CO_2 IN NUMBERS

EMISSIONS & REDUCTIONS

2026

WHAT IS CO_2?

CO_2 is a compound of carbon and oxygen and one of the most important greenhouse gases in the atmosphere.

Biogenic CO_2 is created by burning or decomposing organic matter.

Fossil CO_2 is released by the combustion of fossil fuels.

Although CO_2 is part of the carbon cycle, the current concentration in the atmosphere contributes to the greenhouse effect and climate change.

EXPLANATION & CONVERSION

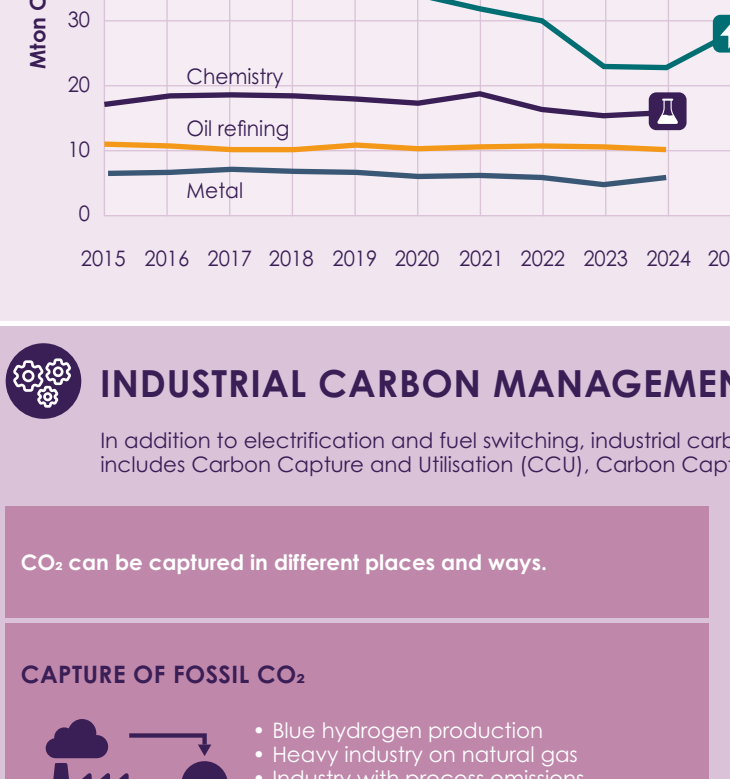
1 megaton
= 1 million tonnes
= 1 billion kilograms

The weight of 1 ton of CO_2 is equivalent to 1 water tank of 1,000 liters (1 m³).

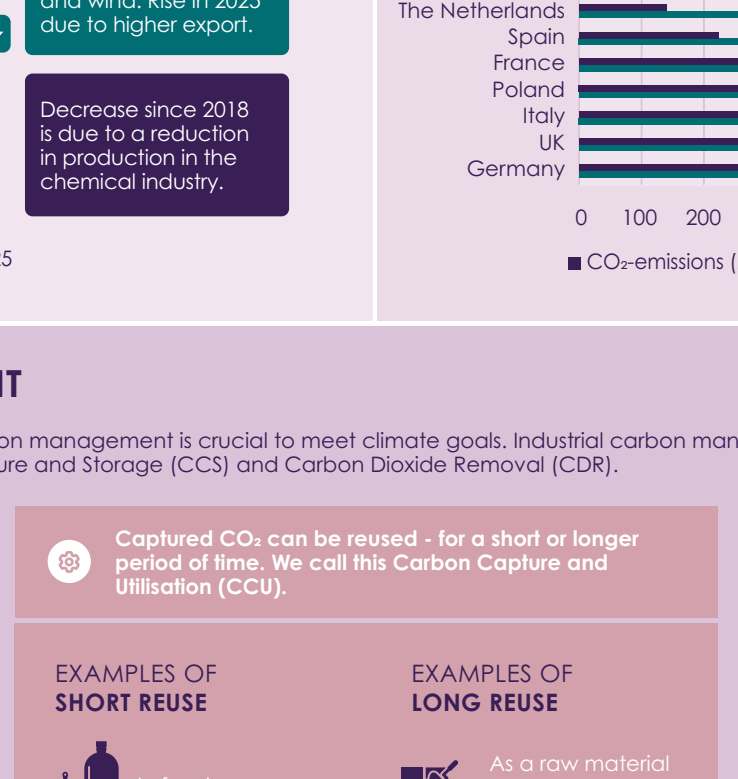
The volume of 1 ton of CO_2 is equivalent to the volume of a house of approximately 200 m² (500 M³, temperate climate).

The average emissions per Dutch person are more than 7 tons of CO_2 per year.

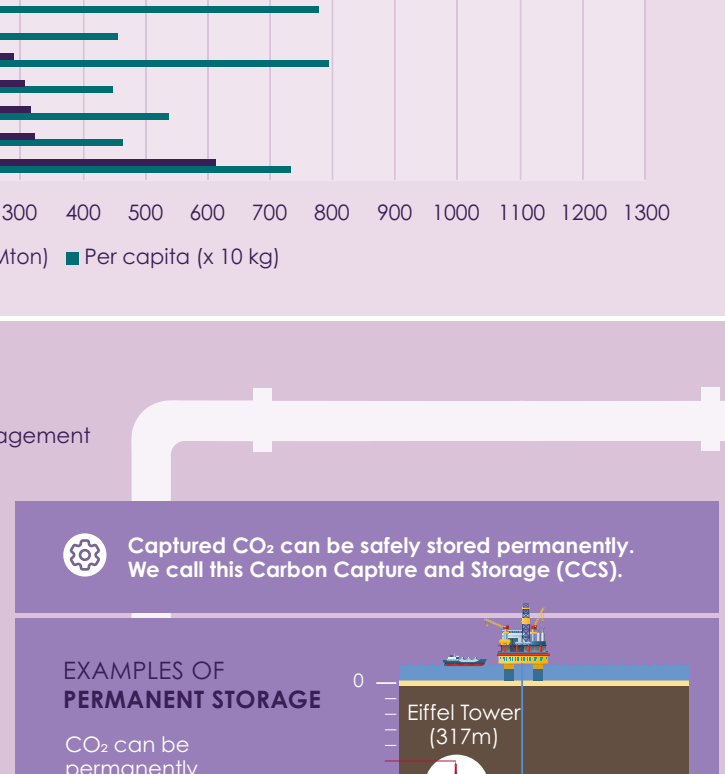
CO_2 CONCENTRATION IN THE ATMOSPHERE WORLDWIDE



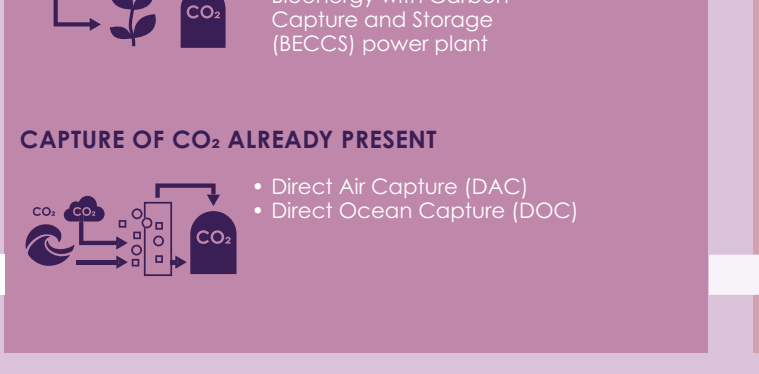
GREENHOUSE GAS EMISSIONS IN THE NETHERLANDS



CO_2 EMISSIONS BY SECTOR IN THE NETHERLANDS



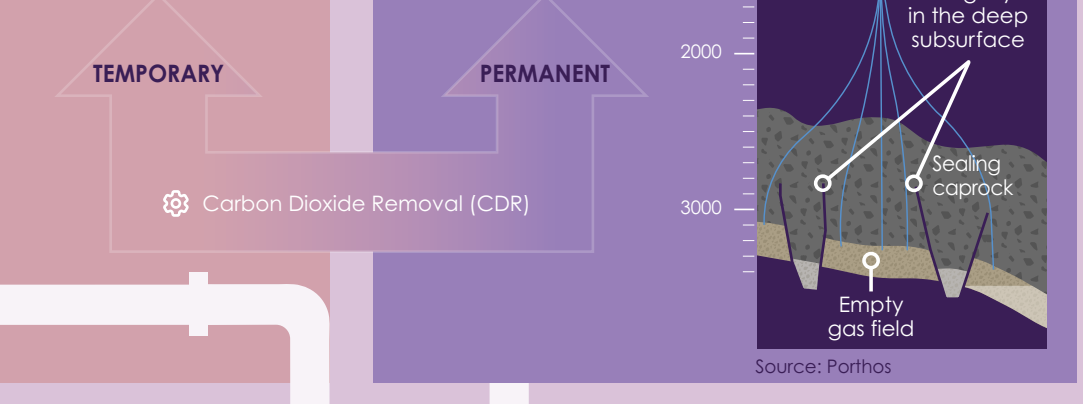
CO_2 EMISSIONS FROM INDUSTRY IN THE NETHERLANDS



Decrease is due to a larger share of solar and wind. Rise in 2025 due to higher export.

Decrease since 2018 is due to a reduction in production in the chemical industry.

CO_2 EMISSIONS IN EUROPEAN COUNTRIES



INDUSTRIAL CARBON MANAGEMENT

In addition to electrification and fuel switching, industrial carbon management is crucial to meet climate goals. Industrial carbon management includes Carbon Capture and Utilisation (CCU), Carbon Capture and Storage (CCS) and Carbon Dioxide Removal (CDR).

CO_2 can be captured in different places and ways.

CAPTURE OF FOSSIL CO_2

- Blue hydrogen production
- Heavy industry on natural gas
- Industry with process emissions
- Natural gas or coal power stations

CAPTURE OF BIOGENIC CO_2

- Waste incineration plants
- Bioenergy with Carbon Capture and Storage (BECCS) power plant

CAPTURE OF CO_2 ALREADY PRESENT

- Direct Air Capture (DAC)
- Direct Ocean Capture (DOC)

Captured CO_2 can be reused - for a short or longer period of time. We call this Carbon Capture and Utilisation (CCU).

EXAMPLES OF **SHORT REUSE**

- In food
- In greenhouse horticulture
- In industrial processes
- For synthetic fuels

EXAMPLES OF **LONG REUSE**

- As a raw material for cement-bound building materials
- In timber construction

TEMPORARY

PERMANENT

Carbon Dioxide Removal (CDR)

Captured CO_2 can be safely stored permanently. We call this Carbon Capture and Storage (CCS).

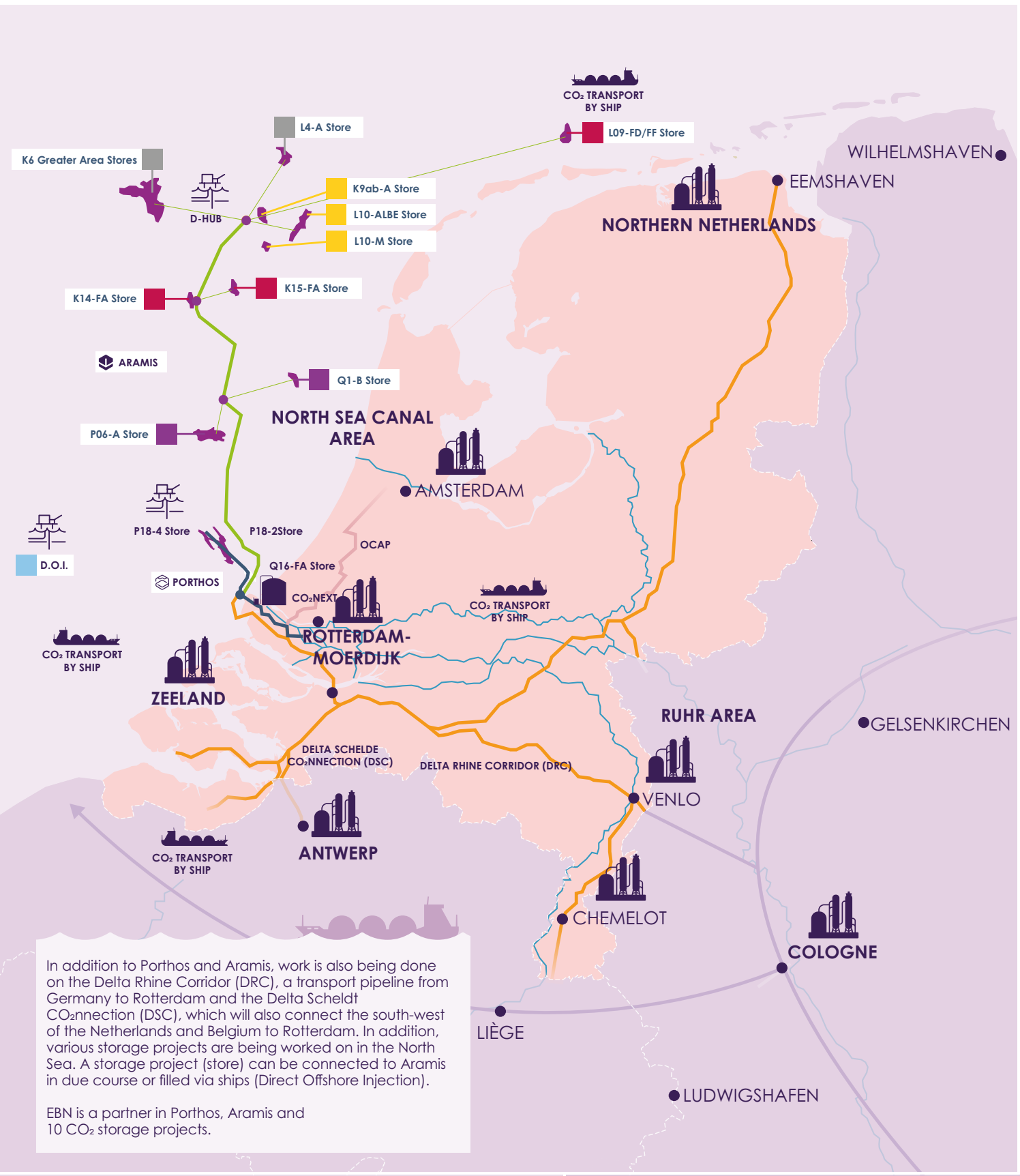
EXAMPLES OF **PERMANENT STORAGE**

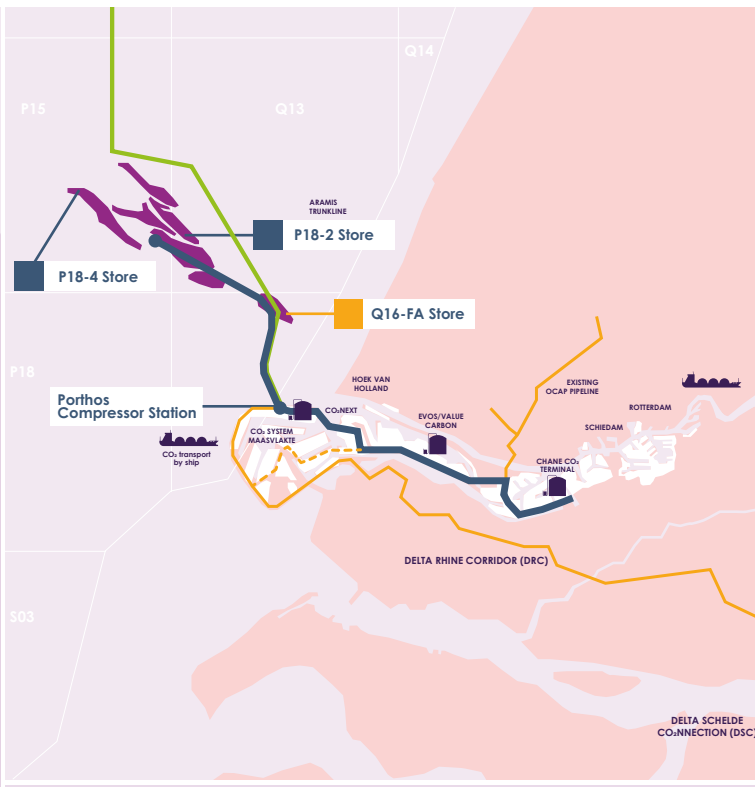
CO_2 can be permanently stored in the deep subsurface, in geological reservoirs such as gas fields and in aquifers.

Source: Porthos

CO_2 IN NUMBERS 2026

PROJECTS & GOALS





In addition to Porthos and Aramis, work is also being done on the Delta Rhine Corridor (DRC), a transport pipeline from Germany to Rotterdam and the Delta Scheldt CO_2nnection (DSC), which will also connect the south-west of the Netherlands and Belgium to Rotterdam. In addition, various storage projects are being worked on in the North Sea. A storage project (store) can be connected to Aramis in due course or filled via ships (Direct Offshore Injection).

EBN is a partner in Porthos, Aramis and 10 CO_2 storage projects.

- TotalEnergies
- Shell
- Eni
- Harbour Energy
- ONE-Dyas
- Porthos Stores
- Porthos trunkline
- Aramis trunkline
- **D.O.I.** (Direct Offshore Injection)
- Spurline
- DRC / DSC
- OCAP

CONTRIBUTION OF PORTHOS AND ARAMIS

Porthos

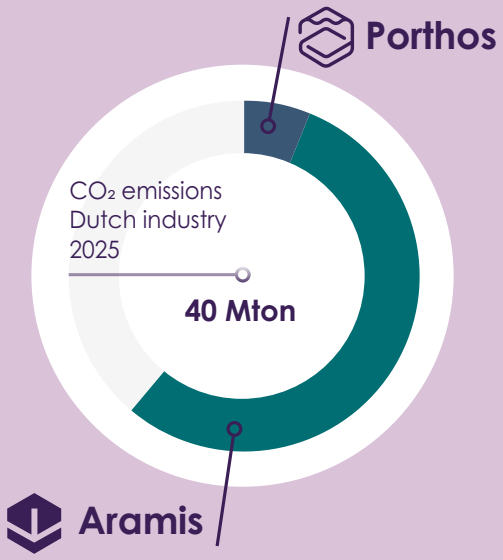
- First large-scale CCS project in the EU
- Transport and storage of CO_2 from the port of Rotterdam
- Storage in several outsourced gas fields under the North Sea
- Designed to accomodate larger CO_2 volumes in future
- Capacity 2.5 Mton CO_2 per year
- Injection period: 15 years
- Total storage: ~ 37.5 Mton CO_2

Aramis

- European infrastructure project for transport and storage of CO_2
- Suitable for multiple industry clusters and companies in The Netherlands and beyond
- Reception of CO_2 via pipeline or ship (via CO_2next hub terminal)
- Pipeline capacity 22 Mton per year, expected starting volume 5 - 7.5 Mton per year
- Injection period: ~20 years or more
- Initially using 3 stores

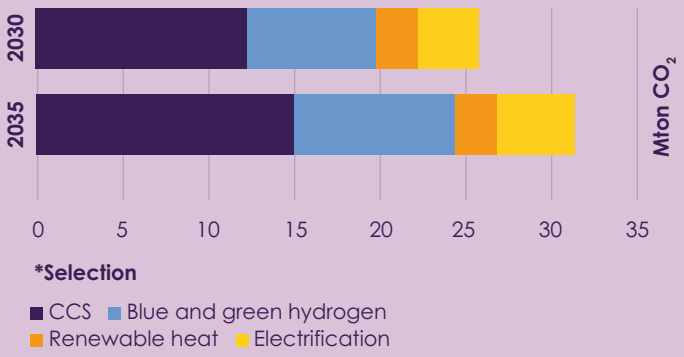
CCS CONTRIBUTES SUBSTANTIALLY TO EMISSION REDUCTIONS

CCS reduces CO_2 emissions industry by more than half



According to Dutch industry, CCS and blue & green hydrogen are considered the largest contributors to emission reductions

Potential greenhouse gas emission savings by project type according to industry (CES 3.0)



*Excluding production change, energy efficiency, other.

Source: PBL, "Reflection on Cluster Energy Strategies 2024", 2024

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EBN.NL/FACTS-AND-FIGURES/KNOWLEDGECENTRE/CO2-INFOGRAPHIC-2026

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