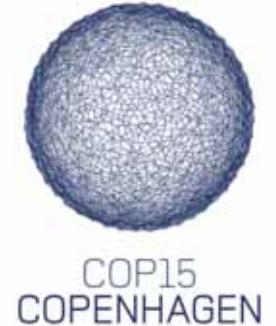
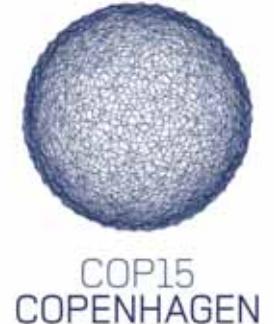

The road to Copenhagen - finance and technology

Adrian Lema, Ministry of Climate and Energy, Denmark

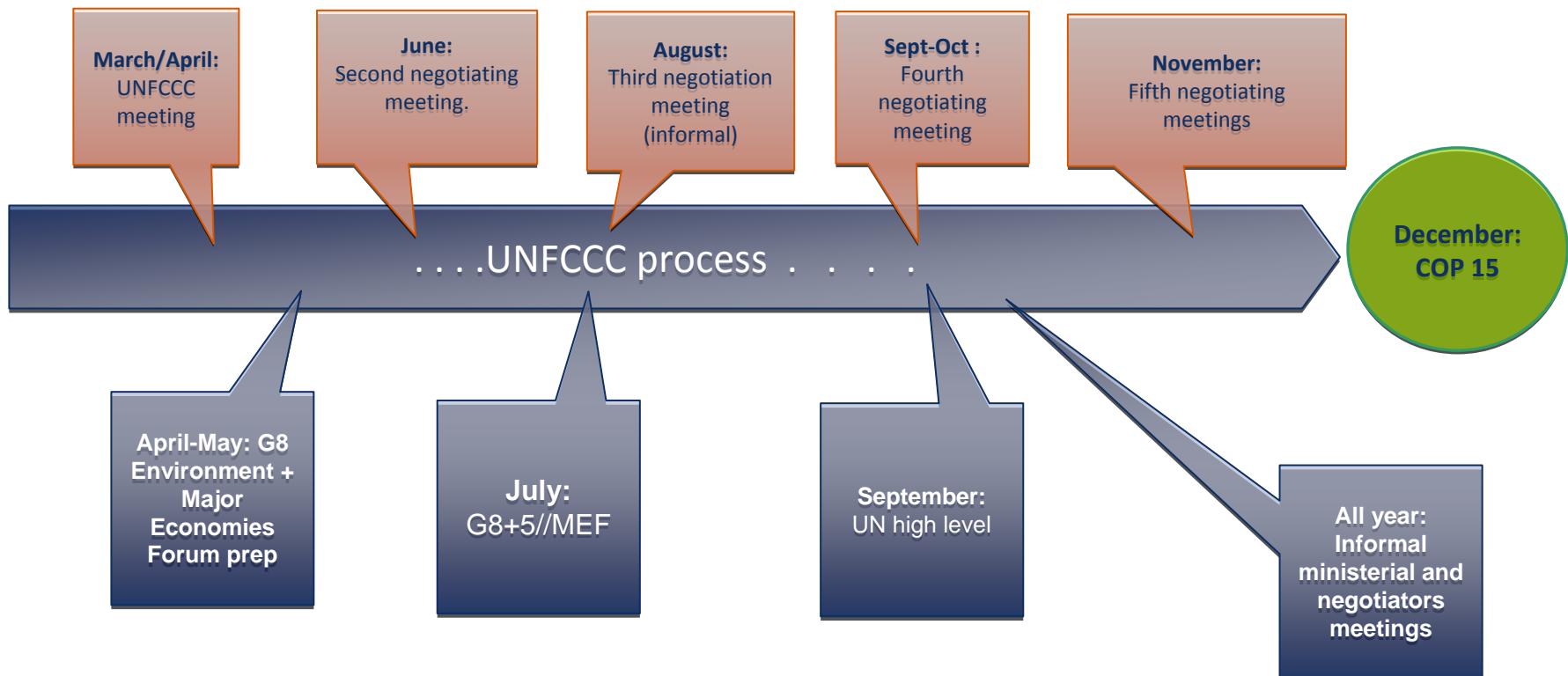
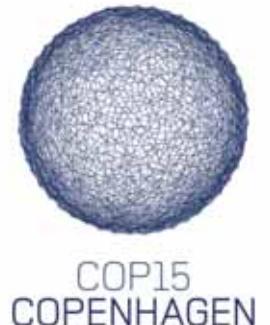


Towards COP15



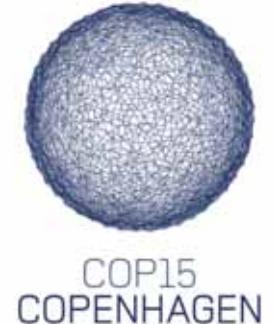
- ✓ **The science is clear:** We need to act now
- ✓ **The mandate is clear:** All countries have agreed to the Bali Action Plan, with the objective of a ambitious and fair agreement in Copenhagen
- ✓ **Increased political involvement world wide**
- ✓ **Public attention:** Climate change is not only on top of the political agenda – it is on everybody's agenda!
- ✓ **Costs of inaction:** “The costs of stabilising the climate are significant but manageable; delay would be dangerous and much more costly.” *The Stern Report*

The story of 2009



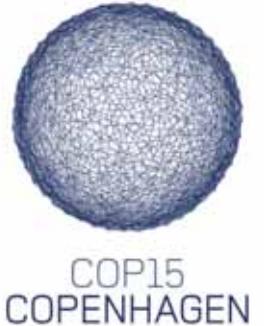
Elements in a future agreement

- Bali Action Plan



- **A shared vision** for long term cooperative action, including global goals for emissions reductions complemented by mid-term targets
- **Enhanced national and international actions to reduce emissions:**
 - Ambitious mitigation targets for developed countries (Annex 1)
 - National appropriate mitigation actions by developing countries
 - Finance, technology and capacity-building support for developing countries' actions
- **Enhanced action on technology development and transfer**
- **Enhanced action on financial resources and investment**
- **Enhanced action on adaptation to climate change**





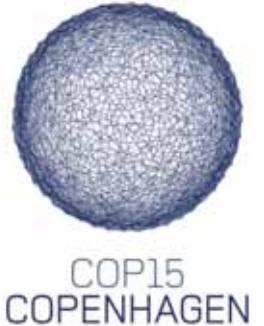
Reductions. Ambitious?

Credible leadership by industrialised countries?

- EU: 20/30 % in 2020 compared to 1990 – supported by Switzerland
- USA: 0 % in 2020 compared to 1990, 80% in 2050 compared to 1990
- Australia: 25 %. i 2020 compared to 2000 and 60 % pct. in 2050
- Norway: CO2 neutral in 2050
- Russia: Increase energy efficiency by 40 %.
- Japan: 60-80 % in 2050

Ambitious developing countries?

- China: 20% reduction of energy intensity 2006-2010. 40% reduction of energy intensity and 15% renewable energy in 2020
- South Korea: 15-30 % from BAU
- South Africa: Peak in 2020/2025, reduce from 2050
- Costa Rica: CO2 neutral in 2020
- Mexico: Top emissions now and reduce by 50 % in 2020.
- Brazil: Reduce deforestation by 70 %

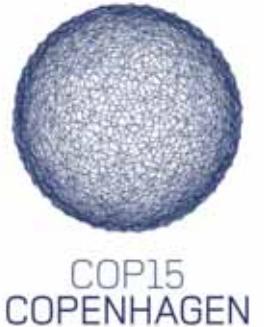


Responding to BAP: Finance

- ❑ Shall ensure incentives for developing countries to participate and implement the agreement.
- ❑ Finance is a cross-cutting issue enabling mitigation, adaptation, technology and capacity-building
- ❑ Bali Action Plan calls for 'new and additional resources' and predictable, sustainable and adequate financial resources'

Options for tools and instruments, include

- ✓ Market based mechanisms: e.g. emissions trading, CDM, JI and others
- ✓ National Policies and measures
- ✓ International funds financed by “innovative means of funding” (e.g. AAU auctioning, levy on aviation and shipping, levy on issuance of credits)
- ✓ Assessed national contributions to the international agreement



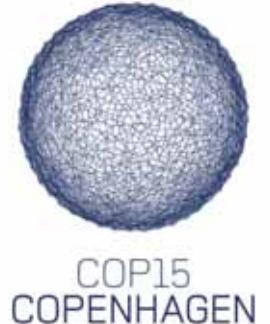
Responding to BAP: Technology

- ❑ Climate technologies in relation to mitigation and adaptation of climate change
- ❑ Countries underline the need for both development of new technologies, and transfer and diffusion of existing technologies.

Options for tools and instruments, include

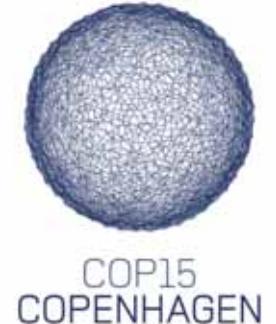
- ✓ Enhance international collaboration on research, development and demonstration
- ✓ Climate technology excellence and innovation centres
- ✓ Developing countries technology action plans – supported appropriately
- ✓ Establishment of a technology fund window supporting transfer, dissemination, research and development of technology
- ✓ Advisory boards/ information panels to share knowledge of best practices of policies and technologies.

EU on climate finance



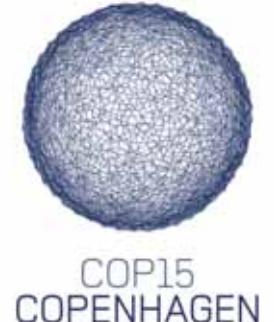
- Call for significant domestic and external sources of finance to scale of incremental investments in the order of euro 175 billion per annum in 2020.
- Sources of funding within and outside of the UNFCCC
- Support for mitigation and adaptation in (especially most vulnerable) developing countries
- No firm position – yet. Future discussions to focus on:
 - Combining different **sources**, including assessed contributions, auctioning arrangements and other options.
 - **Principles** of effectiveness, efficiency, equity, transparency, accountability, coherence, predictability and sound financial management.
 - **Architecture** to ensure strong coherence between the mechanisms under the UNFCCC and promote synergies with efforts outside the UNFCCC framework. Envisages a key role for the Global Environment Facility
- Emphasizes link to low carbon development strategies in developing countries
- Emphasizes carbon market based approaches
 - Flexible mechanisms (JI, CDM, international allowance trading)
 - Sectoral trading and sectoral crediting mechanisms

US on climate finance



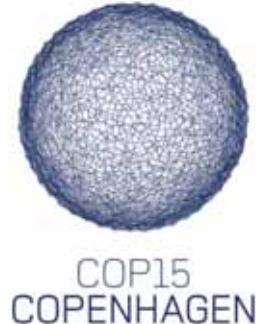
- [Policy formulating phase for UNFCCC positions]
- Finance is a key topic for the US although without strong statements from the new administration
- Indications include,
 - Focus on private sector investments and market based instruments
 - Public funding in relation to adaptation and technology R&D
 - Multiple sources/channels/mechanisms rather than a single architecture
 - Low carbon development strategies in developing countries
- Congress to consider national emissions trading schemes – including international offsets and sectoral mechanisms

EU on climate technology



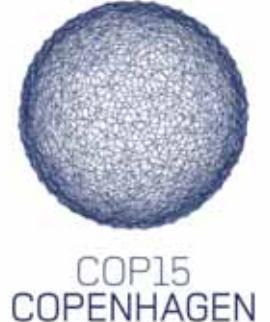
- Commit to enhance development, transfer, deployment and diffusion of low carbon technologies, including provision of finance
- Mitigation and adaptation
- Focus on private sector, but acknowledges role of public sector for both mitigation and adaptation. Public/private division of labour needs elaboration
- Support dependent on assessments of technology needs and obstacles (as part of in low carbon development plans)
- Developing country public policies and enabling environments can enhance technology diffusions and development
- Current areas of emphasis
 - Regional/national centres of technological excellence
 - Technology related capacity building
 - Technology needs assessments
 - Access to information via Technology Information Platform
 - Doubling global energy RD&D by 2012 and quadrupling in 2020 (public and private)
 - Joint RD&D efforts and recognition of Technology Oriented Agreements

US on climate technology



- In the UNFCCC, strong focus on technology information, enabling environments and enhancing private sector activity for both diffusion of technology and technology development
 - national actions, including actions to promote favourable legal and policy frameworks
 - cooperative action
 - greater public and private sector investments in technology
- Possible areas for mechanisms,
 - Innovation centres
 - R&D cooperation
 - Capacity building
- Unclear role Asia Pacific Partnerships and the Clean Technology Fund
- Major Economies Forum with a technology development focus
- In general, strong focus on technology development and R&D. Calls for partnerships on breakthrough technologies, including
 - carbon capture and storage
 - clean coal technologies
 - energy efficiency buildings
 - concentrated solar power
 - Vehicle electrification

EU (and US?) on carbon markets



Carbon markets for enhanced action on mitigation, provision of financial resources, new investments and technology development and diffusion

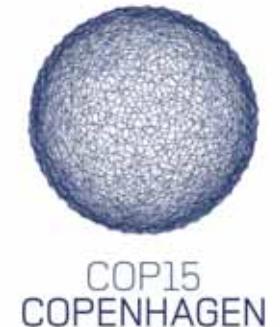
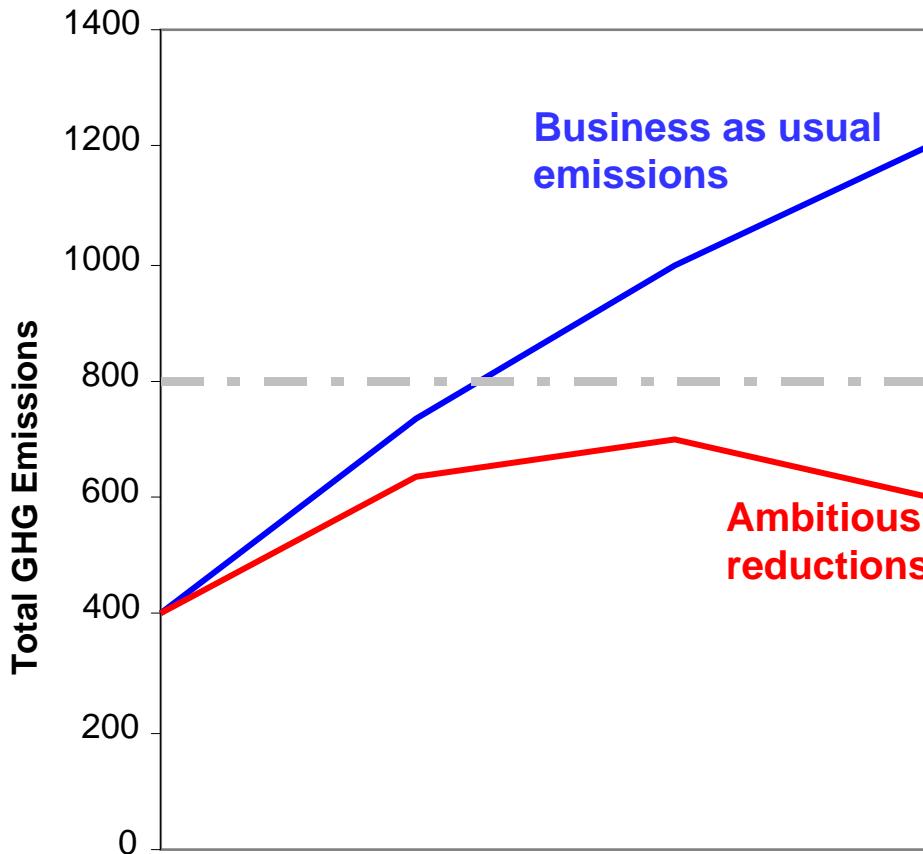
The *current* carbon market is here to stay

- Continued support for CDM and JI
- A strong focus on emissions trading
- Linking of ETS' outside of UNFCCC negotiations

New mechanisms could emerge

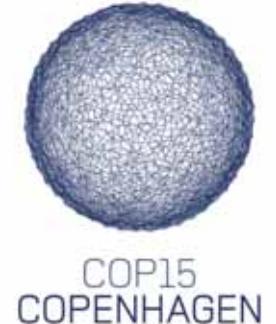
- Sectoral carbon market mechanisms
- Other mechanisms – e.g. policy-based crediting, REDD

Example: Sectoral market mechanism



Initial variables

- Compliance or no-lose?
- Up-front allowances or ex-post credits?
- Reference level equal to, or below, business as usual?



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