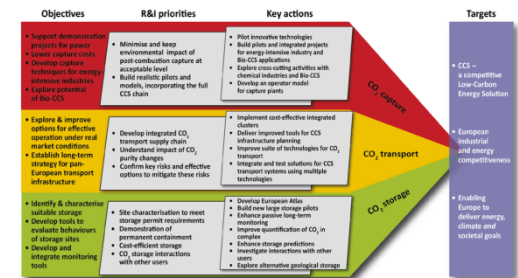


# EERA Joint Programme on CCS



## Introduction to EERA and workshop

# Agenda

Welcome

Ton Wildenborg, CO2GeoNet - TNO

**8:35 Objectives** Jonathan Pearce, EERA - BGS

**Session 1: Injection strategies and injectivity**

**8:45 Assessment of storage injection** Gillian Pickup, HWU

**9:05 Injection strategies design and implementation in fractured carbonates**

Carlos de Dios, Ciuden

**9:25 Coffee break**

**Session 2: Storage capacity and characterisation**

**10:00 Developing a national portfolio of CO2 storage in the UK – The UK CO2Stored database and site portfolio** Michelle Bentham, BGS

**10:20 France Nord case study** Anne-Gaelle Bader, BRGM

**10:40 Providing assurance of storage capacity in open connected aquifers for multiple users: A case study from the Moray Firth - SiteChar & Multistore** Max Akhurst, BGS

**11:00 The SiteChar site appraisal methodology** Filip Neele, TNO

**11:20 Discussion time**

**11:50 Lunch break**

# Agenda

## **Session 3: BREAKOUT DISCUSSION**

**Identifying gaps in research and next steps to ensure storage capacity** Facilitators and rapporteurs: Jonathan Pearce, Ceri Vincent, Ton Wildenborg, Derek Taylor, Federica Donda, Max Akhurst

**13:00 Information on breakout sessions 13:10 Parallel breakout sessions**

***14:10 Coffee break (preparation for presentations)***

## **Session 4: PLENARY**

### **Summary & discussion**

Jonathan Pearce, EERA - BGS & Ton Wildenborg, CO2GeoNet - TNO

**14:40 Presentations from breakout groups and discussion**

**15:40 Follow-up and closure** Jonathan Pearce, EERA - BGS

**15:50 Adjourn** Welcome

# What is EERA?

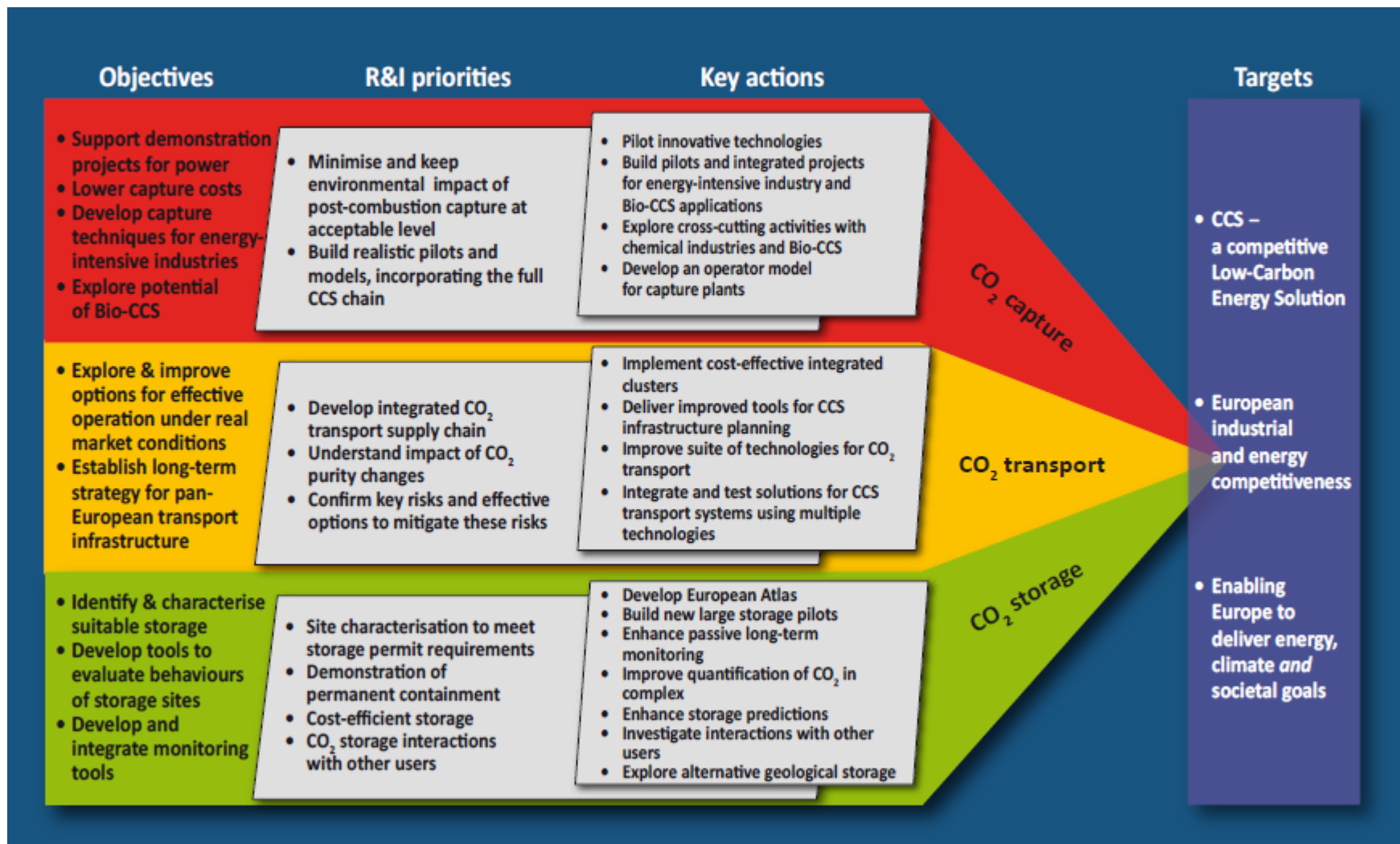
- Recommendation from the SET Plan Steering Group
  - Major research organisations should align their research through joint programming
- 14 Joint programmes including Geothermal, Shale Gas and CCS
- Now formed a legal entity: EERA AISBL
- CCS Joint Program
  - 30 participants and 11 associates
  - Management board led by Nils Rokke and Marie Bysveen (Sintef)
  - 3 subprogrammes
    - capture (Sven van der Gijp, TNO)
    - Transport (Hannah Chalmers/ Julia Race)
    - storage (Jonathan Pearce).

# Aims of the CCS Joint Program

- Ensure CCS is fully represented in both H2020 and Set Plan's Integrated Roadmap as a critical technology to deliver EU energy and climate goals
- Maximise joint CCS R&I programming between industry, Member States and the EU – at national and EU level – as the key to accelerating deployment post 2020. Priorities include:
  - Large CO<sub>2</sub> capture pilots to increase energy efficiency and drive down costs
  - Planning and development of large-scale CO<sub>2</sub> transport infrastructure
  - A range of large CO<sub>2</sub> storage pilots to support CCS demonstration projects and build public confidence in CO<sub>2</sub> storage.
  - Ensure CCS is fully integrated into EU 2030 Energy and Climate Policy Framework in order to provide a long-term price signal for investors.

# Activities of the CCS Joint Program to achieve our objectives

- Write draft SET Plan Integrated Roadmap for R&I:
  - Should define H2020 etc
- Review H2020 draft work programs
- Discuss research priorities with EC and MS
- Provide EERA endorsement to H2020 proposals
- Identify research priorities through workshops
- Seek funding opportunities for participants







# Objectives of this workshop

- **What is needed for assuring CO<sub>2</sub> storage capacity?**
- Objective: Identify research priorities for providing confidence in stakeholders that storage sites can be identified, characterised and will provide the storage capacity required.
- Two levels might be considered:
  - Facilitating national requirements for storage
  - Assuring storage in specific sites
  - Also consider interactions between these two aspects
- Outputs: Research priorities and opportunities
- Joint report: Inform EERA's contributions to EC and MS priorities for research funding.
- This morning: Invited talks to set the scene
- This afternoon: Discussions on priorities

# Breakouts

- Two groups, both considering same questions:
- **Identifying gaps in research and next steps to assure storage capacity**
- Step 1: What are the challenges in providing storage assurance at the moment?

For specific regions of Europe?

For individual sites?

Brainstorm 30 minutes

- Step 2: What are research priorities from above

What are the opportunities? Which demos, sites, regions? What funding opportunities?

Assume demonstrations and pilots proceed as planned

Chairs will facilitate the discussion, rapporteurs will capture this discussion

During break, rapporteurs and chairs finalise presentation

After break, report back and discussion in plenary



# Next steps

- Workshop report on EERA website
- Communicate results to stakeholders (DG Energy and DG Research, MS, ZEP, SET Plan Steering Group)
- Identify opportunities for addressing priorities