

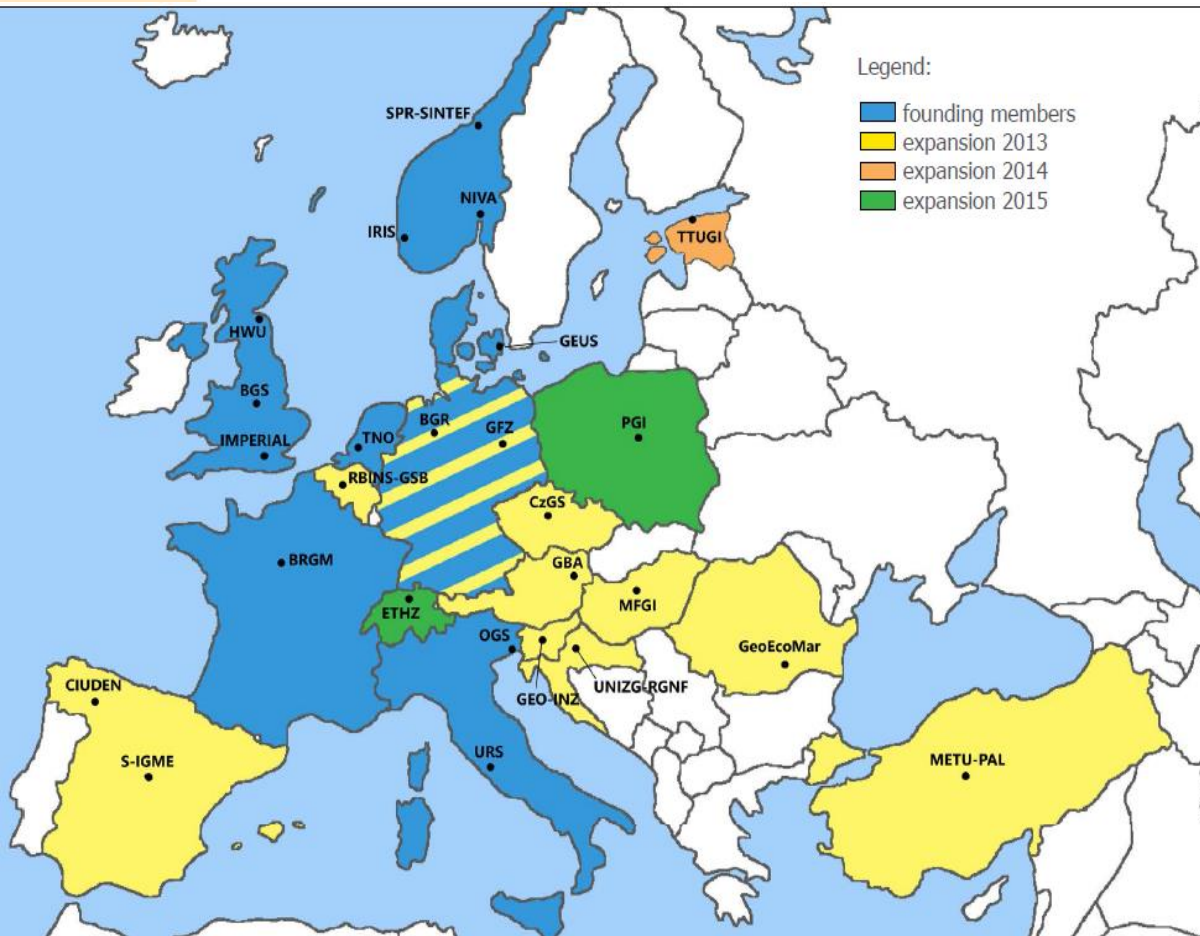


Outcome of COP 21 – Key messages for CCS and future role of CO₂GeoNet

Isabelle Czernichowski-Lauriol
CO₂GeoNet President Emeritus
BRGM, French Geological Survey



CO₂GeoNet, the European Network of Excellence on CO₂ geological storage



- ✓ Created as a EU **FP6 Network of Excellence** in 2004
- ✓ Became an **Association** under French law in 2008
- ✓ Founding Members: **13** research institutes over **7** countries
- ✓ Expansion thanks to **CGS Europe** FP7 project (2010-2013)
CSLF Global Achievement Award in 2015 in recognition of its advancement of CCS technologies

- ✓ Now comprises **26** research institutes from **19** countries
- ✓ New members welcome!



CO₂GeoNet's Activities and Role

Activities:

1. Joint research
2. Scientific advice
3. Training
4. Information and communication

Cooperation with international bodies:



*As a **credible, independent, multidisciplinary, pan-European scientific body**,
CO₂GeoNet has the key role of building trust on
CO₂ geological storage and supporting wide-
scale CCS implementation*



CO₂GeoNet and COPs

→ COP15 in Copenhagen in December 2009

- Booth hosted by Bellona (CO₂GeoNet association was an invited guest, with the brochure used as a major communication tool)

CO₂GeoNet is an Observer organisation (Research NGO) of UNFCCC since 2013

→ COP19 in Warsaw in December 2013

- CO₂GeoNet's activities and views expressed at 3 side-events:
 1. IETA (International Emissions Trading Association) - Benefit sharing and options for CO₂ storage projects
 2. ZERO – Environmental NGOs' Network on CCS
 3. IETA - Value of current generation of CCS demonstration projects and future

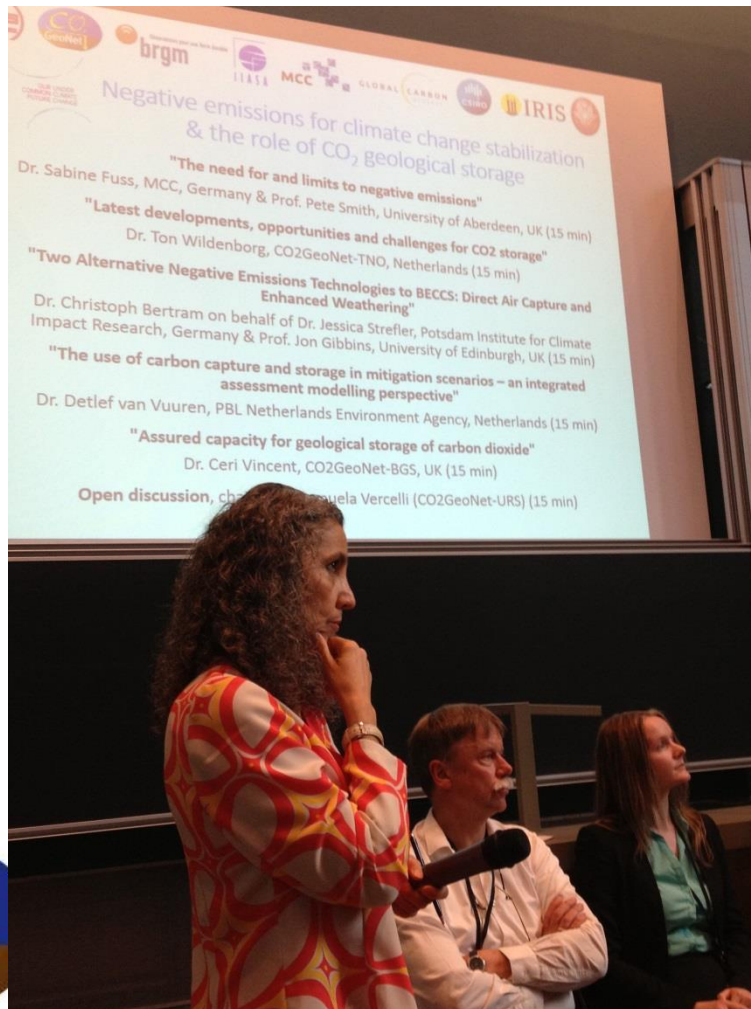
→ COP21 in Paris Le Bourget in December 2015

- CO₂GeoNet (co)organised **side-events and booths** in both the **UNFCCC Negotiation zone** (accessible with accreditation) and the **Climate Generations Areas** (open to the public)

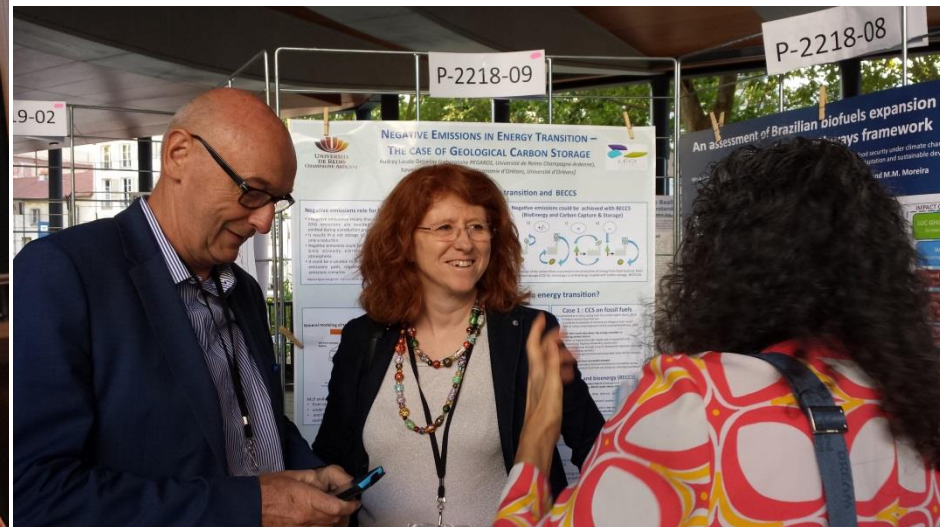
All the information presented at COP21 is available at: <http://cop21.co2geonet.com/>



CO₂GeoNet and the pre-COP21 scientific conference *'Our common future under climate change'* Paris, France, 7-10 July 2015



➔ CO₂GeoNet co-organiser of **Parallel session: *Negative emissions for climate change stabilization & the role of CO₂ geological storage*** (Paris, 9th July)
(with Mercator Research Institute on Global Commons and Climate Change)



CO₂GeoNet and the pre-COP21 scientific conference *‘Our common future under climate change’*

Paris, France, 7-10 July 2015

→ CO₂GeoNet also co-organiser of **Side events**:

→ **Italy**: *A dialogue for developing synergies for sustainable energy production: how can biomass, hydrogen and CCS work together to mitigate climate change?* (20th June)

→ **UK**: *What geological CO₂ storage can bring to mitigating climate change - UK research perspective* (1st July)

→ **France**: *Sharing visions of a low carbon society* (5th July)

→ **Italy**: *The potential contribution of CO₂ geological storage to climate change mitigation, both globally and in Italy* (13th July)



CO₂GeoNet and the pre-COP21 scientific conference *'Our common future under climate change'* Paris, 7-10 July 2015

→ Joint **Press statement** on July 10th



Press Statement

Paris, 10 July 2015

Scientists cite CCS as a viable and flexible climate change mitigation technology

At the international Scientific Conference “Our Common Future under Climate Change” in Paris from 7 to 10 July scientists presented Carbon dioxide Capture and Storage (CCS) as a viable technology to reduce emissions resulting from fossil fuel combustion and industrial processes and even as an opportunity for negative emissions through integration with renewable energy from biomass. This makes CCS a very flexible technology to mitigate climate change.



CO₂GeoNet and COP21 (1)

Restricted 'negotiations' zone:

- ➔ CO₂GeoNet was a co-organiser with Univ. of Texas at Austin/IEAGHG/CCSA of the UNFCCC side-event titled '**Carbon Capture and Storage (CCS): Achievements and opportunities for developing country involvement**' (1st December)
 - ➔ CO₂GeoNet presented on '**CCS Pilot Projects in the EU; achievements on CO₂ storage and opportunities for developing country involvement**'
- ➔ CO₂GeoNet co-organised and helped staff a UNFCCC booth which provided **Information on CCS as a climate change mitigation technology**. The booth received many visitors, particularly from developing countries



Ton Wildenborg, CO₂GeoNet President, speaking at the CCS side event



CCS Booth in the restricted 'blue zone'

CO₂GeoNet and COP21 (2)

Restricted 'negotiations' zone:

- CO₂GeoNet was lead organiser for a side event in the EU Pavilion titled '**The role of CCS (Carbon dioxide Capture and Storage) in mitigating climate change**'. The event was well attended by official negotiation delegate members (10th December)
- CO₂GeoNet presented on '**North Sea Basin CO₂ storage opportunities**' at a Bellona side event (8th December)



Philippe Benoit (IEA) presenting at the EU Pavilion side event



Ceri Vincent, CO₂GeoNet ExCo Chair presenting at the Bellona side event

CO₂GeoNet and COP21 (3)

Open access 'Climate Generations Areas':

- ➔ CO₂GeoNet was lead organiser of a side event in French "**CO₂ Capture and Storage: a proven and safe technology vital for completing the climate change mitigation portfolio**" (2nd December)
 - CO₂GeoNet presented on '**What does CO₂ capture and storage really mean? How to make sure that CO₂ will be stored safely deep underground**'



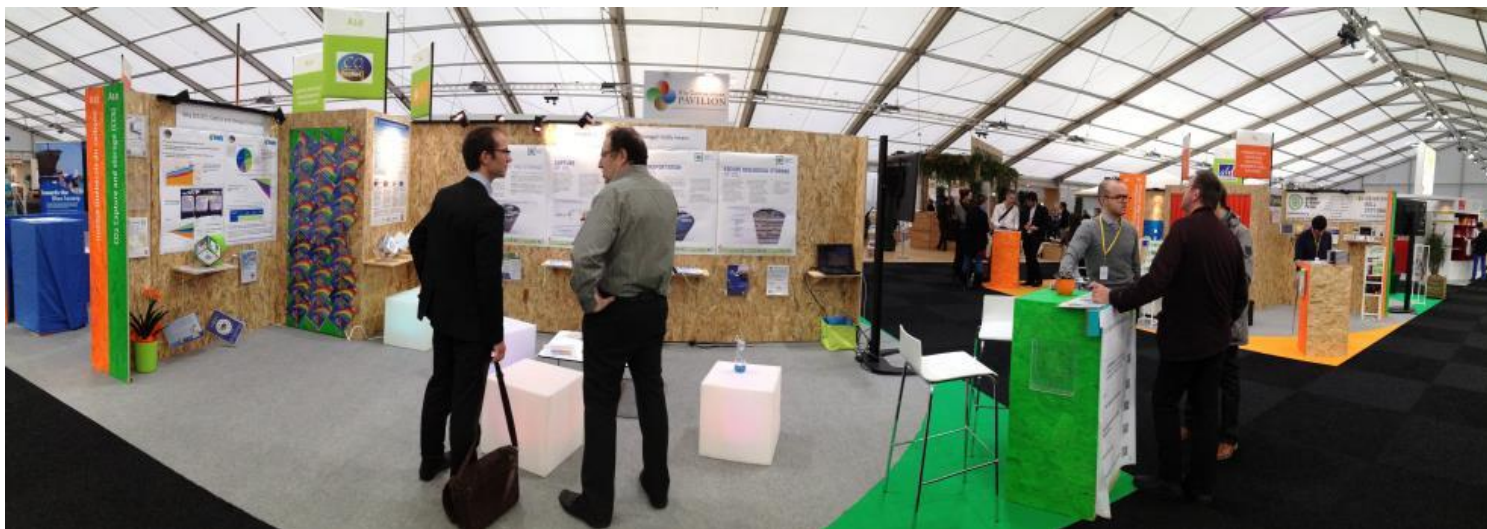
Photo: The CCS side-event in the Open access zone in Paris – Le Bourget

Event co-organised with IEA, GCCSI, French Club CO₂

CO₂GeoNet and COP21 (4)

Open access 'Climate Generations Areas':

- CO₂GeoNet was lead organiser of the **CCS booth**. The booth provided **'Information on CCS as a climate change mitigation technology'**
- Hands-on experiments were presented to the visitors to better explain what happens with CO₂ in the reservoir and how CO₂ is safely stored deep underground
 - The booth was visited by governmental representatives, NGOs, general public, students, oil companies, academics and many other interested parties
 - Booth co-organised with GCCSI, IEAGHG, French Club CO₂, University of Texas



Key messages for CCS

- ➔ CCS is a key technology to mitigate climate change, now ready to be progressively deployed
 - ➔ Can reduce emissions resulting from fossil fuel combustion and industrial processes
 - ➔ Offer an opportunity for negative emissions e.g. through integration with renewable energy from biomass (BECCS)
- ➔ To accelerate CCS deployment:
 - ➔ Multiply real-field experiences (pilots, demonstration projects)
 - ➔ Establish strategic plans for CO₂ storage and transport infrastructure
 - ➔ Develop a socio-economic incentive framework
 - ➔ Continue upstream research for 2nd and 3rd generation CCS technologies
- ➔ CCS is not a way to continue using fossil fuels. Reverse wording is right: No more fossil energy without CCS!
 - ➔ Returning the carbon back into the underground where it was extracted is a virtuous loop for protecting the environment and the climate



The Paris climate agreement

- Ambition to limit global warming to **1.5° C** (Article 2)
- ...achieve a balance between anthropogenic emissions by sources and **removals by sinks** of greenhouse gases in the second half of this century (Article 4)
- Communicate **nationally determined contributions** (NDC) **every five years**. Recognize and implement mitigation actions with respect to **anthropogenic emissions and removals** (Article 4)
- **Strengthen cooperative action on technology development and transfer** for the implementation of mitigation and adaptation actions (Article 10)
- **Capacity-building** should enhance the capacity and ability of **developing countries** to implement adaptation and mitigation actions, and should facilitate **technology** development, dissemination and deployment (Article 11)

All this calls for stronger efforts in CCS technology development, transfer and capacity-building



What's next?

- ➔ Nationally Determined Contributions (NDCs)
 - only 11 include CCS out of 187 INDCS (focus on early actions up to 2025-2030) – some surprising omissions or inclusions
 - Revision within 5 years – more consideration of CCS?
- ➔ New IPCC report on 1.5° C ambition by 2018
 - Important role of CCS should be further emphasised
 - CO₂GeoNet to write a submission to IPCC?
- ➔ “Mission Innovation” – CCS included? Role for CO₂GeoNet?
 - a global initiative announced end Nov. in Paris by US President Obama and French President Hollande
 - 20 countries are committing to double their clean energy R&D investment over five years
- ➔ EU SET Plan : CCS is one of the 10 key actions
 - CO₂GeoNet answered on 25 April 2016 the EC consultation on the proposed targets by 2020 and 2030
- ➔ COP22 – which actions on CCS to prepare?

