

CCUS Markets and Regulatory Developments in Poland

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Association



Find out more:

www.ccuspoland.org

<https://www.linkedin.com/company/ccus-p>

Introduction

CCUS Poland Association

Strategic R&D project: „Strategy development for CO₂ capture, transport, utilization and storage in Poland, and pilot implementation of Polish CCUS Cluster (CCUS.pl)”

AGH University of Krakow,
WiseEurope Institute & Ministry of Economic Development and Technology
04.2021 - 12.2024

CCUS Poland Association

- an industrial association supporting the emerging CCUS market in Poland
10.2024 - ...



Ministry of Climate and Environment
Republic of Poland

~~Ministry of Climate and Environment~~

- all three Working Groups on CCUS
03.2025 - ...



HELCOM

The Baltic Marine Environment Protection Commission

- informal correspondence group working on the analysis of environmental and cumulative impacts and risks of CCS in the Baltic Sea context
08.2025 - ...

41% share of total industrial CO₂ emissions (Scope 1) in Poland reported by the supporting members of the CCUS Poland Association (approximately 23 million tonnes per year)





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Introduction

CCUS Poland Association



The development and implementation of CCUS technologies in Poland require coordinated efforts from both government administration and entities operating in this sector. (...) The CCUS Poland Association is a response to these challenges and will act as an entity dedicated to building a sustainable CCUS technology chain in Poland, including increasing public acceptance and engaging in active and constructive dialogue with all stakeholders.

Areas of Activity of the Association:

- presenting the **opinions** of CCUS Poland Association members,
- reviewing assumptions and draft **legislative solutions**,
- initiating and recommending **systemic solutions**,
- **collecting information** in the field of CCUS in Poland and the EU,

Agenda

CCUS Markets and
Regulatory Developments
in Poland



1
Overview of
Poland's CCUS
market, projects
and initiatives

2
Poland-level CCUS
policies and
regulatory
framework

3
Plans for creating
an enabling CCUS
market in Poland -
current activities

GHG emissions in Poland

... and how to reduce them?

01. Energy efficiency,
process and
organisational changes

03. Carbon capture,
transport,
utilization and
storage (incl. CDRs)

03.

02.

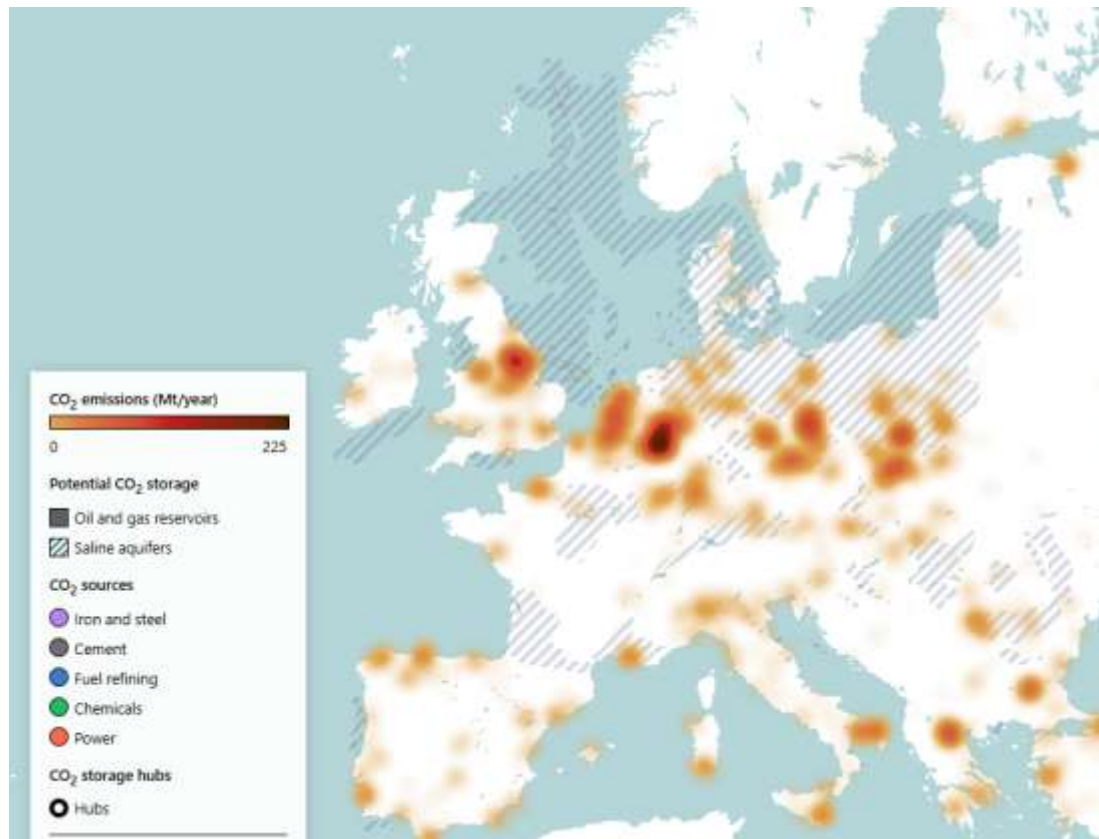
02. Renewable and low-
carbon energy
sources



149.9 Mton CO₂ in EU-
ETS
reduction by 2.6% compared
to 2023

CCUS potential

Map of CO₂ sources and potential geological storage in Europe.



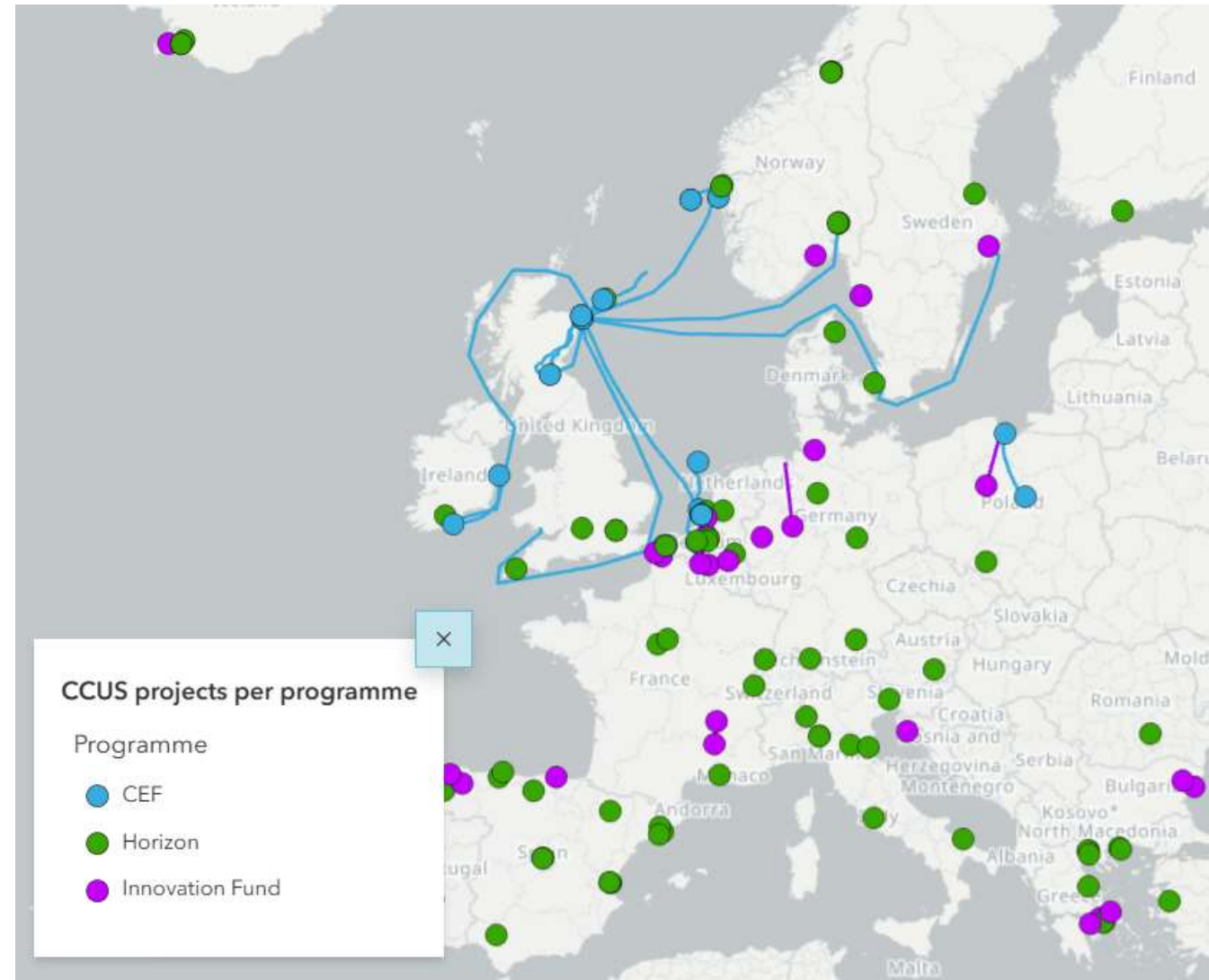
- **68%** of emissions produced by power plants and factories **in Europe are found within 100 km of possible storage sites.**
- Poland is in a notably advantageous position, as **we possess considerable onshore capacity for CO₂ storage within central Poland**, as well as option for **off-shore storage in Baltic sea:**
 - **Depleted oil and gas fields**

- up to 1 Gt of

CCUS projects in Poland

EU funding for industrial carbon management – backbone for CCS infrastructure in Poland

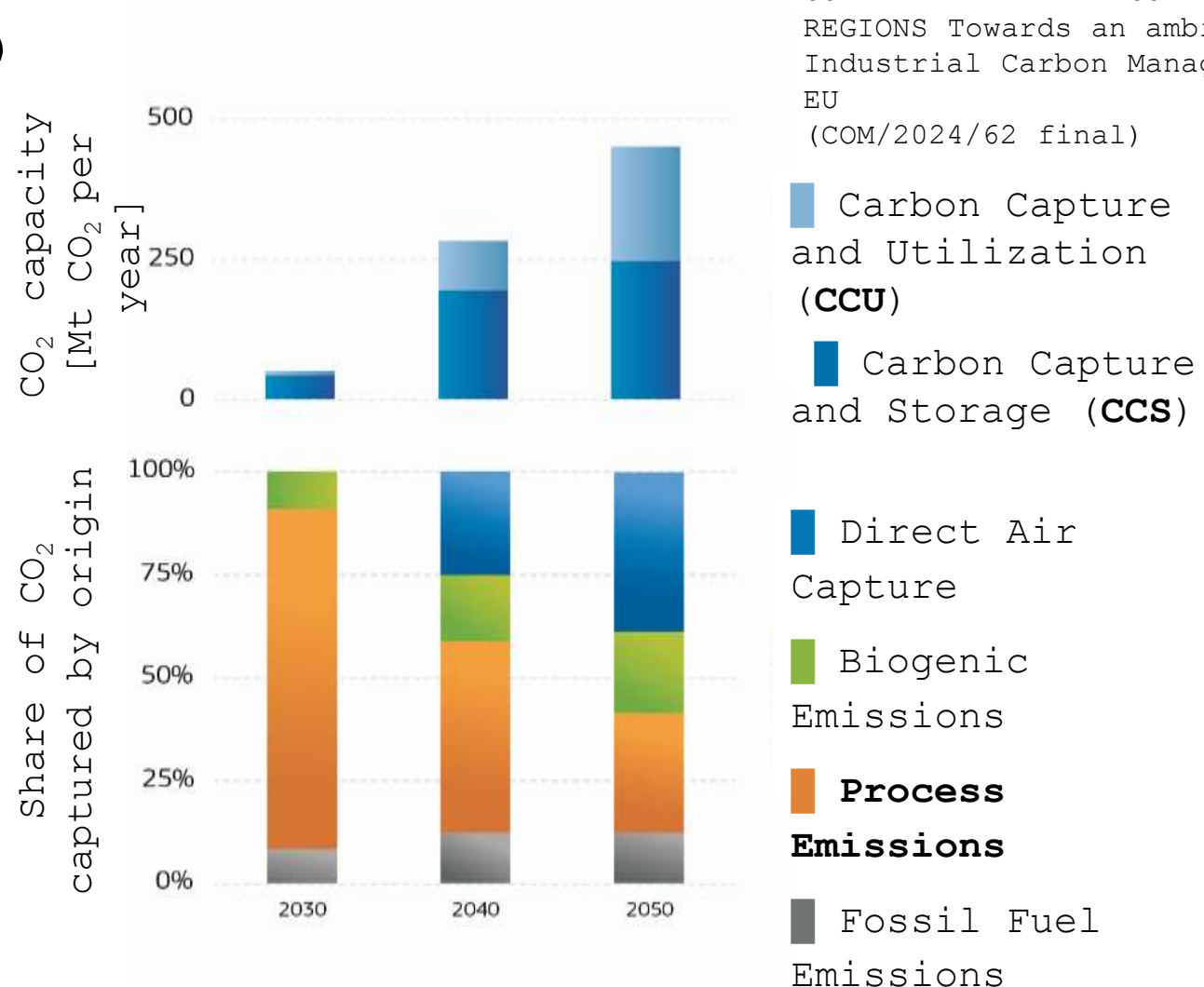
- It is evident that the **current emphasis is on CO₂ export** through the sea terminal.
- However, we are **actively exploring options for CO₂ storage both onshore and offshore** in Poland.
- This initiative would involve the development of **CO₂ transport pipelines system** and **clustering of emission points**.



CCUS market projections

European Union (ICM & NZIA)

- European Commission issued a landmark decision assigning CO₂ storage obligations to 44 oil and gas producers across the EU under the **Net-Zero Industry Act (NZIA)**
- Announced operational CO₂ injection capacity contribution obligation by 2030 for ORLEN S.A. (Poland) is **4.26 Mt CO₂ per year**



COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS Towards an ambitious Industrial Carbon Management for the EU (COM/2024/62 final)

Carbon Capture and Utilization (CCU)

Carbon Capture and Storage (CCS)

Direct Air Capture

Biogenic Emissions

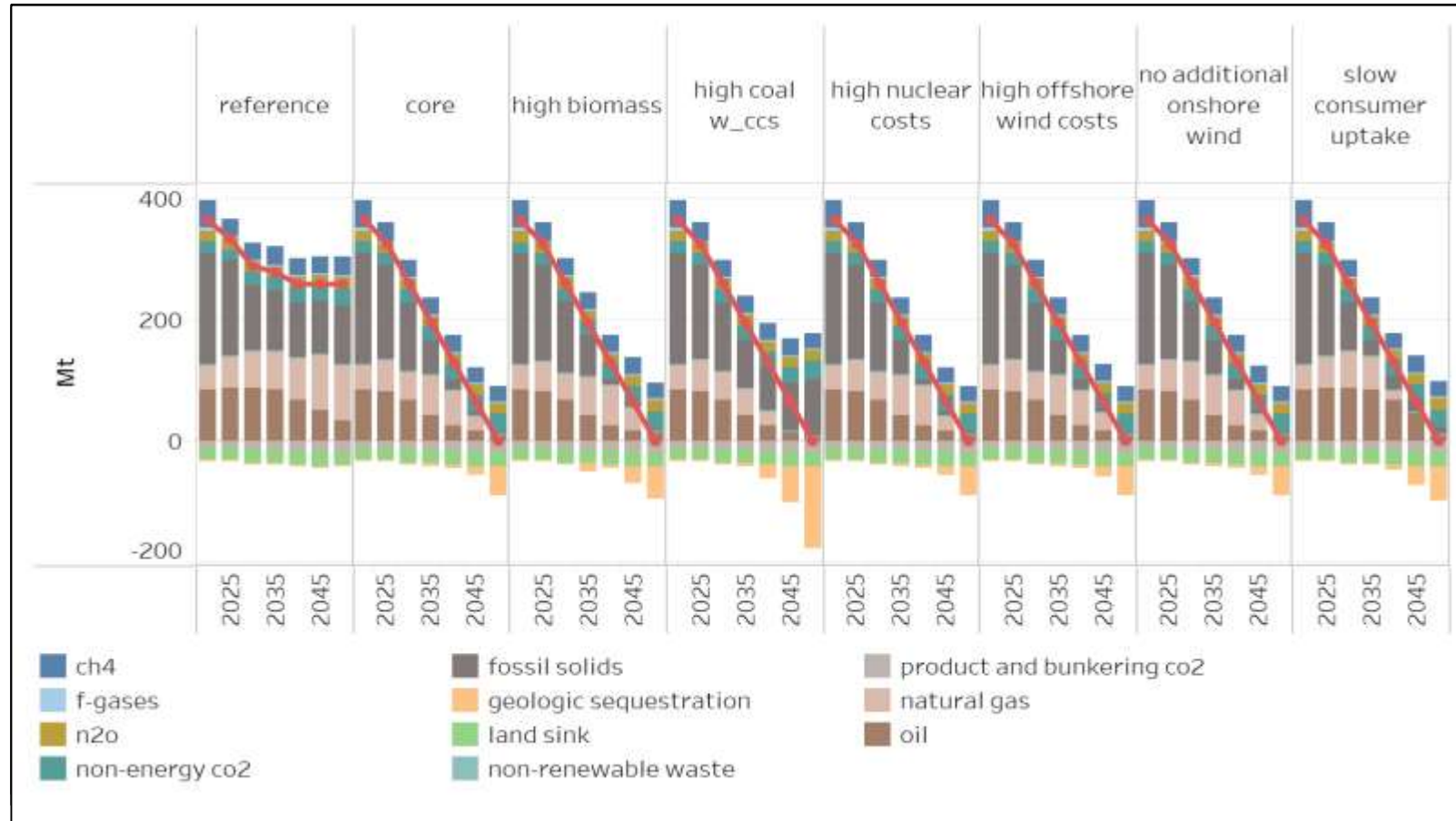
Process Emissions

Fossil Fuel Emissions

Polish CCUS Strategy needs to establish **clear quantitative goals** for the deployment of CO₂ capture, utilization, and storage technologies. These targets are currently defined using a variant approach, **employing two complementary analytical methods** - the *top-down approach (formal studies)* presents various results in terms of CCUS market projections...

CCUS market projections

Various projections published in the last 2-3 years



CCUS sector projections

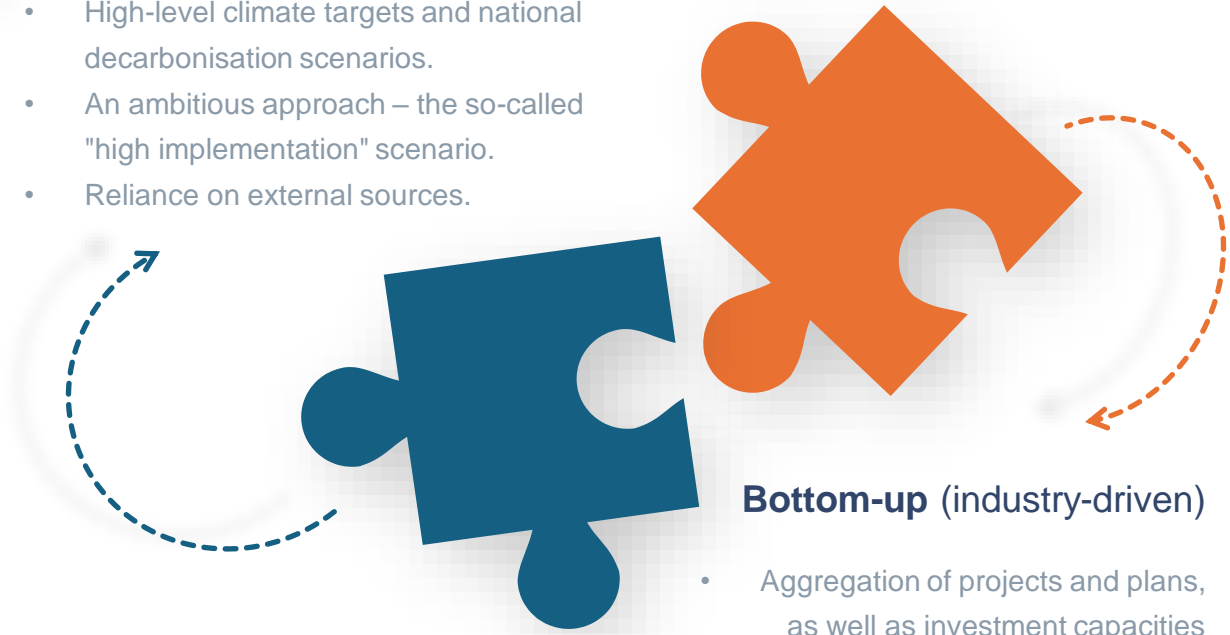
... while the **bottom-up approach is more realistic**. This dual strategy will facilitate the establishment of **targets that are both achievable and aspirational**, ensuring alignment with **national climate objectives** and the **capabilities of the anticipated investments**.

Inconsistency in projects – currently addressed at the Ministerial Working Group for CCUS Strategy!

> Top-down (← formal studies)

- High-level climate targets and national decarbonisation scenarios.
- An ambitious approach – the so-called "high implementation" scenario.
- Reliance on external sources.

Projections for CO ₂ capture	2030	2050
CCUS.pl („high-tier“)	2 Mtpa	74 Mtpa
CCUS.pl („low-tier“)	1.6 Mtpa	35.6 Mtpa
CCUS.pl („low-tier with CDR“)	1.6 Mtpa	56.6 Mtpa
		~40 Mtpa

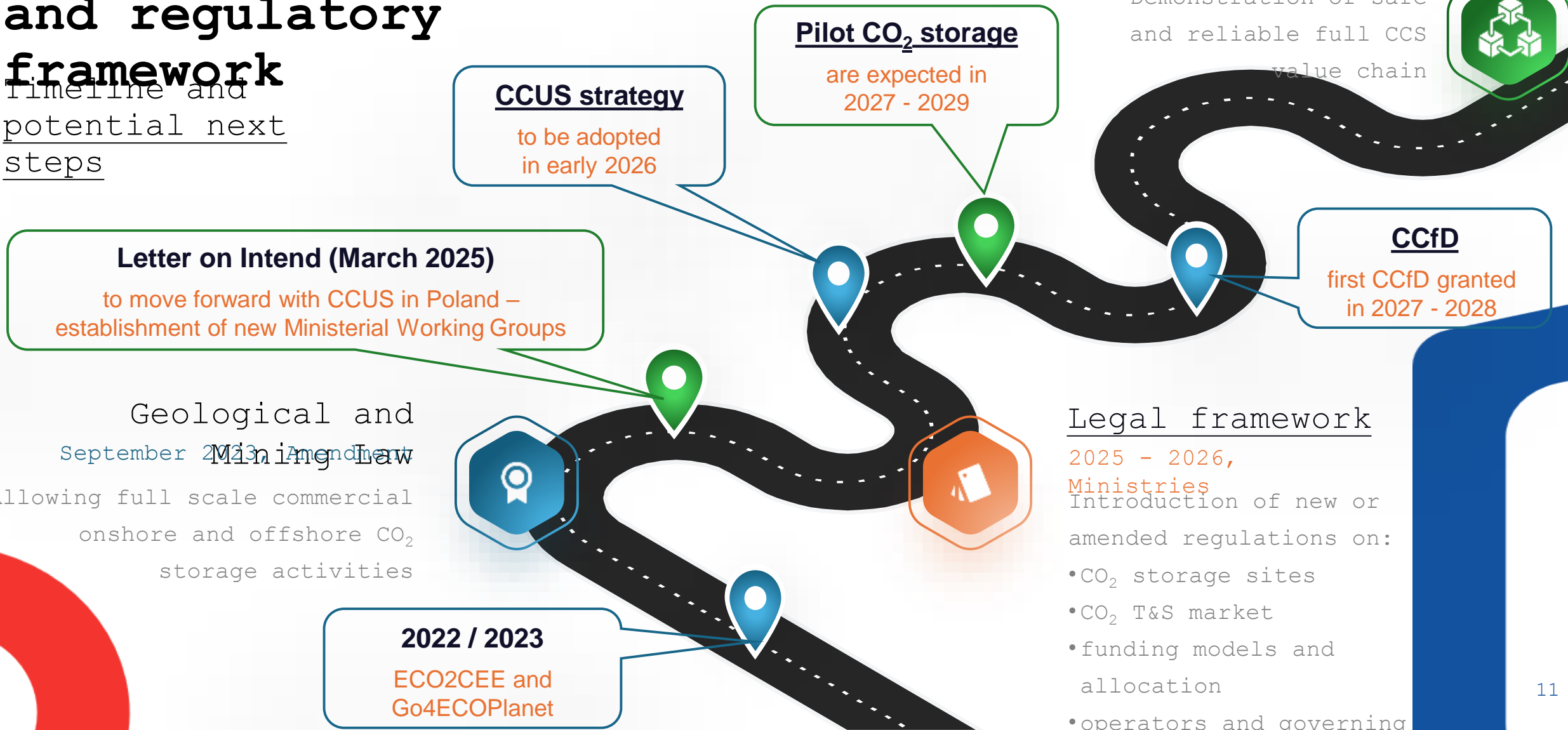


Bottom-up (industry-driven)

- Aggregation of projects and plans, as well as investment capacities and ambitions.
- Realistic approach – „minimal implementation" scenario.
- Leaning on internal sources.

CCUS policies and regulatory framework

Timeline and potential next steps



Full CCS value

2028 - 2032, chain

Demonstration of safe and reliable full CCS value chain



Legal framework

2025 - 2026,

Ministries

Introduction of new or amended regulations on:

- CO₂ storage sites
- CO₂ T&S market
- funding models and allocation
- operators and governing

Geological and
September 2023 Mining Law

Allowing full scale commercial onshore and offshore CO₂ storage activities



We have completed
the initial step, but
it is essential that
we continue to
progress.

Geological and Mining Law

Amendment to the Geological & Mining Act (2023) :

- easing **CERTAIN** obstacles to the development of storage sites in Poland,
- advancing CCS as viable commercial projects (beyond mere demonstrations),
- streamlining the permitting processes,
- accelerated pathways for projects below 100k,
reducing costs associated with permitting procedures.

But that is not all, we need to update the specific regulations:

- on **areas where the location** of an underground carbon dioxide storage complex is permitted
- on the detailed requirements for a **development plan for an underground carbon dioxide storage site**
- on **financial security and the safeguarding of funds** related to underground carbon dioxide storage
- on the **detailed requirements for the operation of an underground carbon dioxide storage site**, the injected carbon dioxide stream, and the monitoring of the underground storage complex

Amendment to the Geological & Mining Act (2023) :

Specific regulations on areas where the location of an underground carbon dioxide storage complex is permitted

List of legislative works of the Minister of Climate and Environment – point #1274 – to be published in January 2026:

- new areas will be designated where **geological CO₂ storage complexes may be located**, including onshore areas;
- location restrictions have been introduced to protect:
 - deep groundwater intakes and deposits of medicinal waters, thermal waters, and brines;
 - documented central or local groundwater reservoirs and aquifers for which protective zones have been established or planned;
- the regulation also **prohibits siting surface injection installations** of underground CO₂ storage on the territories of national parks, nature reserves, and in areas with a population density of at least 75 persons/km².

*Dark green:
population density
in municipalities
above 75*

*Potential
geological CO₂
storage sites in
Poland*



Other regulations and policies

For updates, modifications, or new establishment



T&S market

Regarding the operation of the CO₂ transport and storage market



Operators

Designating or overseeing the operators within the CO₂ transport and storage sector



Funding

Financial frameworks for the CCUS market and subsidy structures supporting the



Specification

Standards, norms, guidelines, and best practices for the CCUS value chain

CCUS policies and regulatory framework

How we will advance, basing on experience from Europe, within **legal and regulatory framework**?

In order to promote CCS, the **European Commission along with national governments** utilize a variety of policy, legal, and regulatory frameworks, which can be grouped into **three primary categories**:

Direct policy requirements and financial incentives

regulations

tax incentives

carbon contracts for difference

Supportive policies and programs

formal expressions of ambition or strategic statements

direct funding or grants

loan programs

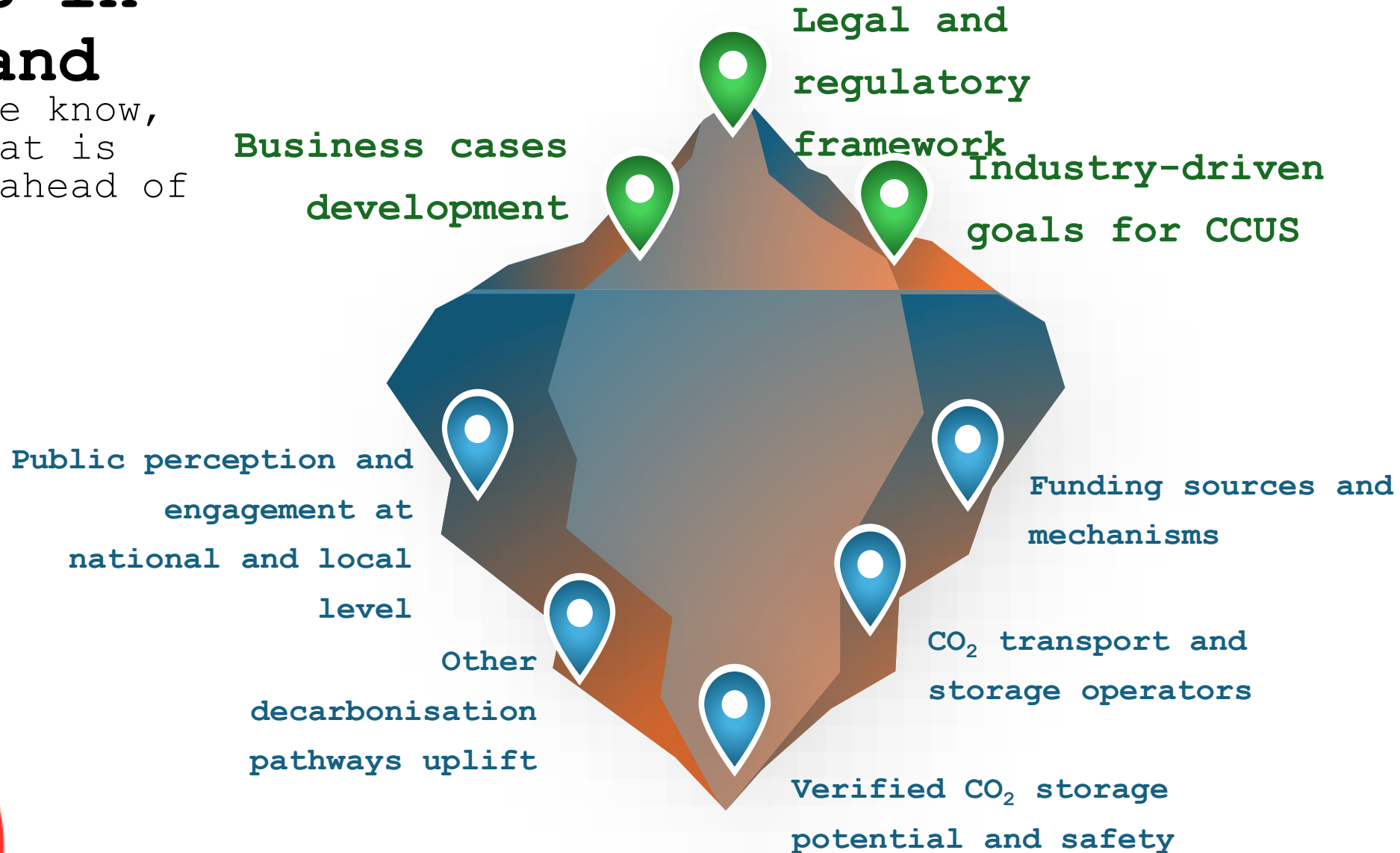
Legal and regulatory governance structures

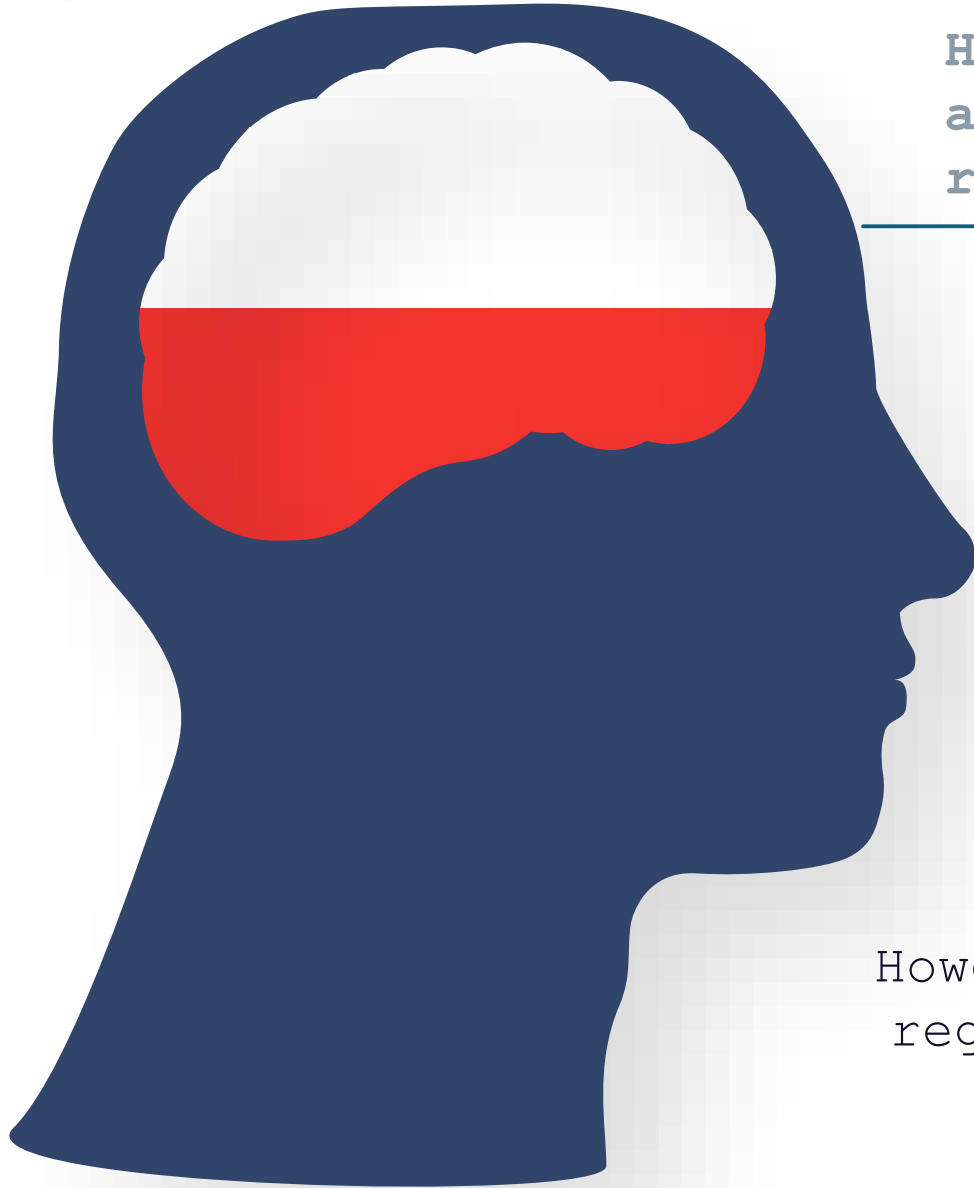
regulatory frameworks for CO2 T&S, framework for transboundary issues, permitting processes

national level monitoring, reporting, and verification protocols

CCUS in Poland

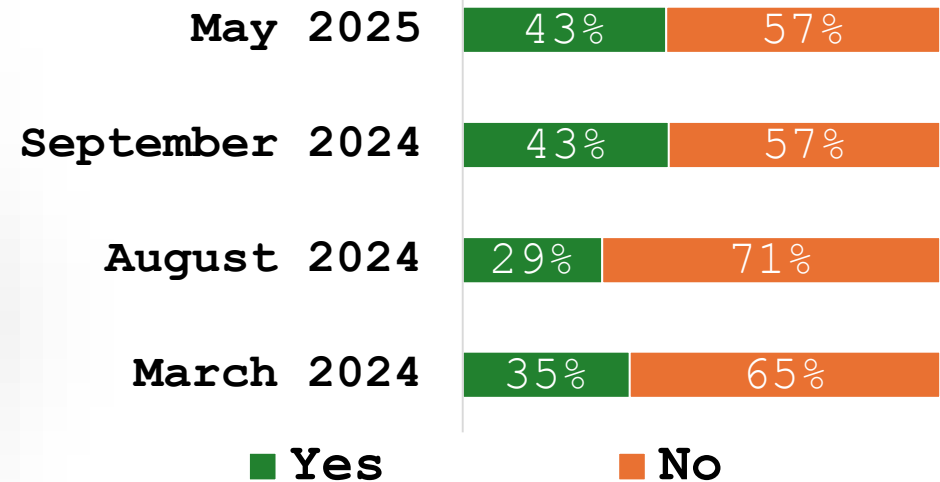
What we know,
and what is
still ahead of
us?





Have you heard of carbon capture and storage technologies (commonly referred to as CCS)?

Q



However, when inquiries are made regarding specifics, the actual comprehension of what CCS technologies entail is approximately

Creating an enabling CCUS market

How to attract investment and reach the FIDs on next projects?



Strategy and goals

Adopt a national CCUS strategy with clear 2035 targets for industry



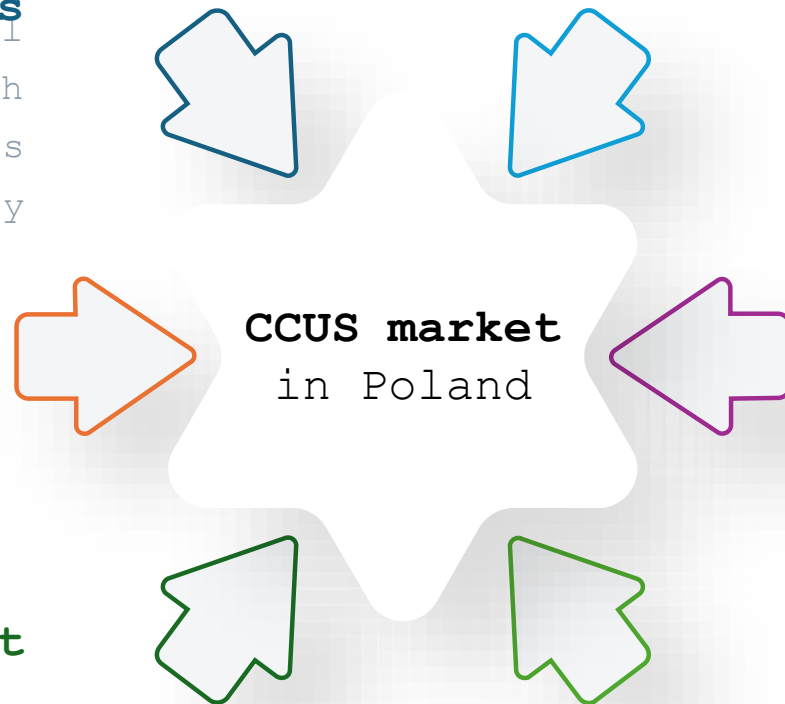
Financing

Deploy strong financial incentives (funding and carbon contracts for difference)



Social aspect

Build public acceptance, workforce skills, and R&D support



CCUS market
in Poland

Legal barriers

Establish a robust regulatory framework and streamline permitting

Infrastructure

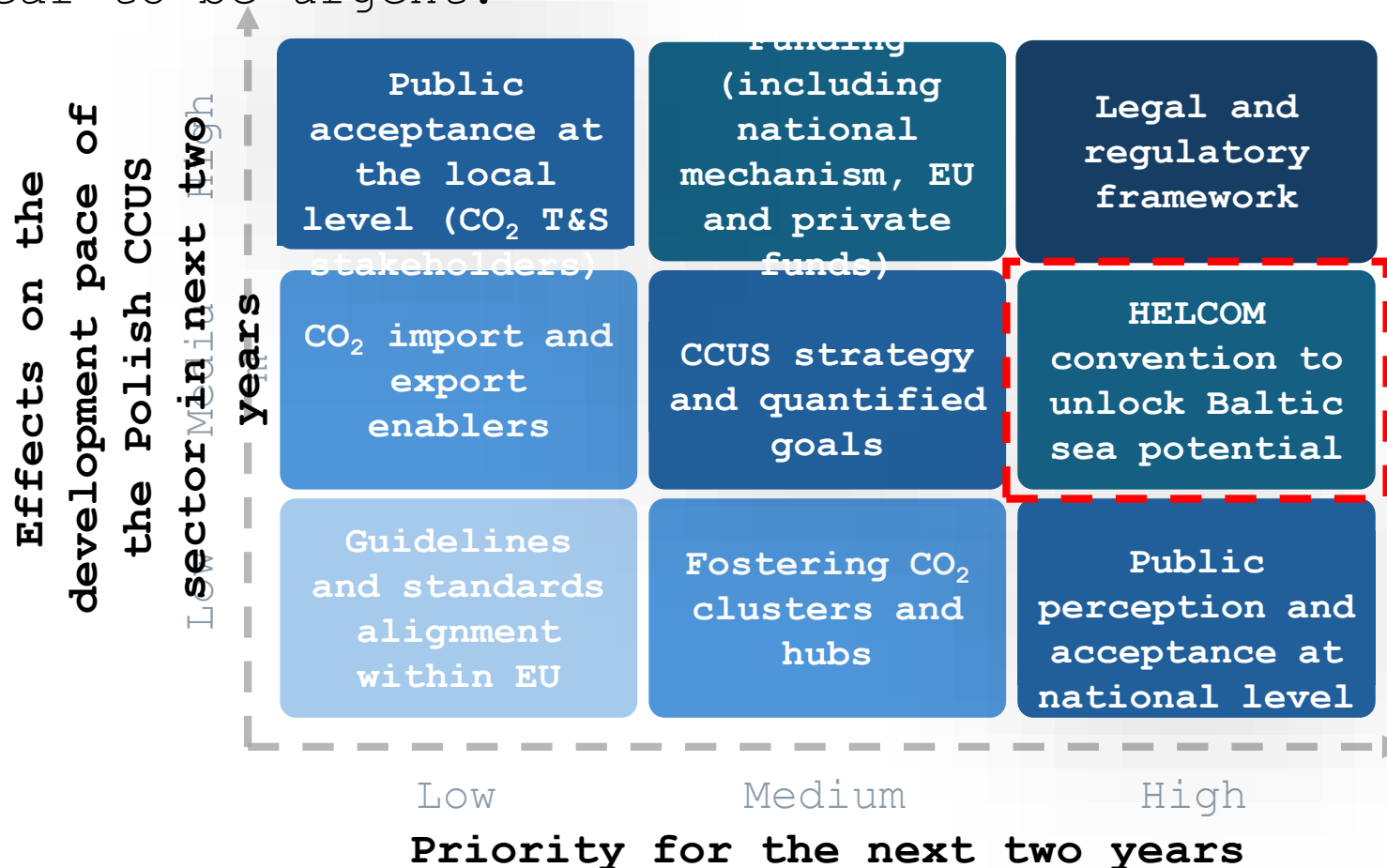
Invest in CO₂ transport infrastructure and storage sites recognition

Hubs and clusters

Catalyze industrial CCUS hubs and public-private partnerships

„Homework” for Polish CCUS sector for the next 2 years

... I made an effort to remain impartial! At this moment, all the issues appear to be urgent.



Where cooperation is needed now?

The Baltic Marine Environment Protection Commission – **HELCOM** – informal correspondence group working on the **analysis of environmental and cumulative impacts and risks of CCS in the Baltic Sea context** – the group should finalize a report for the Heads of Delegation in **June 2026**.

„The analysis should assess the general environmental aspects of Carbon Capture and Storage (CCS) in the Baltic Sea area. The analysis shall, as far as possible, include impacts caused during all parts of the life cycle of CCS activities, including carbon capture, transport (including pipelines), storage, and long-term management of storage complexes, as well as termination (when the storage is “full”). It should also include

all environmental compartments (geological seafloor formations, seafloor, water column, etc.), but should not include local CO₂ storage (e.g., habitats/algae).

(...) should contain the following:

- 14/12/2025
1. Environmental Impacts and Risk Assessment
 2. Regional Specificity and Site Considerations



If you want to join, please contact your

Thank you for your attention!

contact us: biuro@ccuspoland.org