



# London Convention's Response

Tim Dixon

IEAGHG

UNFCCC Side-event, COP-23, 7 November 2017

# London Convention and Protocol



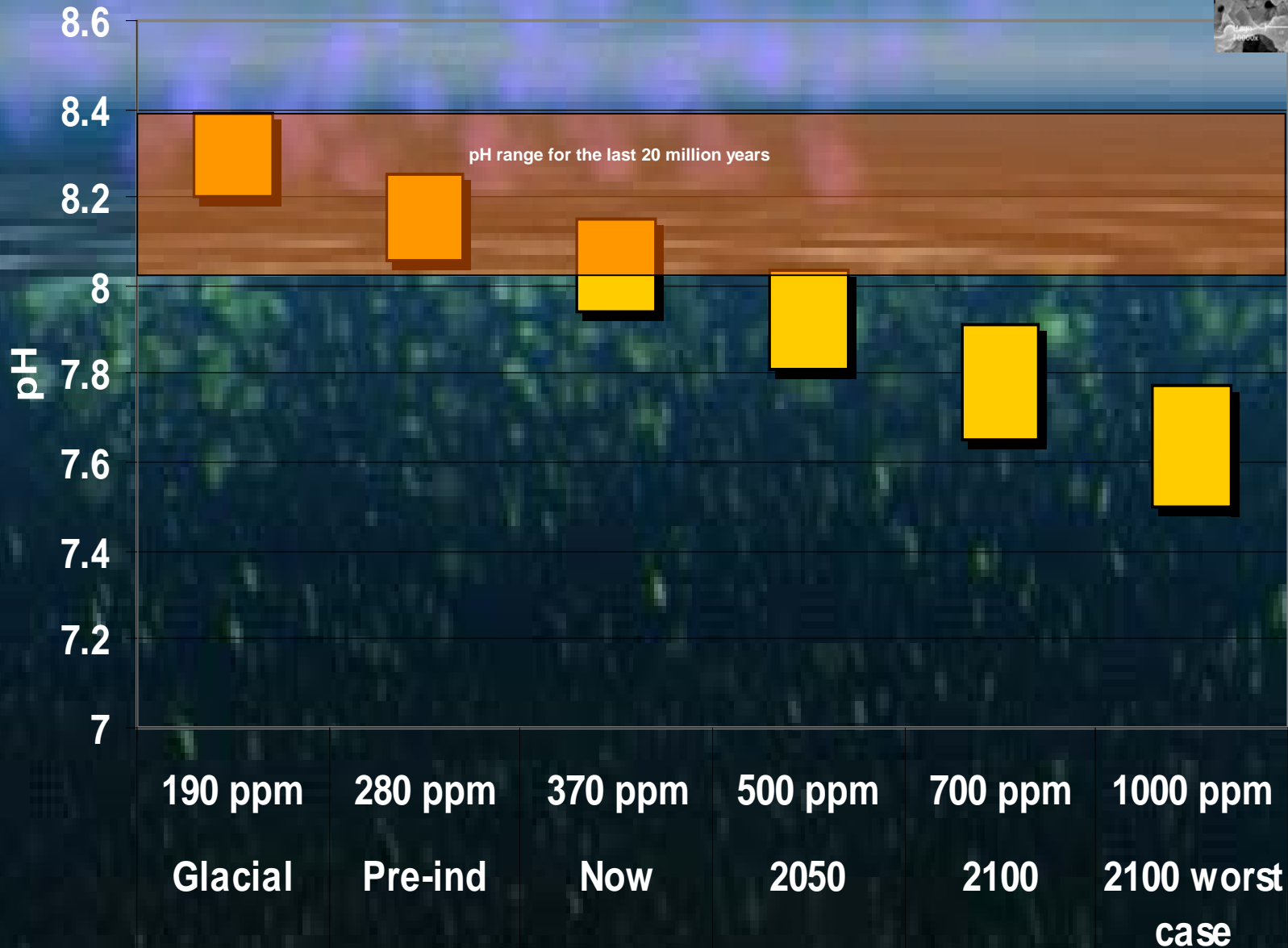
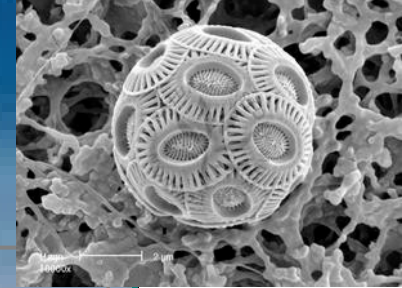
- Marine Treaty - Global agreement regulating disposal of wastes and other matter at sea
- London Convention 1972 (87 countries)
- London Protocol 1996 – ratified March 2006 (49 countries as of Oct 2017)
- Annual Meetings of the Contracted Parties and of Scientific Group.
- How it works:
- **Prohibits dumping of all wastes in marine environment, including sub-seabed**, except for those listed in Annex 1, which need to be permitted under conditions in Annex 2.
  - Annex 1: dredged material; sewage sludge; fish waste; vessels and platforms; inert, inorganic geological material; organic material of natural origin; bulky items primarily comprising unarmful materials from small islands with no access to waste disposal options
- **Therefore London Protocol prohibited most CCS project configurations**

# London Convention and Protocol and CCS



- **Legal assessment in 2005 - London Protocol did prohibit many CCS project configurations.** Recommended an amendment.
- Scientific Group set up a working group to assess CO<sub>2</sub> Geological Storage in 2005/6
- 2006 – produced a Risk Assessment Framework for CO<sub>2</sub>

# Simulated and observed marine pH ranges till 2100



PML  
2005



# London Convention and Protocol and CCS

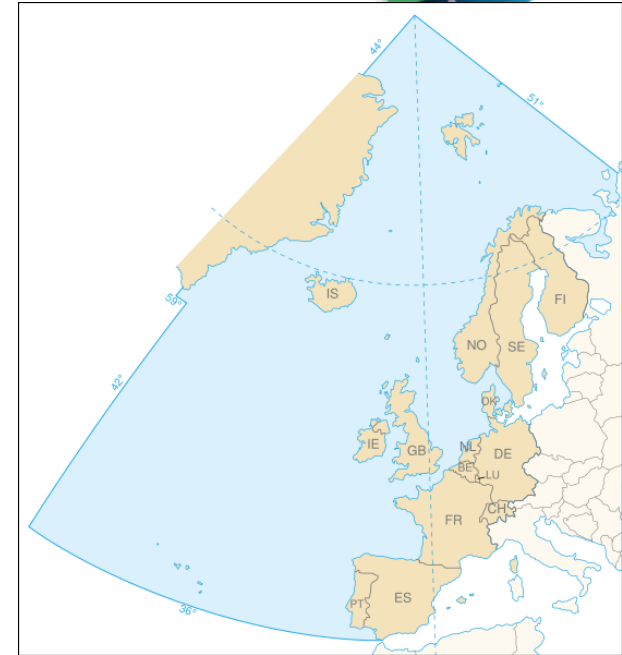


- To allow prohibited CCS configurations – **Protocol amendment proposed and adopted** at 28th Consultative Meeting (LP1), 2 Nov 2006 - came into force 10 Feb 2007 to allow disposal in geological formations .
  - Allowed to dispose of “ CO2 streams from CO2 capture processes for sequestration”
    - “Carbon dioxide streams may only be considered for dumping, if:
      - 1 *disposal is into a sub-seabed geological formation; and*
      - 2 *they consist **overwhelmingly** of carbon dioxide. They may contain incidental associated substances derived from the source material and the capture and sequestration processes used; and*
      - 3 *no wastes or other matter are added for the purpose of disposing of those wastes or other matter.”*
- LC 28/15 (6 Dec 2006) Annex6
- Annex 2. Produced ‘CO2 Specific Guidelines’ (2007) – EIA guidance for regulators in issuing permits for CO2 storage

# OSPAR



- Marine Convention for NE Atlantic, 1992
- 15 nations and EC
- Prohibited some CCS configurations
- Considered CCS and CO2 impacts
- To allow prohibited CCS configurations:
- Amendments (to Annexes II and III) for CO2 storage adopted June 2007
- Needed ratification by 7 Parties (8 ratified as of Oct 2011)
- Amendments came into force July 2011



- OSPAR Decision – requirement to use Guidelines when permitting, including risk assessment and management process
- OSPAR Guidelines for Risk Assessment and Management of Storage of CO2 in Geological Formations – includes the Framework for Risk Assessment and Management (FRAM)
- OSPAR Decision to prohibit ocean storage

# London and OSPAR Guidelines for Risk Assessment and Management



In order to receive a permit must demonstrate:

- Scope – scenarios, boundaries
- Site selection and characterisation – physical, geological, chemical, biological – need measurement
- Exposure assessment – characterisation CO<sub>2</sub> stream, leakage pathways
- Effects assessment – sensitivity of species, communities, habitats, other users
- Risk characterisation – integrates exposure and effects - environmental impact, likelihood
- Risk management – emphasis on monitoring



# London Convention's Response

Tim Dixon

IEAGHG

UNFCCC Side-event, COP-23, 7 November 2017