



**Possible workshops organized by CSLF  
Technical Group**

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# Some suggestions for workshops in 2022 (maximum two have to be prioritized)

## New themes to CSLF (mentioned in strategic planning document along with others on list)

1. Carbon Dioxide Removal (CDR)
  - Needed in practically all IAM models to achieve <math><1.5^{\circ}\text{C}</math>
  - Significant attention at COP26
  - Still uncertainties and debates
  - Focus on BECCS and DACSS
2. Regional workshop – CCUS in Central and Eastern Europe incl. Russia (CEE)
  - Five CSLF members (Poland, the Czech Republic, Serbia, Romania and Russia)
  - Activities picking up: Poland has an EU PCI, Romania and Turkey members of ACT

## CSLF task forces and/or former workshops

1. Transport and Storage infrastructure projects
  - Much is happening (Europe, USA, China, OGCI)
  - Opportunity to leverage expertise/projects and sharing lessons learned
  - Formally an ongoing task force with virtual workshop October 2020
2. Low-carbon hydrogen w/emphasis on fossil feedstock + CCUS
  - Significant debate on LCA (databases) and technologies
  - Update from Chatou November 2019
3. Industrial CCUS
  - Important as  $\text{CO}_2$  sources to transport and storage infrastructure - many new industrial hubs suggested
  - Update from Chatou November 2019

## Other earlier or considered task forces without report or workshop

1. Non-EHR utilization (phase 2)
  - Strong international interest
  - Briefly discussed at Nov. 2019 meeting in Chatou as alternative to Task Force report
  - Formally an ongoing task force
2. Mineralization (carbonation of mine tailings and industrial wastes)
  - As emission reduction measure, excluding what may be covered under CDR
  - Once suggested as task force, IEAGHG report soon

# Workshop on Carbon Dioxide Removal (CDR)



- Will have to be organized in close cooperation with the MI Mission Implementation Plan on CDR. Other potential partners could be IEAGHG and CEM CCUS.
- Contents could include
  - Focus on technical concepts involving CCUS (+enhanced weathering?)
  - Status of LCA and TEA
  - CDR in climate scenarios and Integrated Assessment Models (IAM)
  - CDR and sustainable development goals and planetary boundaries
  - Needed activities on short and medium term
- 3-4 presentations by invited speakers
- Panel debates and Q&A sessions
- Breakout groups?

# Workshop on Carbon Dioxide Removal (CDR)



## Carbon Dioxide Removal (CDR) and LCA – open issues

- **Transparency.** Life cycle inventories often not included. Is essential for harmonization
- **System boundaries. Side effects** should be included, also for the end-of-life phase, which are often missing.
- **Temporal aspects** must be included, particularly for biomass related CDRs. Usually absent.
- **Environmental impact categories:** need a comprehensive approach, often missing
- **Proper accounting for offsets and negative emissions.** Avoided emissions often accounted as negative emissions. Related to choice of reference system
- **Sustainability.** Environment and climate only two of several sustainability pillars
- **Ethics.** A danger that overestimation of potential leads to postponement of other mitigation actions
- **General guidelines and standardization**
  - Could increase comparability
  - Could build on existing ISO standards on LCA

# Regional workshop – CCUS in Central and Eastern Europe incl. Russia (CEE)



- Possible content
  - Status and potential for CCUS in CEE
  - Examples of experiences in other countries
  - Further facilitation and deployment of CCUS in CEE
    - Technical aspects, opportunities as well as barriers
    - Political, legal and financial barriers.
- 3-4 presentations by invited speakers
- Panel debates and Q&A sessions
- Breakout groups?

# Regional workshop – CCUS in Central and Eastern Europe incl. Russia (CEE)



- Potential cooperation partners
  - CSLF's allied organizations
  - EC
  - ACT
  - CEM CCUS
  - Active projects, mainly
    - CCS4CEE (<https://ccs4cee.eu>; Bellona)
    - ENeRG network (<https://energnet.eu/about-energnet/>)
  - But also including
    - ccusnetwork (<https://www.ccusnetwork.eu/events/north-south-east-west-building-political-support-ccs-and-ccu-europe>)
    - Strategyccus (<https://www.strategyccus.eu/about-project/project-objectives;>)
- Invited countries
  - Five CSLF members + ACT member Turkey, the Baltic States
  - Members of CC4CEE and ENeRG
  - Number must be limited to maximize benefits to participants