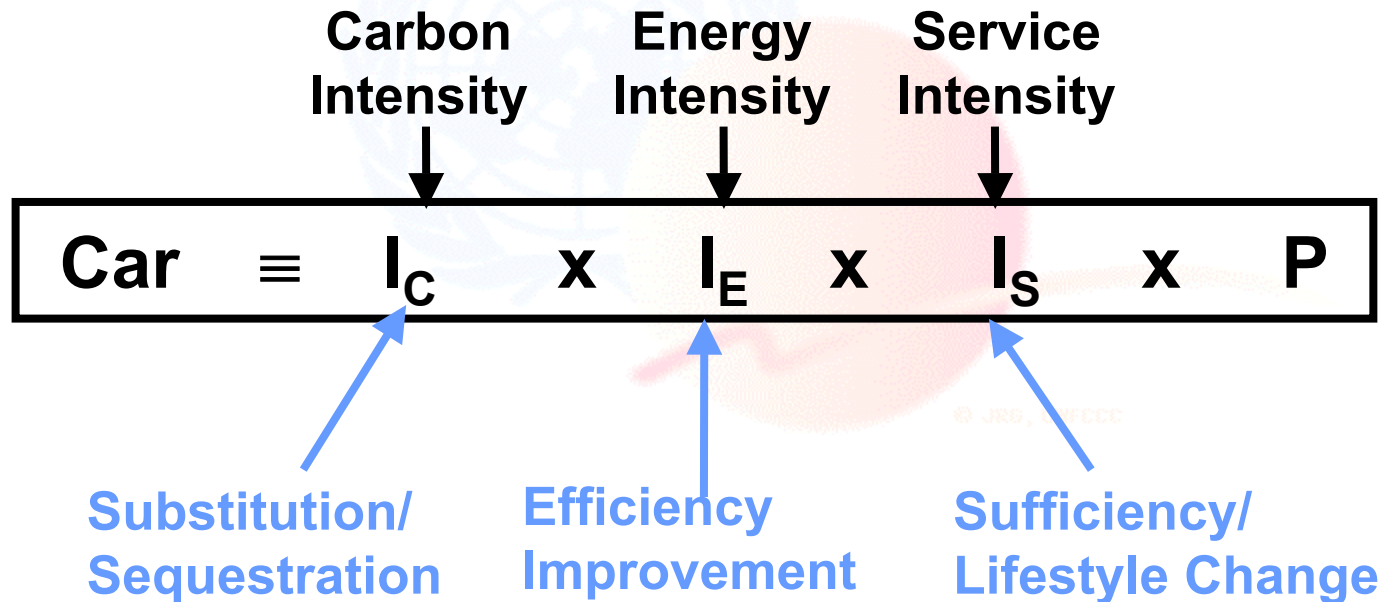
The objective of the Climate Change Convention

- The **objective of the Climate Change Convention**, as enshrined in its Article 2 is framed over **mitigation and adaptation as the key response strategies**. It includes:
 - Protecting climate from human interference by stabilising the concentration of emissions in the atmosphere at a safe level (**mitigation**), and
 - Building resilience of human systems, ensuring the possibility for ecosystems to adapt naturally to climate change, ensuring that food production is not threatened and enabling economic development to proceed in a sustainable manner (**adaptation**)

Domestic policies and measures: Kaya Identity

$$\text{Carbon (emitted in total)} \equiv \frac{\text{Carbon}}{\text{Energy}} \times \frac{\text{Energy}}{\text{Service}} \times \frac{\text{Service}}{\text{Population}} \times \text{Population}$$

or



Strategic Options

Overview of domestic policies and measures

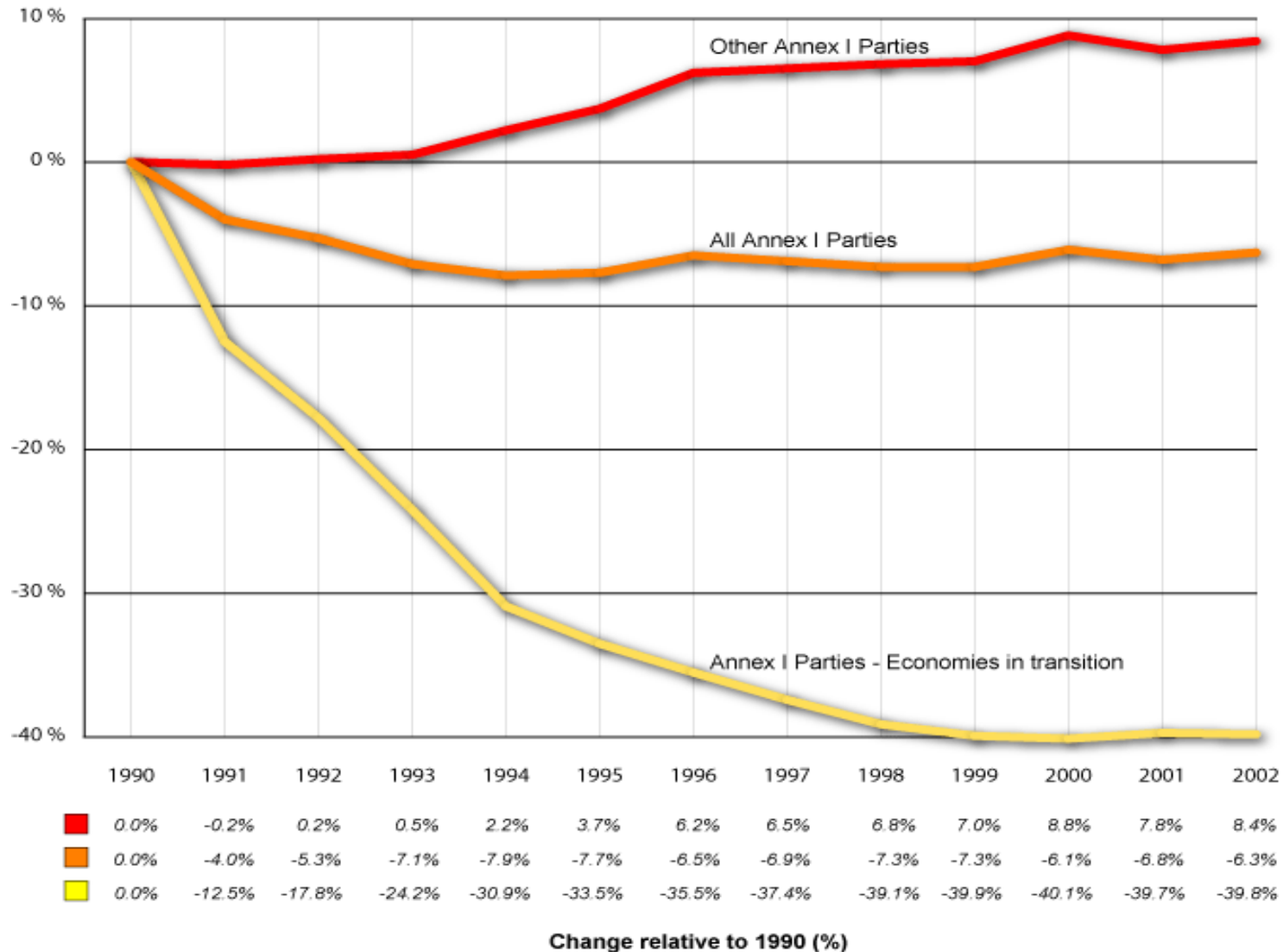
Box 4 Key policies and measures reported by Parties in all sectors

	AUS	AUT	BEL	BGR	CAN	CHE	CZE	DEU	ESP	EST	EC	FIN	FRA	GBR	GRC
Combined heat and power		X	X	X				X					X	X	
Renewable energy sources	X	X	X	X	X	X		X	X		X	X	X	X	X
Fuel switch (mainly to natural gas)				X			X	X	X	X		X	X	X	X
Energy efficiency improvements	X	X	X	X	X	X	X	X		X	X	X	X	X	X
Vehicle and fuel taxes		X	X			X		X		X		X	X	X	
Integrated transport policy frameworks	X	X				X					X	X			
Pollution prevention in industry	X	X	X	X		X	X	X		X			X	X	X
Landfill site gas recovery	X	X			X		X	X	X	X	X	X	X	X	X
Fertilizer and manure management	X	X	X	X			X	X	X	X	X		X	X	X
Common Agricultural Policy		X	X					X			X	X		X	X
Afforestation and reforestation	X		X	X	X	X	X	X	X	X	X	X	X	X	X

	HRV	HUN	ITA	JPN	LTU	LVA	NLD	NOR	NZL	POL	RUS	SVK	SVN	SWE	USA
Combined heat and power	X		X			X	X	X				X	X		X
Renewable energy sources	X	X	X	X	X	X	X	X				X	X	X	X
Fuel switch (mainly to natural gas)	X		X	X									X		
Energy efficiency improvements	X		X	X	X	X	X	X		X	X	X	X	X	X
Vehicle and fuel taxes							X	X						X	
Integrated transport policy frameworks							X							X	
Pollution prevention in industry	X		X	X		X	X	X				X	X		X
Landfill site gas recovery		X	X			X	X	X	X				X	X	X
Fertilizer and manure management	X		X	X	X	X			X	X		X	X		X
Common Agricultural Policy			X											X	
Afforestation and reforestation	X			X	X	X	X		X	X		X		X	

Annex I emissions: historic trends

Trends in aggregate greenhouse gas emissions, 1990-2002



The Kyoto Protocol and its emission reduction targets



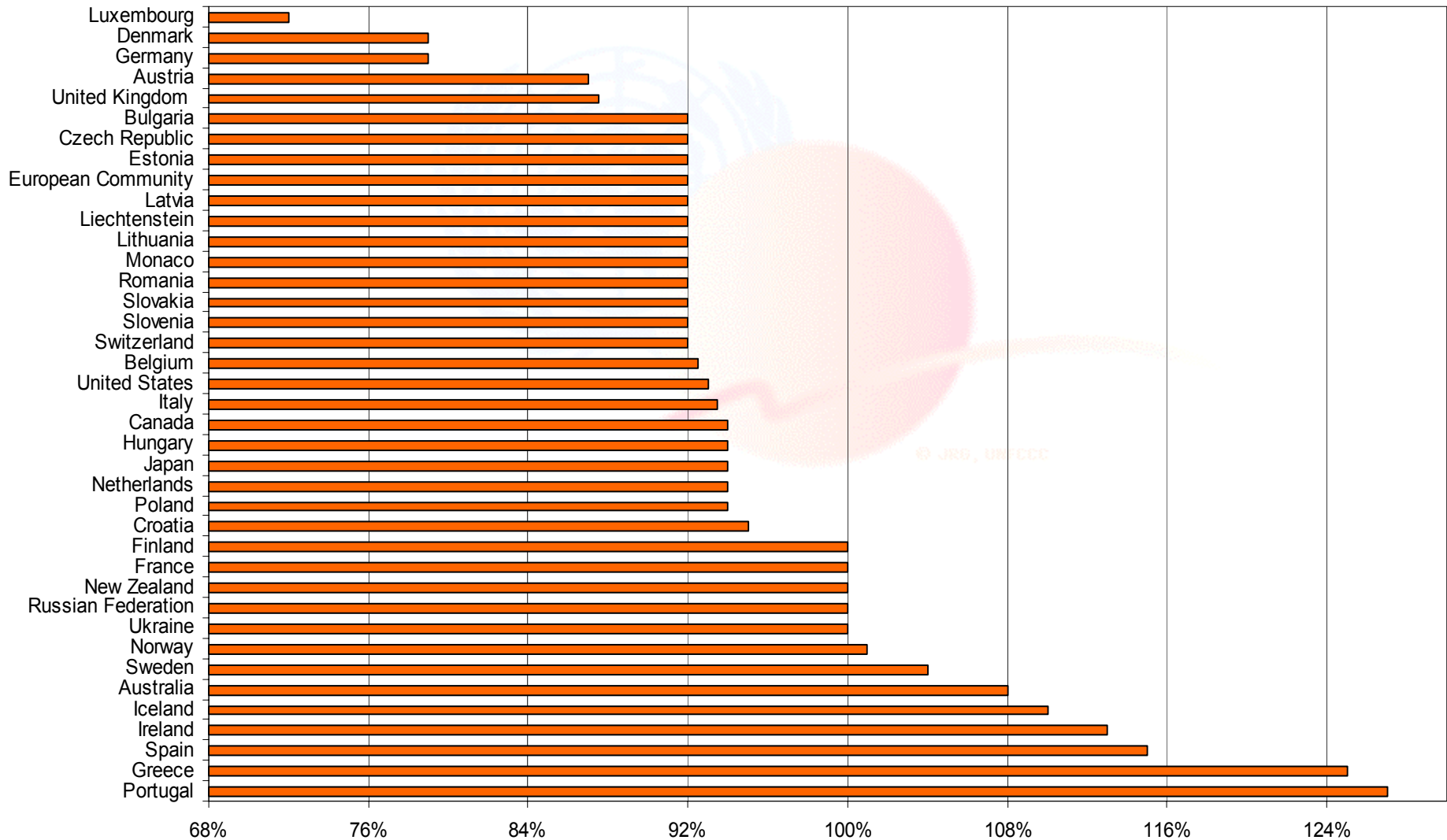
Emission reduction targets under the Kyoto Protocol (Annex B targets)

	Increase
Iceland	+ 10 %
Australia	+ 8 %
Norway	+ 1 %

1990 level
New Zealand
Russia
Ukraine

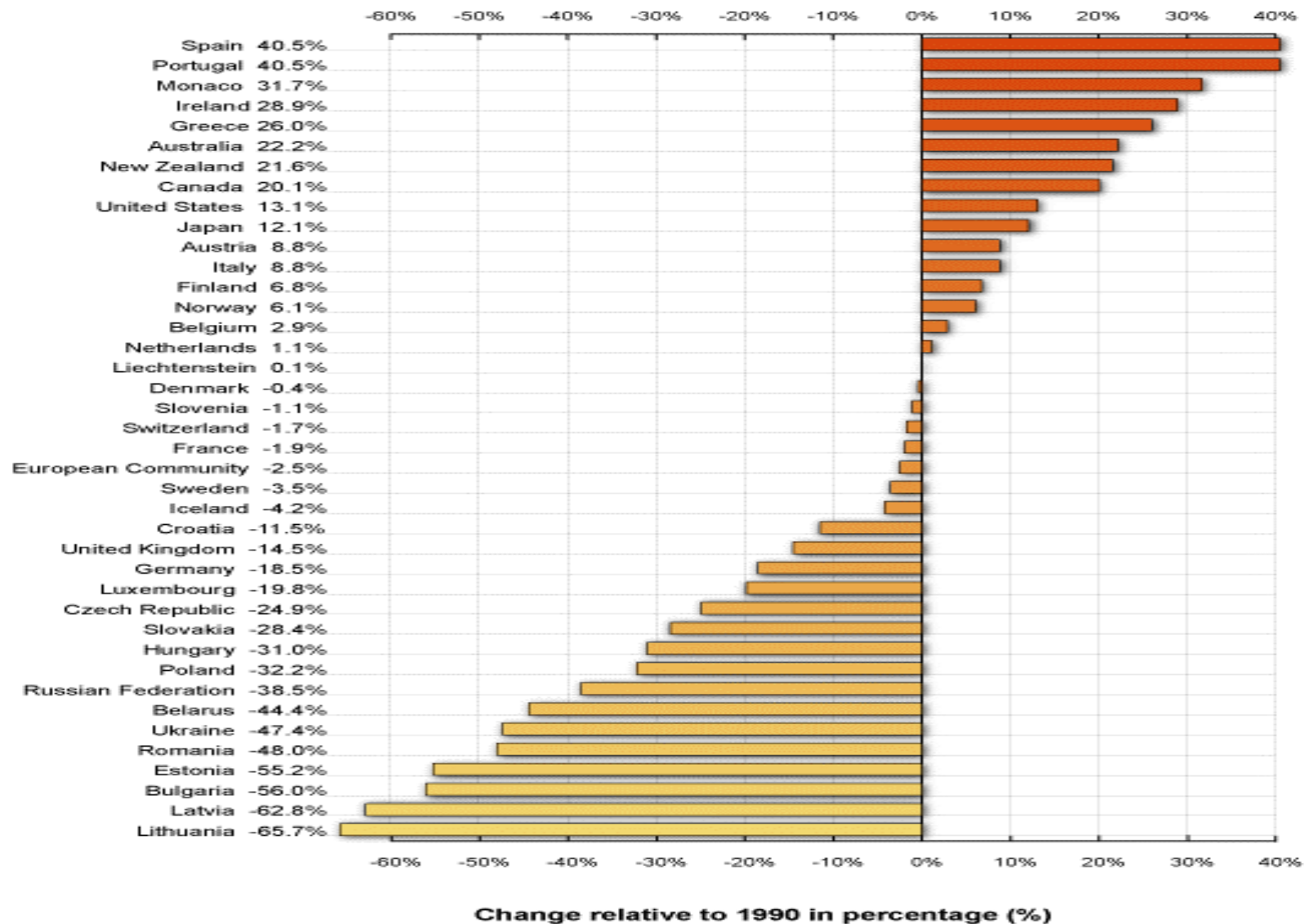
	Cut
Japan Hungary Poland	- 6 %
US	- 7 %
EU and most others	- 8 % “bubble” range + 27 % ⇔ - 28 %

Emission reduction targets under the Kyoto Protocol, including Article 4



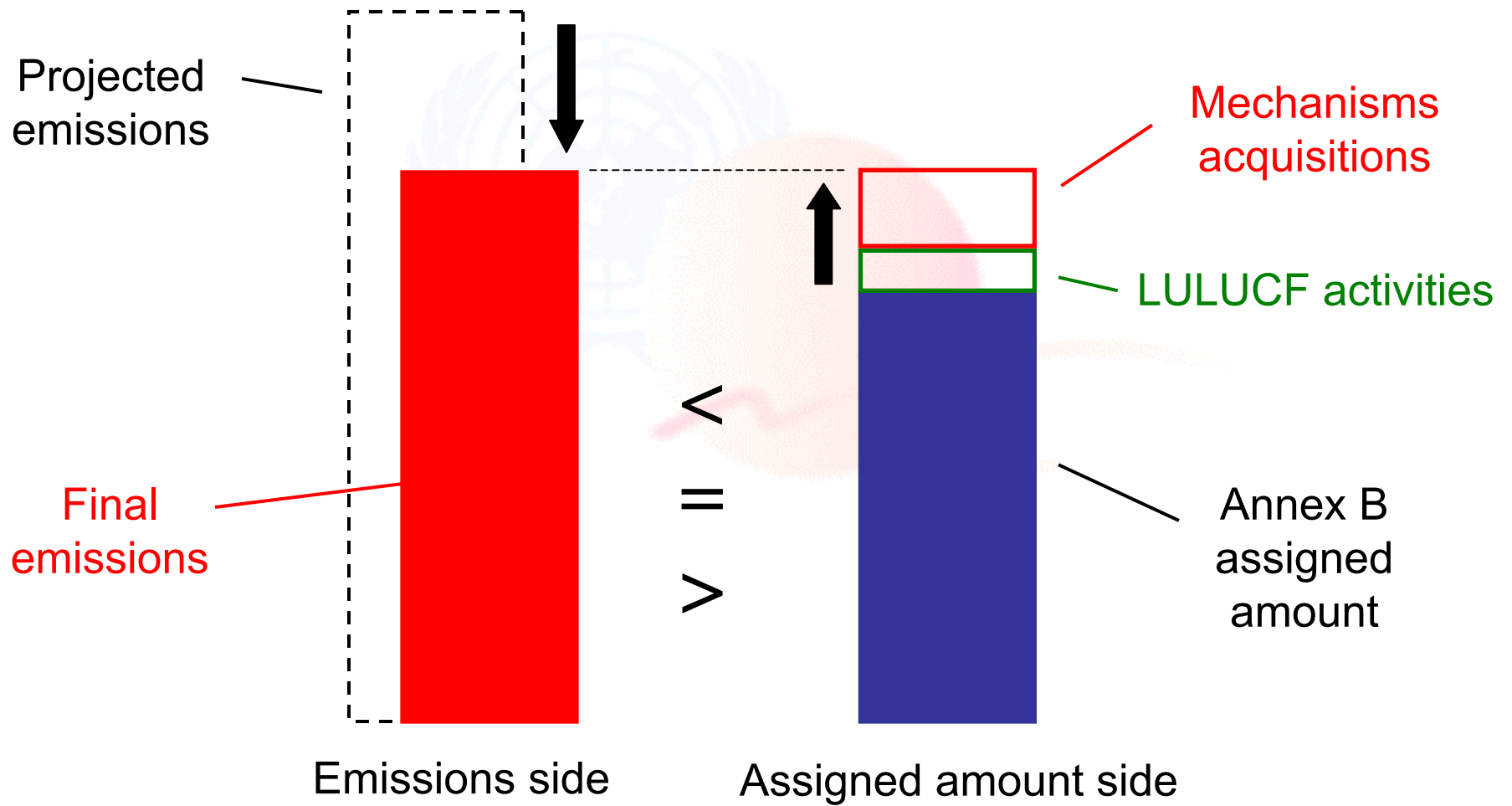
Changes in Annex I Parties emissions

Total aggregate greenhouse gas emissions of individual Annex I Parties, 1990-2002*



* The change related to 1990 shown here is for 2002 except for Liechtenstein (1990), Poland (2001) and Russian Federation (1999)

Ways to meet the emission reduction targets (Annex B targets)



Policies and measures under the Kyoto Protocol

- Continuation and strengthening of policies adopted under the Climate Change Convention
- EU-ETS as a landmark environmental policy
 - The world's first large-scale GHG trading programme is up and running with significant trading volumes
 - Set to deliver real (against the BAU) emission reductions
 - Comprises a core element of the EU climate change strategy
 - Covers 12,000 installations in 25 countries and 6 major industrial sectors
 - Private sector is a key player

Implications of the EU ETS

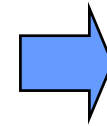
- Near-term implications of the EU-ETS
 - Price, traded volumes and cost-saving from GHG trading
 - Possibility to link to non-EU schemes (e.g. Norway, Canada, Japan, Switzerland and New Zealand)
 - Possibility to use project-based emission allowances (from JI and CDM)
 - Impact on industrial competitiveness and the impact of higher electricity prices
- Long-term implications of the EU-ETS
 - Impact on technology development
 - Impacts on the sectors not covered by the EU-ETS
 - Progression of global climate change policies
 - Direct lessons for other countries, e.g. for the U.S. as the debate over the domestic GHG trading proposals evolve

Innovative approaches for international co-operation: ET, CDM and JI

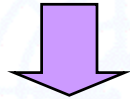


Approaches for international co-operation

Climate Change Convention
(Art. 3.3, 4.2 (cooperate, jointly))



AIJ under the pilot phase

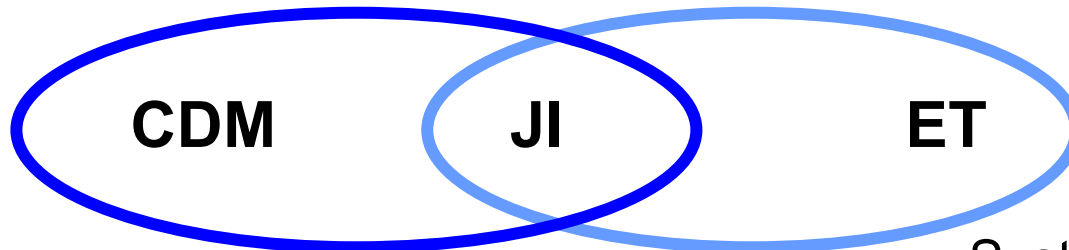


Kyoto Protocol Art. 6, 12 and 17



3 Mechanisms/approaches

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project based

System with GHG
emission limitations

Mechanisms eligibility

Full eligibility

- a. Party to the Kyoto Protocol
- b. Assigned amount calculated
- c. National system in place for estimating emissions/removals
- d. National registry in place for tracking assigned amount
- e. Submission of most recent required emissions inventory
- f. Accurate accounting of assigned amount and submission of information

Track 2 JI projects

- a. Party to the Kyoto Protocol
- b. Assigned amount calculated
- d. National registry in place for tracking assigned amount

Emission trading

- International emission trading under Article 17 of the Kyoto Protocol
- All Annex B Parties can participate
- Compatibility of the EU ETS with Article 17 emission trading

CDM is a reality

- CDM Executive Board has been operational for 3.5 years
- Project registration
 - 156 projects in the process of validation
 - 17 projects have been submitted to the EB (9 projects registered (landfill gas to electricity, renewable energy and HFC-23), 5 have requested registration and 3 are under review)
- Methodological work
 - 125 methodologies submitted to the EB
 - 25 methodologies approved (including 3 consolidated and 15 small-scale methodologies)
 - 54 methodologies under consideration
- Accreditation
 - 8 DOE accredited for operating sector-specific validation functions globally and 27 under consideration
 - One entity close to being considered for accreditation and verification functions (can certify projects in all the sectors for which they have been accredited)
- Parties: 76 DNAs established (62 in developing countries)
- The CDM central registry is in place (credits can be issued)

CDM potential and private sector role

- Private sector involvement is a key for the success of the CDM
 - Proposes methodologies and ensures their usability
 - Designs project activities and ensures feasibility
 - DOE (private sector certifying companies) validate and certify on behalf of the intergovernmental process and ensure utilizing private sector know-how, and global coverage
- The potential for CDM is estimated at around \$US 14 billion, if the post 2012 value could be ensured
- Currently committed funds for the purchase of emission allowances (CER) are around \$US 1.2 – 1.7 billion
- Recent CDM host country rating according to Point Carbon: India, Chile, Brazil, China and Mexico.

Next steps in JI

- JI Supervisory Committee to be elected at COP11/MOP1
- JI rules to take into account the lessons learnt from the CDM EB, but not a “carbon copy” of them
- Two track approach for JI
- Role of the private sector is similar to that of the CDM
- Recent JI host country rating according to Point Carbon:
New Zealand, Bulgaria, Poland, Romania and Hungary

Outlook: impact of the Climate Convention and the Kyoto Protocol and next steps

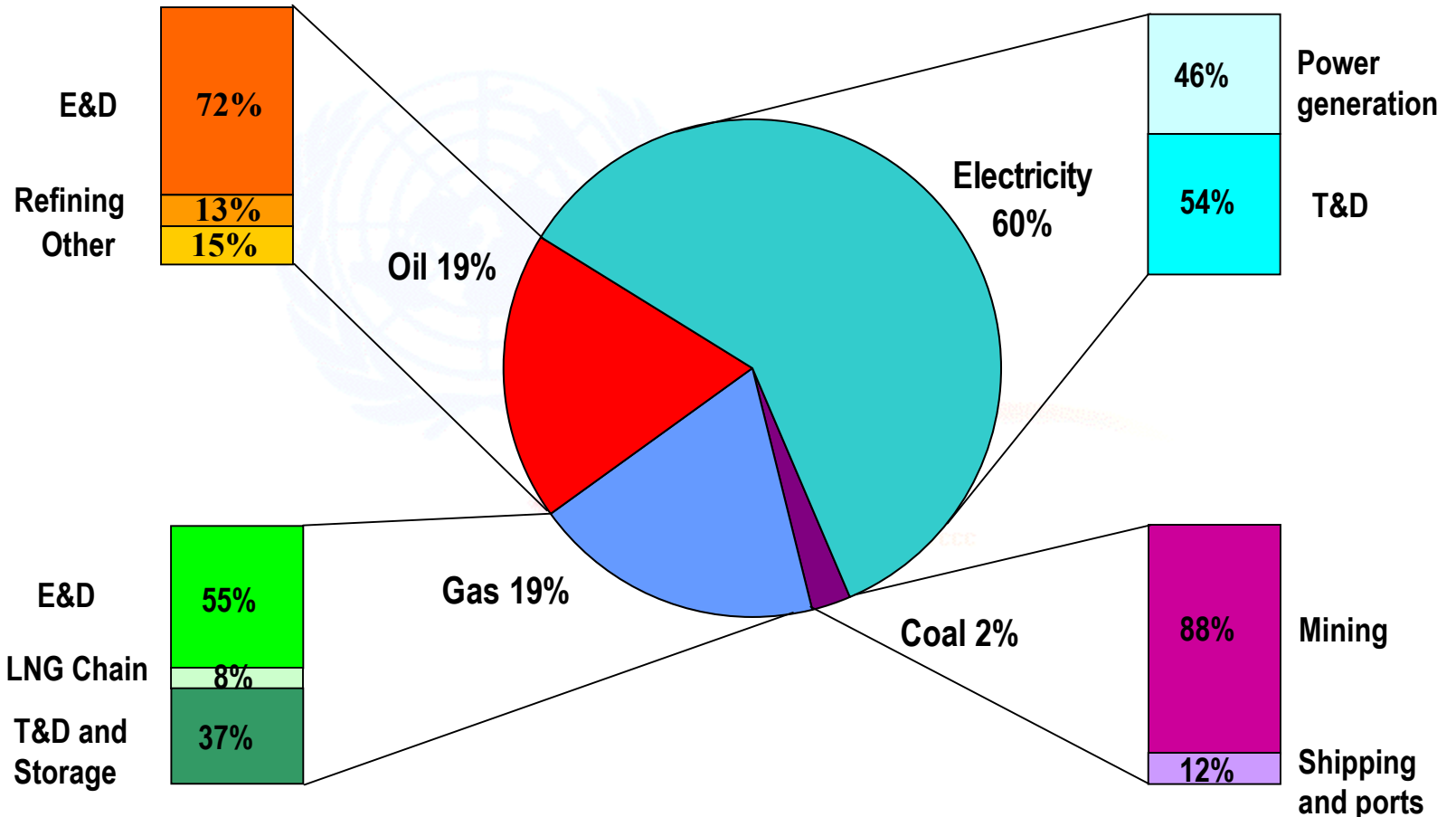


Challenges for the energy sector

- EU-ETS attach a price to carbon
 - Change the competitiveness of different energy technologies
 - The overall business environment in which private sector, including energy sector, operates
- New climate policies, including the EU-ET and their impact on the new investment in the energy sector
 - What type of investment and how much
 - Where these investment will come from and where they will be made
- Effects on energy sector: large investments, far-reaching investment decisions, long-lived infrastructure (not easy to change)
- Economic and environment stakes are enormous
- Investment decisions in the energy sector have to take into account growing constraints on carbon emissions

World Energy Investment Outlook IEA (2001-2030)

Total investment: 16 trillion dollars

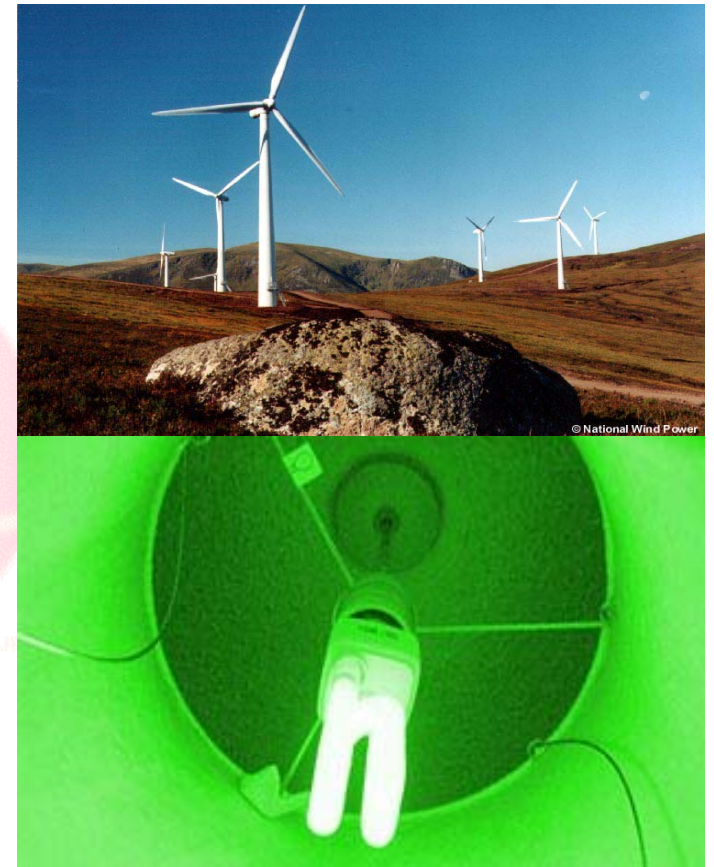


Production accounts for the majority of investment in the supply chain – except for electricity

IEA

Opportunities for the energy sector

- New market opportunities for cleaner and more efficient technologies;
- New opportunities for companies and investors
- Dealing with companies' carbon risk exposure and competitive implications
 - Assessing the risk and investing in solutions
 - A need for new tools
 - Carbon market as a source of risk management
- Energy security



Next steps: COP11 and COP/MOP1

- **COP11 and COP/MOP1: United Nations Climate Change Conference – Montreal 2005**, 28 November to 9 December in Montreal hosted by Canada
- What is the expected outcome from the COP11 and COP/MOP1:
 - To ***adopt all relevant decisions*** needed to make the Kyoto Protocol operational (already agreed by the COP at earlier sessions);
 - To ***continue to advance the implementation*** of the commitments under the Convention as a foundation for international co-operation on climate change
 - To ***find ways to continue the exchange of views on the future climate change responses***

Instead of conclusion...



Climate Convention, Kyoto Protocol and the long-term policy framework

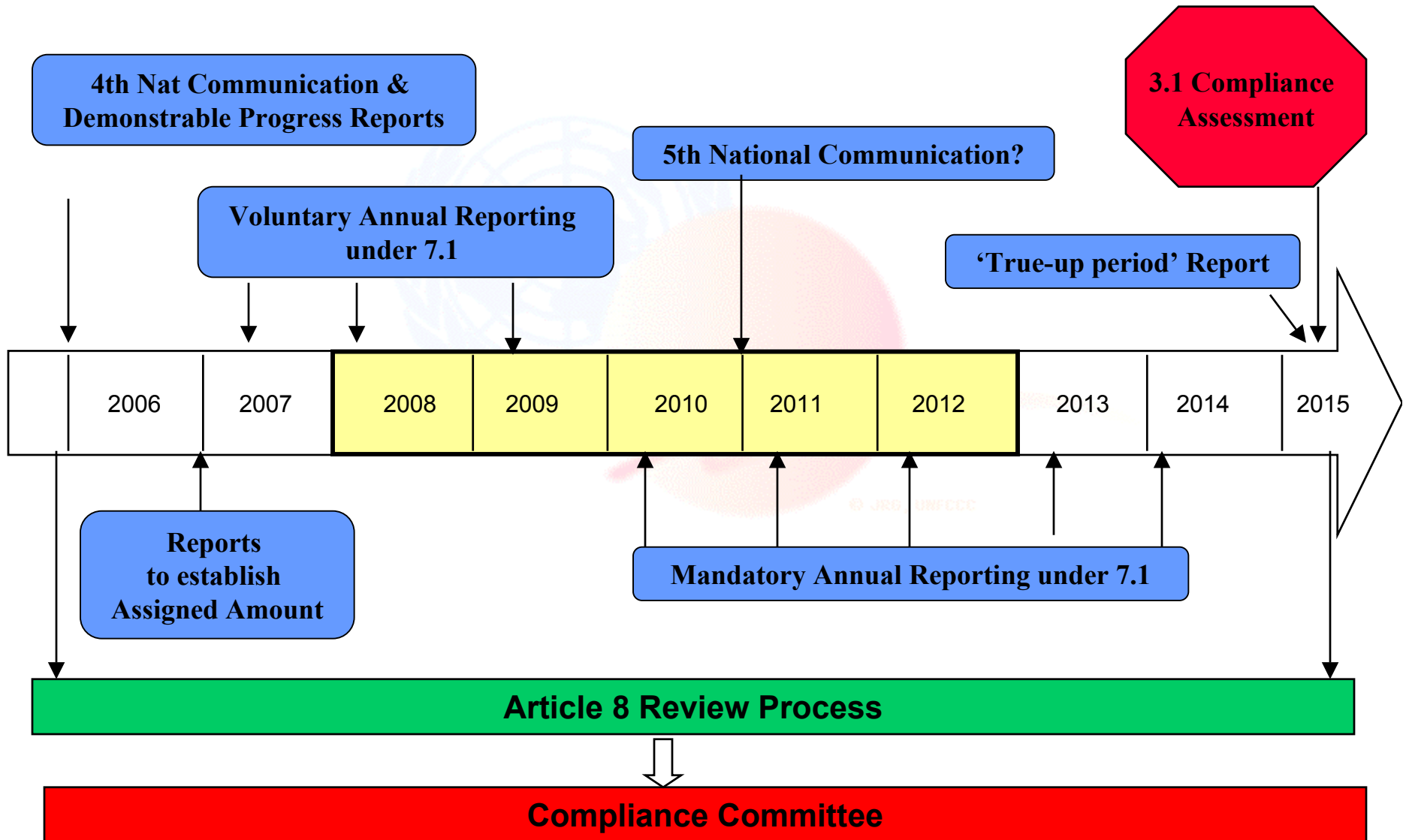
I know, for business investment, **certainty in the long-term policy framework** is very important. I am therefore using a challenge today to the business community, in the UK and beyond: to join us in putting in place a **long-term framework to meet our climate change goals in the most cost-effective way and with the lowest impact on competitiveness**. It is clear that a key requirement for this will be to work internationally. And this is why the **Kyoto Treaty** and the **EU Emission Trading Scheme** are so important.

The UK Chancellor, Gordon Brown, March 15, 2005

Additional slides



Kyoto Protocol timeline





Search:

- Executive Board (EB)
- Panels / Working Groups
- Project Activities
- Methodologies
- Designated National Authorities (DNA)
- Designated Operational Entities (DOE)
- Reference
- CDM News
- Extranets

Clean Development Mechanism (CDM)

What's new

Report of the sixteenth meeting of the CDM Executive Board (EB16)

The Executive Board held its sixteenth meeting on 21 - 22 October 2004 in Bonn, Germany. [more >>](#)

Inputs received on approved methodology AM0001

The Executive Board agreed to review the methodology AM0001 in order to address, inter alia, the potential leakage. In order to ensure transparency of the process, the Board opened a call for public inputs in relation to this methodology. [more >>](#)

Afforestation and reforestation methodologies

Open round for submissions for baseline and monitoring methodologies for afforestation and reforestation project activities [more >>](#)

Latest documents

Report of the sixteenth meeting of the Executive Board [more >>](#)

Report of the Meth 12 [more >>](#)

Information on specific project types

Small scale CDM project activities [more >>](#)

Afforestation and reforestation CDM project activities [more >>](#)

Open call for inputs / experts

Input - Projects [more >>](#)

Input - Accreditation [more >>](#)

Input - Methodologies [more >>](#)

Experts - Accreditation [more >>](#)

Experts - Methodologies [more >>](#)

Experts - Afforestation and reforestation [more >>](#)

UNFCCC CDM News Facility (If you join as a UNFCCC CDM web site user -> automatically subscribed)

Submit your application as expert

Experts - Accreditation [more >>](#)

Experts - Methodologies [more >>](#)

Experts - Afforestation and reforestation [more >>](#)

INFORMATION SOURCE | *Keep up to date*

- CDM

UNFCCC CDM **website** (*<http://unfccc.int/cdm>*)

UNFCCC CDM **News Facility** (*Requirement to register as a UNFCCC CDM web site user (join) -> automatically subscribed*)

CDM EB meetings are **live web casted (internet) and made available after the meeting,**

CDM EB meets frequently with constituencies

Q&A sessions are held in conjunction with COPs/SBs

GEF climate change mitigation and adaptation projects

- Mitigation:
 - OP5: Removal of barriers to energy efficiency and energy conservation
 - OP6: Promoting the adoption of renewable energy and removing barriers and reducing the implementation cost
 - OP7: Reducing the long-term cost of low greenhouse gas emitting technologies
 - OP11: Promoting environmentally sustainable transport
- Short-term response measures and enabling activities
- Adaptation: staged approach (planning, explore measures, facilitate measures)
- Three new funds: LDCF, SCCF, Adaptation Fund

GEF funding

- GEF climate portfolio depends the most on effective private sector participation compared to other focal areas
- On climate change, the GEF financing between 1991 and 2004 of \$US 1,840 billion leveraged more than \$US 9,517 billion co-financing for climate change projects, the highest ratio among focal areas
- Co-financing from implementing agencies, bilateral agencies, recipient countries and the private sector
- Private sector contribution: \$US 3,334 billion
- A need to strengthen co-operation with and engagement of private sector partners
- The dynamic role the private sector could play in the GEF climate-related activities is yet to be fully explored