



CCS and Sustainable Development Goals

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UNFCCC Side Event

COP-24, Katowice

Background



- Issue considered by IEAGHG and South Africa in 2009, driven by CCS in CDM issue – resolved by UNFCCC decision on CCS in CDM in 2011 – host country's prerogative to decide.
- UN produced 17 “Sustainable Development Goals” (2015) to replace 8 Millennium Development Goals (2000)
- Paris Agreement (2015) - mitigation actions in context of sustainable development
- IPCC 1.5 report – chapter 5 on impacts (synergies and trade-offs) of mitigation pathways and options with SDGs
- Lack of information on CCS and sustainable development, and SDGs specifically

 **SUSTAINABLE DEVELOPMENT GOALS**

1 NO POVERTY



2 ZERO HUNGER



3 GOOD HEALTH AND WELL-BEING



4 QUALITY EDUCATION



5 GENDER EQUALITY



6 CLEAN WATER AND SANITATION



7 AFFORDABLE AND CLEAN ENERGY



8 DECENT WORK AND ECONOMIC GROWTH



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



10 REDUCED INEQUALITIES



11 SUSTAINABLE CITIES AND COMMUNITIES



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



13 CLIMATE ACTION



14 LIFE BELOW WATER



15 LIFE ON LAND



16 PEACE, JUSTICE AND STRONG INSTITUTIONS



17 PARTNERSHIPS FOR THE GOALS




SUSTAINABLE DEVELOPMENT GOALS



CCS and 17 SDGs in IPCC 1.5

CCS on coal:

- Health (3) **-ve**
- Water (6) **ok**
- Affordable clean energy (7) **+ve**
- Work (8) **-ve**
- Industry innovation (9) **+ve**
- 11 SDGs **No literature**

CCS in industry:

- Health **-ve**
- Partnerships (17) **+ve**
- Water **ok**
- Responsible production (12) **+ve**
- Affordable clean energy (7) **ok**
- Work (8) **+ve**
- Industry innovation (9) **+ve**
- 9 SDGs **No literature**

Bio-CCS

- Poverty (1) **ok**
- Hunger (2) **ok**
- Health (3) **-ve**
- Water (6) **ok**
- Life on land (15) **ok**
- Affordable clean energy (7) **+ve**
- Work (8) **+ve**
- Industry innovation (9) **+ve**
- 8 SDGs **No literature**

Note 1: 23 mitigation options assessed, 3 relate to CCS

Note 2 : **OK** means +ve and -ve exist

Note 3 : SDG Climate action (13) not assessed

Existing literature



Includes:

- IEAGHG report 2010/05 "Evaluation and Analysis of Water Usage of Power Plants with CO₂ Capture" (March 2011)
- Magneschi et al (GCCSI) "The Impact of CO₂ Capture on Water Requirements of Power Plants", GHGT-13, Energy Procedia 114 (2017) 6333-6347 .
- Jones et al "Developments since 2005 in understanding potential environmental impacts of CO₂ leakage from geological storage". International Journal of Greenhouse Gas Control 40 (2015) 350-377
- Mapping the Oil and Gas Industry to the SDGs, IPIECA (2017)
- Sustainable Development and CCS, GCCSI 2-page leaflet (2014)
- Shand CCS Feasibility Study (and Summary for Decision Makers), International CCS Knowledge Centre (November 2018)

Scope of IEAGHG work



- Aim: Assess existing information on impacts of CCS on the 17 Sustainable Development Goals (SDG) and propose gap closure
- Contractor: TNO
- Assess information with relation to assessment criteria used by IPCC (Interaction (+ve, -ve), Nilsson Score, Evidence, Agreement, Confidence)
- Identify specific gaps in information
- Prioritises gaps and proposes work to address gaps
- Report in May 2019



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