



NORWEGIAN CCS RESEARCH CENTRE

## Legal bottlenecks in Bio-CCS regulation

IEA Bioenergy Task 41 workshop on Bio-CCUS

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# Introduction

- Difference between bio-CCS and "traditional" CCS: the source of CO<sub>2</sub> emissions and the extent of the capture process.
- Research focuses on central regulatory challenges for bio-CCS:
  - Defining negative emissions and accounting for them;
  - Cost reduction and deployment;
  - Managing the impact on biodiversity and more broadly the food-water-energy-climate nexus.

# Legal bottlenecks in Bio-CCS regulation

1. Target setting
2. Enabling the use of bio-CCS technologies
3. Bringing legal consistency and certainty



# 1. Target setting

- Putting bio-CCS on the agenda.
- Making bio-CCS / NETs part of the target compliance strategy.

# Negative emissions: legal & policy targets

- **Emissions reduction** to remain central legal requirement. Needs to be **binding** to be effective.
- Need to adopt **ambitious emission-reduction targets**, which may include negative emissions targets.

More than 100 percent?

Ex: Sweden, New Climate Act June 2017 aims at net zero emissions of GHG by 2045, and thereafter negative emissions.

- Beyond law: **putting negative emissions on the policy agenda;**

# The place of NETs in target



- **New factor influencing the discussion on target compliance?**

Following recent climate litigation cases.

**Duty of care** and **duty to act**: duty of government bodies to adopt implementation measures, in line with targets and scientific knowledge.

- **Choice of instruments and technologies:**

UNFCCC/Paris Agreement: The choice of instruments and technologies for implementing mitigation policies (adaptation) is **left to the discretion of the state Parties**. There are few guidelines in the texts. Ex: removal of cost-effectiveness criterion in PA.

EU: **technology neutrality principle** (State aid guidelines, EEAG (2014-2020)); although CCS supported.

UNFCCC: likely important to keep technology neutrality (type of mitigation technologies).

To be further clarified in the **Rulebook** to the Paris Agreement, post-2020 architecture (at COP24). Reminder: CCS in CDM.

Also applies to access to finance, eg **Green Climate Fund & Art 6** (cooperative approaches).

# Diverse national target monitoring tools

- **Nationally Determined Contributions (NDCs)**, subject to monitoring (!).

Obligation (“shall”) to pursue domestic mitigation measures, with the aim of achieving the objectives of the NDCs (Art. 4.2)

Periodic assessment: Each successive NDC will represent a progression and reflect “the highest possible ambition”

“economy-wide” approach in emission reduction targets.

So far: Only about a dozen countries mentioned CCS in their pledges to the Paris Agreement.

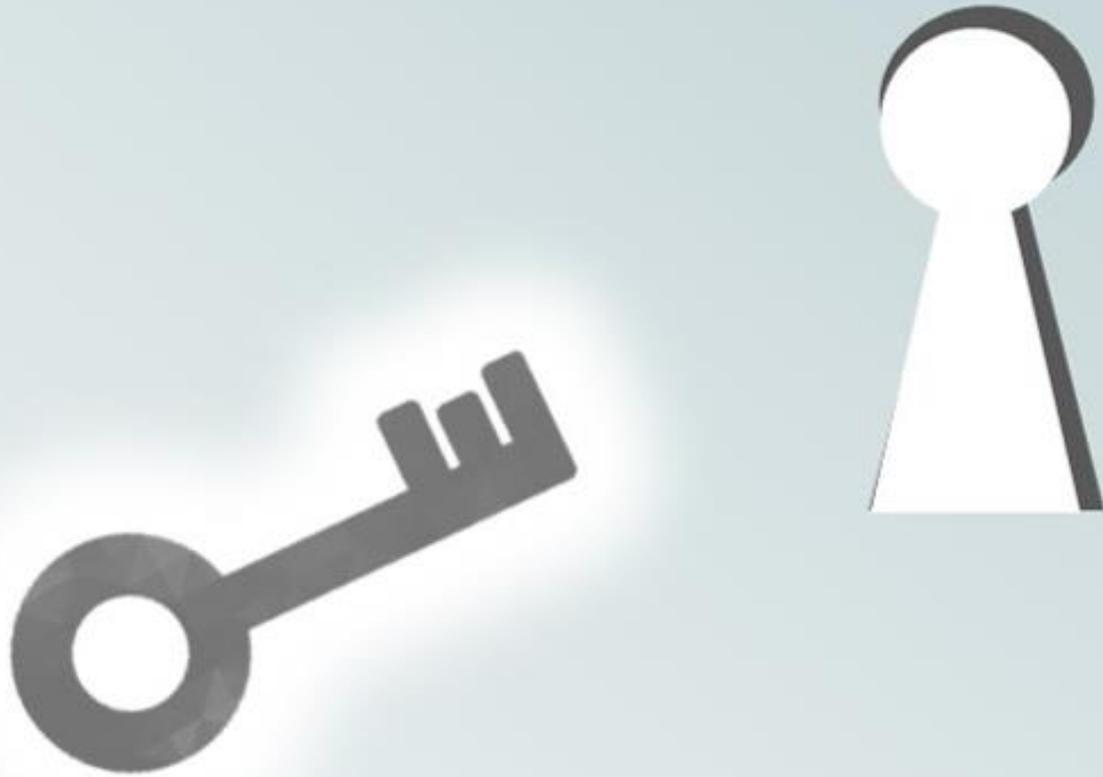
None spoke of bio-CCS.

- **Carbon budgets**, as monitoring tool

Show the total amount of emissions that would still be allowed for meeting the target.

Ex: UK Climate Change Act (reduction of GHG emissions by at least 80% of 1990 levels by 2050.

To meet the target: 5 yearly-carbon budgets running until 2032. Committee on Climate Change.



## 2. Enabling the use of bio-CCS

- The necessary regulatory adjustments.
- The need to support and reward NETs / bio-CCS

# Necessary regulatory adjustments

Building on **existing regulations**. Adjusting existing rules. Not necessarily totally new rules.

emissions permits (combustion plants)

EU emissions trading directive

CCS Directive

Fuel Quality Directive

Renewable Energy Directive

EU's sustainability criteria for biomass

NET-ready plants

# The need to support and reward NETs/Bio-CCS

- **International level:**

New cooperative mechanisms in the Paris Agreement

Financing: **Green Climate Fund**

Who goes first? Universal coverage, but developed countries must contribute more. Technology transfer.

- **European level:**

Going beyond R&D&I

State aids Guidelines on environmental protection and energy (EEAG)

- Confirm the need for support
- Technology neutrality principle

Revised EU Emissions Trading Directive and CCS Directive

- accounting rules for negative emissions (including cross-border) (!)

Revised NER300 facility, "Innovation Fund", Modernisation fund

Project of Common Interest (PCI) lists.

Carbon taxation ?

Valorisation of carbon negative products

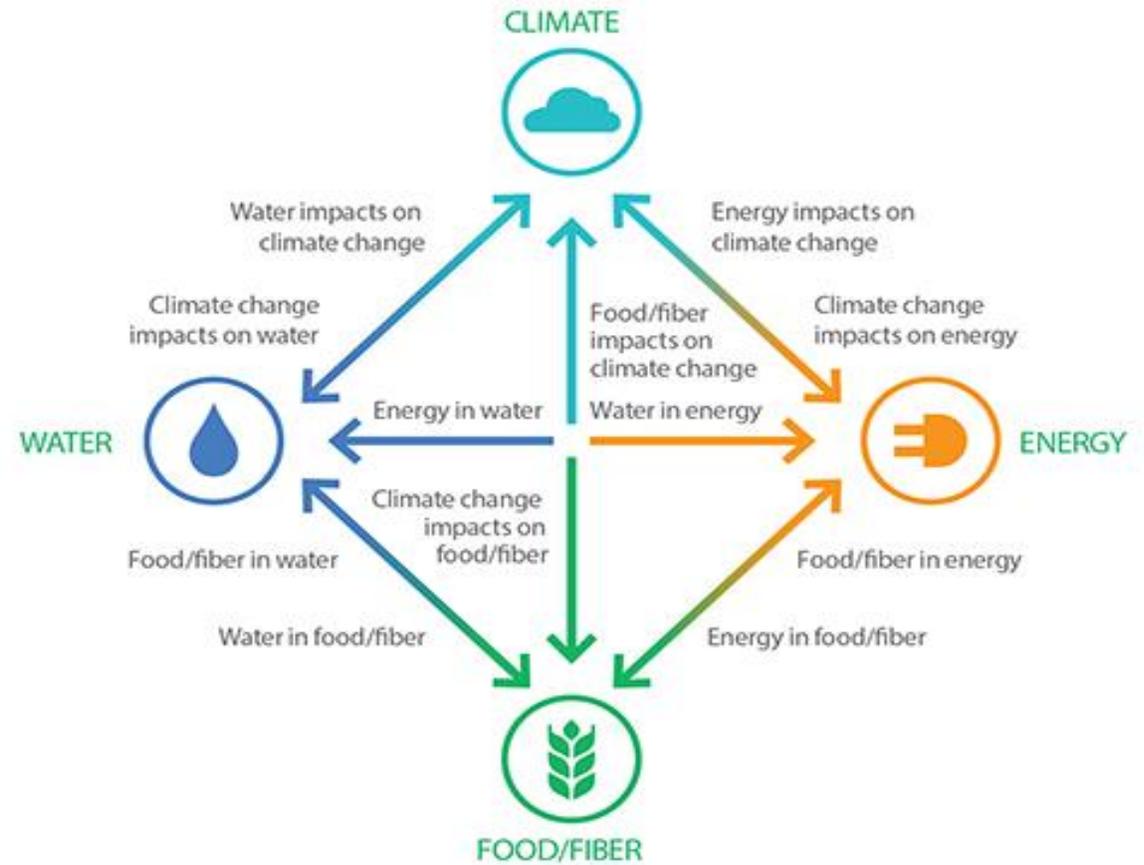
### 3. Bringing legal consistency and certainty



# Connecting the dots of the food-water-energy-climate nexus

= looking for consistency across framework and impact assessment (including public participation).

The concept of **food-water-energy-climate nexus** refer to the fact that the different elements of the nexus are closely linked and that any action that will alter one sector will have an effect on one or several other sectors.



# Addressing environmental uncertainties

Negative emissions and **modification of the atmosphere**, atmospheric degradation. Need to apply the **precautionary principle**.

2 recent initiatives:

1. Guideline 7 of the Draft Report (UN International Law Commission) on **Law of the Atmosphere**: intentional large-scale modification of the atmosphere (geo-engineering). Obligations of States to protect the atmosphere.

2. Effects of geoengineering technologies on **biodiversity**. Eg 2010 Decision on Biodiversity and Climate Change, Convention on Biodiversity. Decision X/33, para 8(w) and (x).

Guidance to not undertake climate-related geo-engineering activities that may affect biodiversity, in the absence of science-based, global, transparent and effective control and regulatory mechanisms.  
Moratorium.



**Thank you for your attention!**



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# NCCOS

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