



Session C: Perceived Barriers

C-3 Social Acceptance

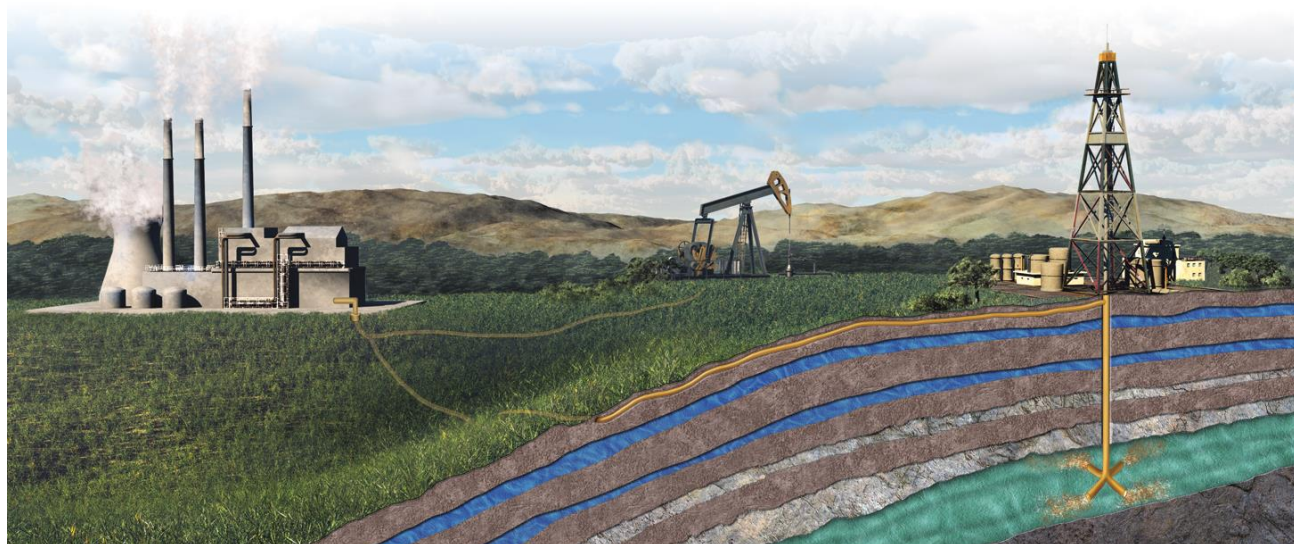
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29 October 2015
BASREC conference, Warsaw

Social Acceptance – factors that determine technology acceptance



Acceptance is when there is no resistance. Indifference is mostly qualified as an approval



Does Polish or European society really know what exactly CCS technology is?



EUROPEAN
COMMISSION

Brussels, 27.3.2013
COM(2013) 180 final

**COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN
PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL
COMMITTEE AND THE COMMITTEE OF THE REGIONS**

on the Future of Carbon Capture and Storage in Europe

Communication says clearly: there is a lack of public awareness among Member States in respect to the CCS technology

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Some projects that envisage onshore storage face strong public opposition. This is especially true for projects in Poland and Germany. In Germany, lack of public acceptance was the main reason for the delayed transposition of the CCS directive. The EEPR-supported (European Energy Programme for Recovery) project in Spain – after a dedicated information and engagement campaign – successfully overcame the public opposition. The projects that aim at offshore storage in the UK, NL and Italy have equally found public acceptance.

A recent Eurobarometer survey shows that the European population is unaware of CCS and its potential contribution to mitigating climate change. However, those who are informed are more likely to support the technology. This shows clearly that more needs to be done to introduce CCS into the debate on Europe's and Member States efforts to combat climate change, that potential health and environmental risks (associated with leakage of stored CO₂) need to be further explored, and that public acceptance should not be assumed without prior assessment.

An Eurobarometer survey from 2011 (next slides) shows that the European population is unaware of CCS and its potential contribution to mitigating climate change. However, those who are informed are more likely to support the technology.

EUROBAROMETER

According to wikipedia...

Eurobarometer is a series of public opinion surveys conducted regularly on behalf of the European Commission since 1973. These surveys address a wide variety of topical issues relating to the European Union throughout the EU Member States. The Eurobarometer results are published by the European Commission's Directorate-General Communication. Its database since 1973 is one of the largest in the world. The surveys are conducted by TNS Opinion.



Special Eurobarometer

European Commission

SPECIAL EUROBAROMETER 364

Public Awareness and Acceptance of CO₂ capture and storage

REPORT

Fieldwork: February – March 2011
Publication: May 2011

This survey was requested by the Directorate-General for Energy and coordinated by the Directorate-General for Communication (‘Research and Speechwriting’ Unit).

http://ec.europa.eu/public_opinion/index_en.htm

This document does not represent the point of view of the European Commission. The interpretations and opinions contained in it are solely those of the authors.

Special Eurobarometer 364 / Wave 75.1 – TNS Opinion & Social

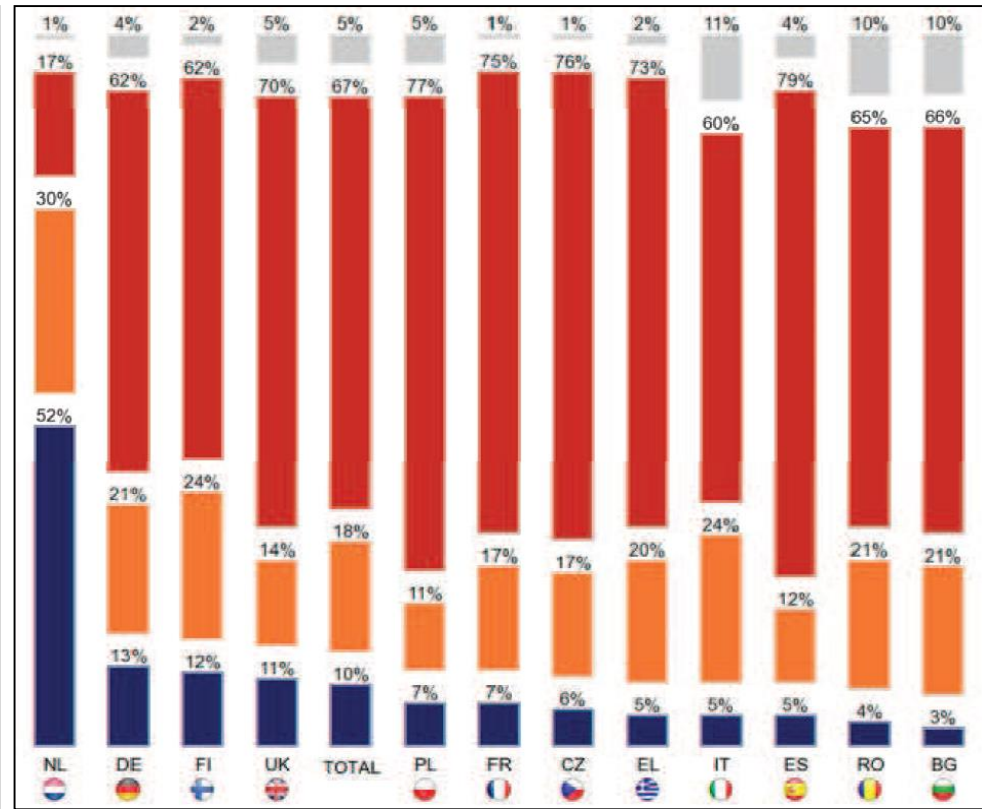
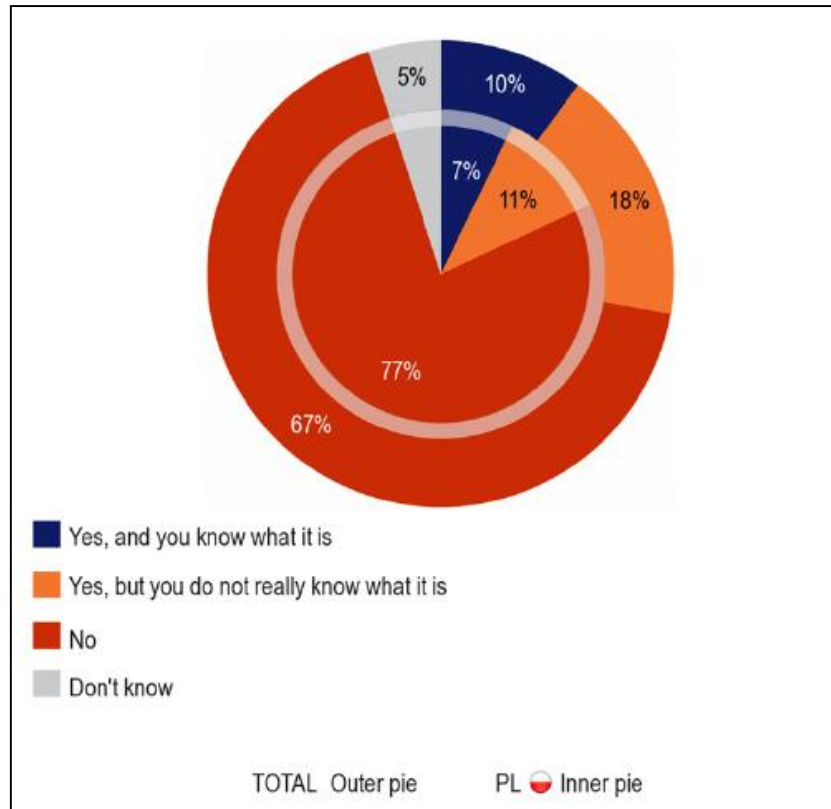
Between 9 February and 4 March 2011, TNS Opinion & Social, a consortium created between TNS plc and TNS opinion, carried out the wave 75.1 of the EUROBAROMETER, on request of the EUROPEAN COMMISSION, Directorate-General for Communication, “Research and Speechwriting”.

The SPECIAL EUROBAROMETER 364 is part of wave 75.1 and covers the population of the respective nationalities of the European Union Member States, resident in each of the Member States and aged 15 years and over.

COUNTRIES	INSTITUTES	N° INTERVIEWS	POPULATION 15+
Bulgaria	TNS BBSS	1001	6.537.510
Czech Rep.	TNS Aisa	1014	9.012.443
Germany	TNS Infratest	1622	64.409.146
Greece	TNS ICAP	1000	8.693.566
Spain	TNS Demoscopia	1004	39.035.867
France	TNS Sofres	1035	47.756.439
Italy	TNS Infratest	1027	51.862.391
Netherlands	TNS NIPO	1012	13.371.980
Poland	TNS OBOP	1000	32.413.735
Romania	TNS CSOP	1053	18.246.731
Finland	TNS Gallup Oy	1001	4.440.004
United Kingdom	TNS UK	1322	51.848.010
		13.901	347.627.822

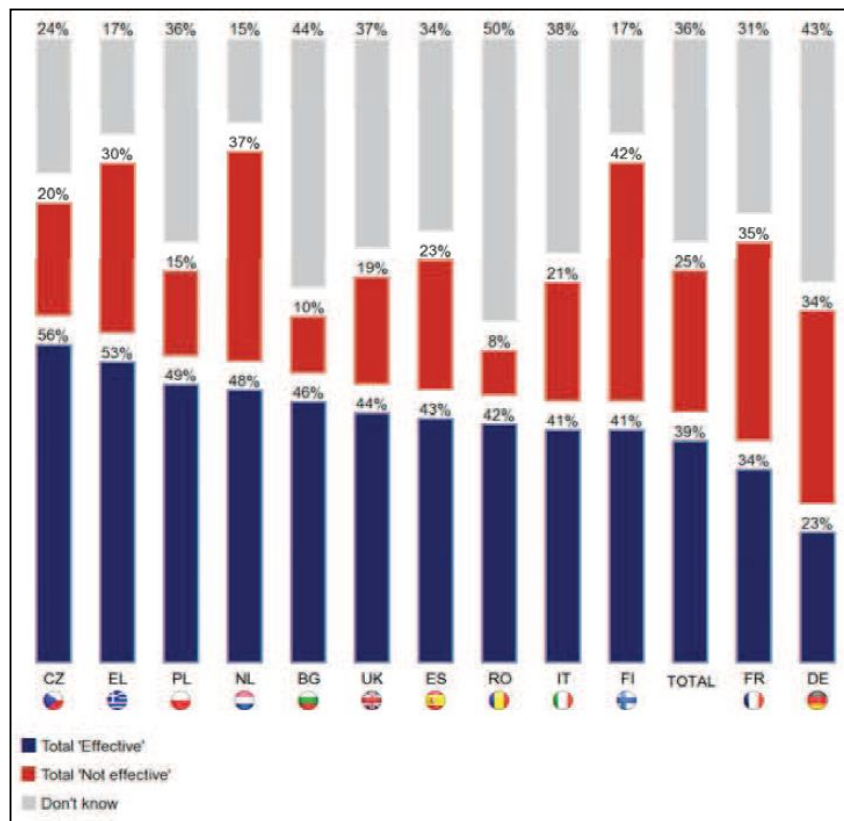
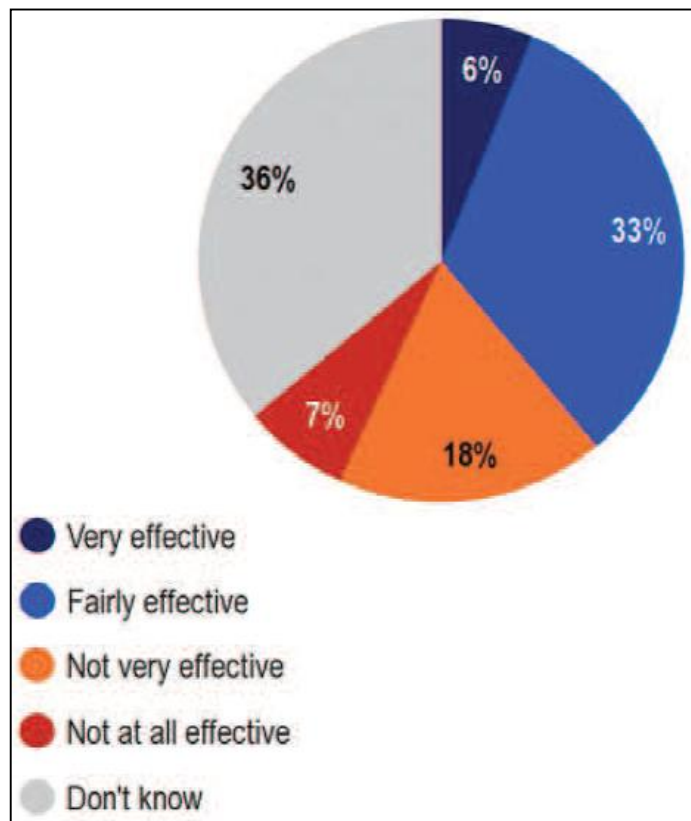


Have you ever heard of CO₂ capture and storage, also known as carbon capture and storage or carbon capture and sequestration (CCS)?



The majority, over two thirds (67%), had not heard of CCS. Over half (52%) of respondents in the Netherlands said they had heard of CCS and knew what it was. This was a much higher level of awareness than in any of the other countries, over five times as many as the average.

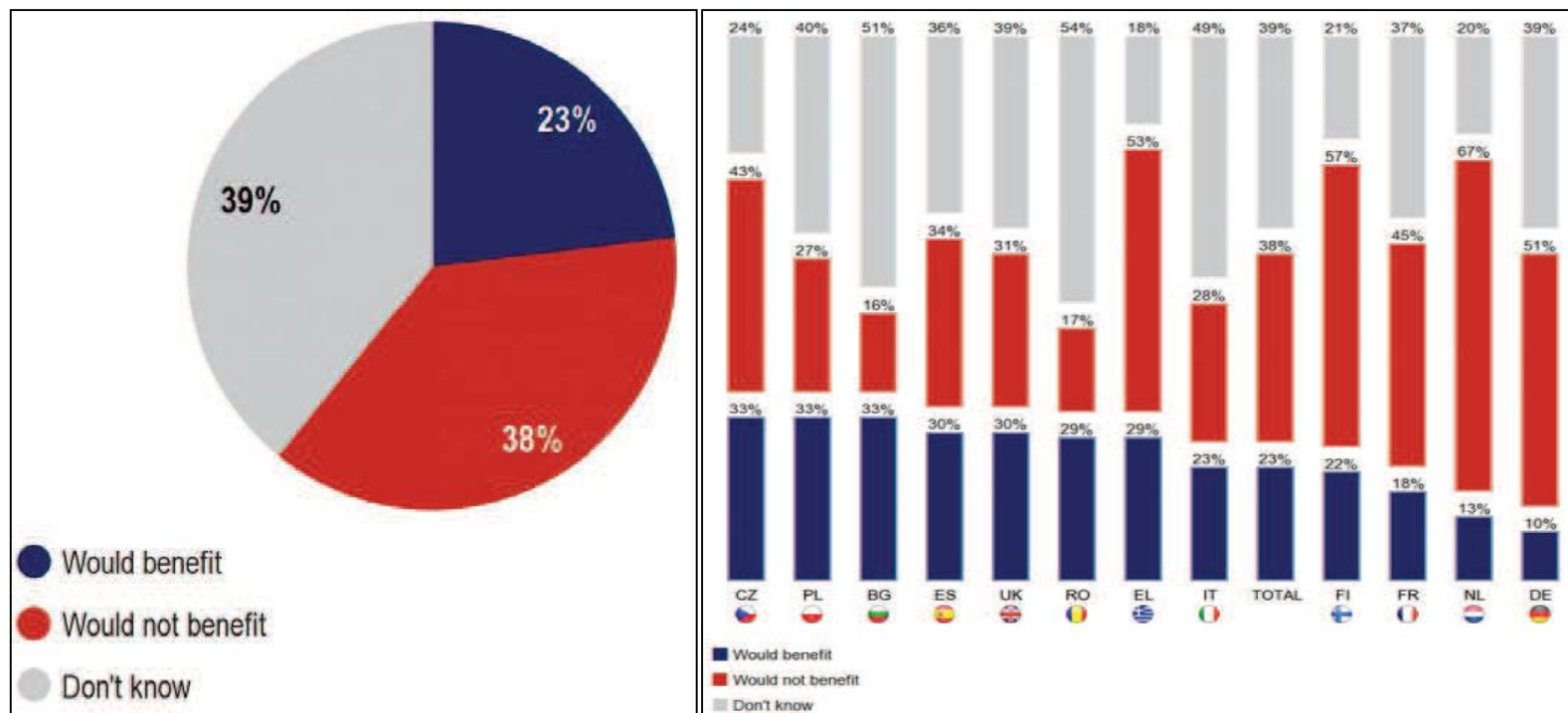
In your opinion, taking into account all you know about CCS or Carbon capture and storage, could you tell me whether you think it could be effective or not to fight climate change?



Respondents who indicated that they knew what CCS was were more likely to think that CCS would be effective than those who did not (54% vs. 35%).

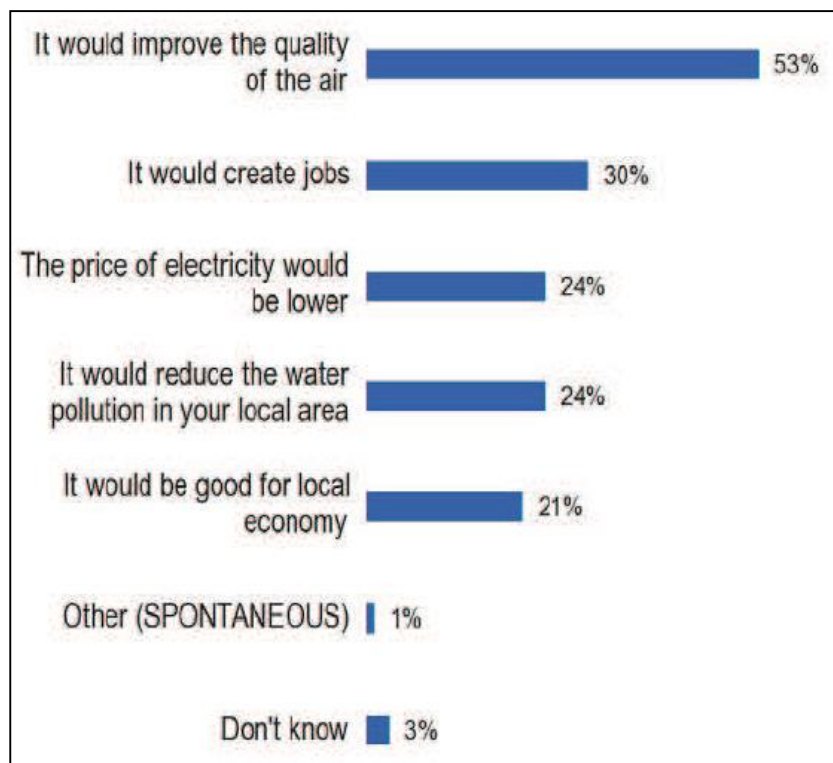


If CCS or carbon capture and storage technology was used in your region, do you think that you would benefit from it or not?

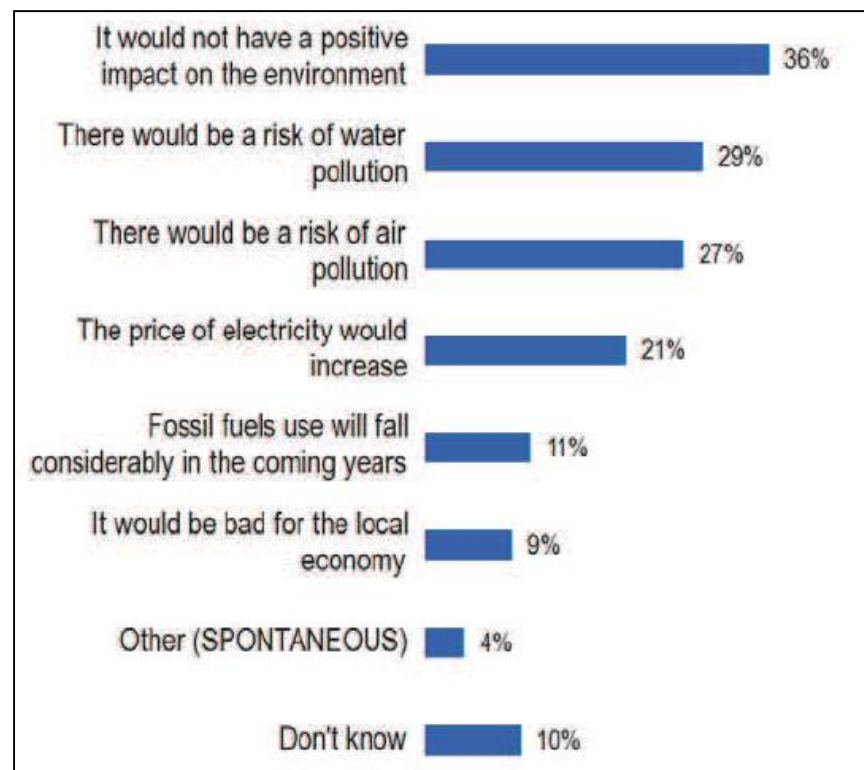


People were unclear about the benefits of CCS technology. Overall a higher proportion thought that they would not benefit from CCS technology (38%) than thought they would benefit from it (23%)

Why do you think that you would benefit from the use of CCS technology in your region?

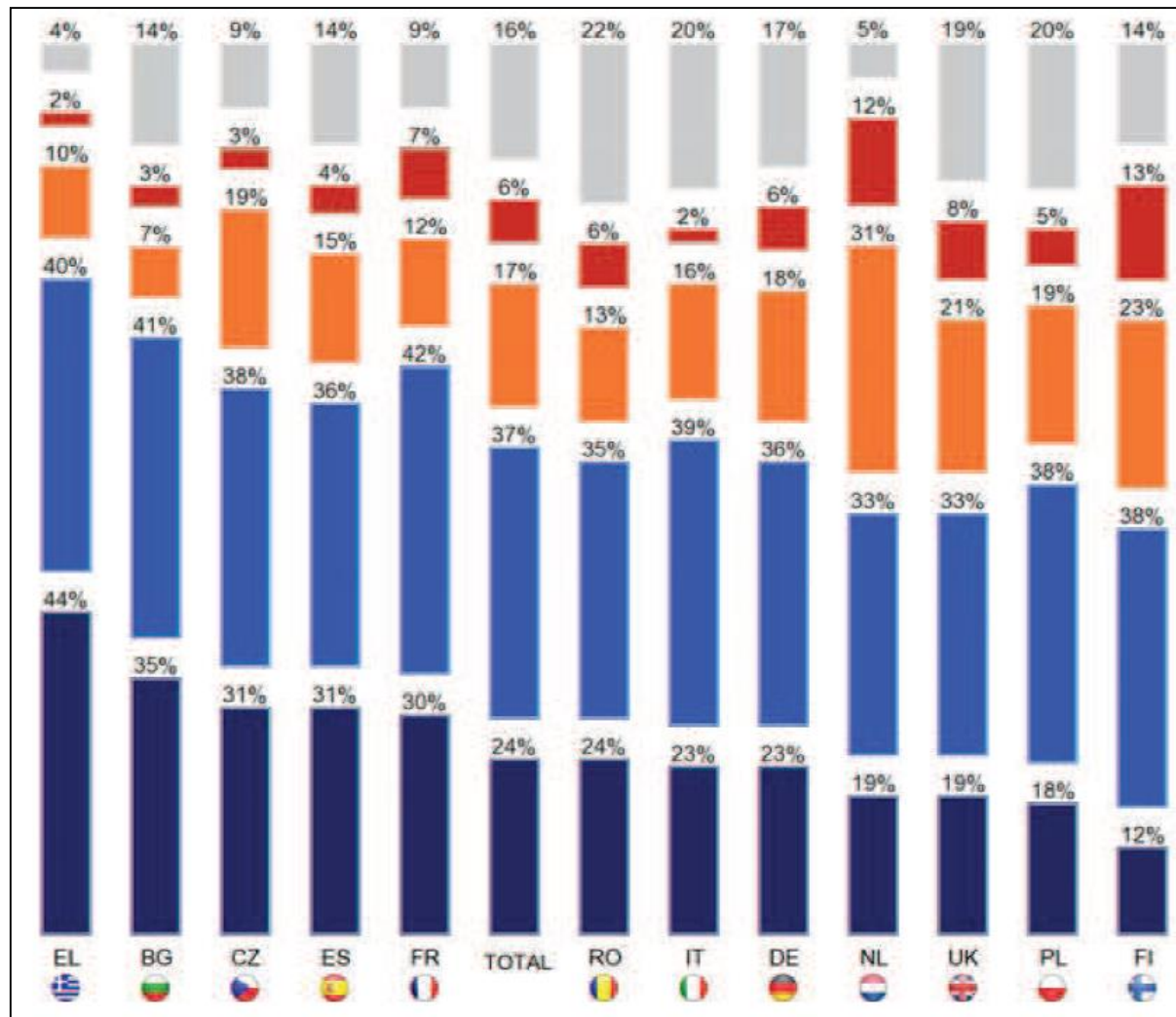


Why do you think that you would **not** benefit from the use of CCS technology in your region?



The main reason why people thought they would benefit from CCS technology was 'an improvement of air quality'. The main reason people thought they would not benefit was that it would 'not have a positive effect on the environment'

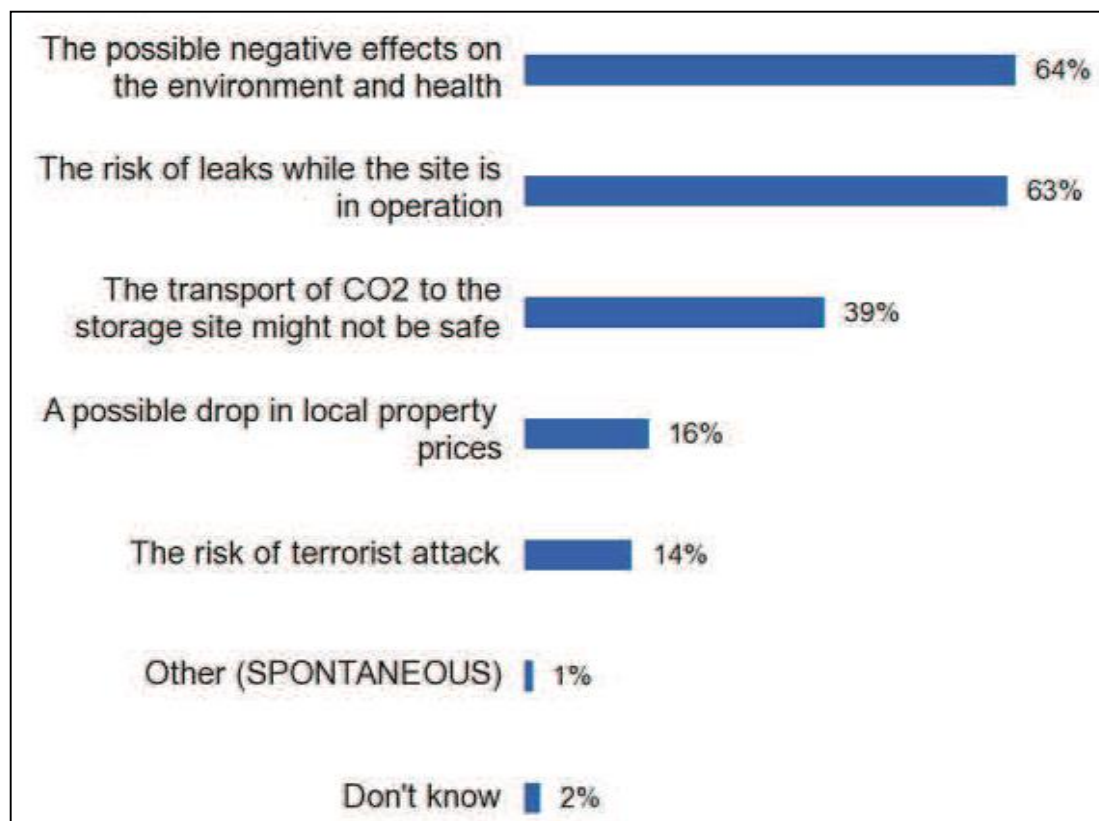
If a deep underground storage site for CO₂ were to be located within 5km of your home, do you think that would be....?



Overall around six in ten people (61%) expressed some concern about the safety of CO₂ storage. Just under a quarter were 'very concerned' about it

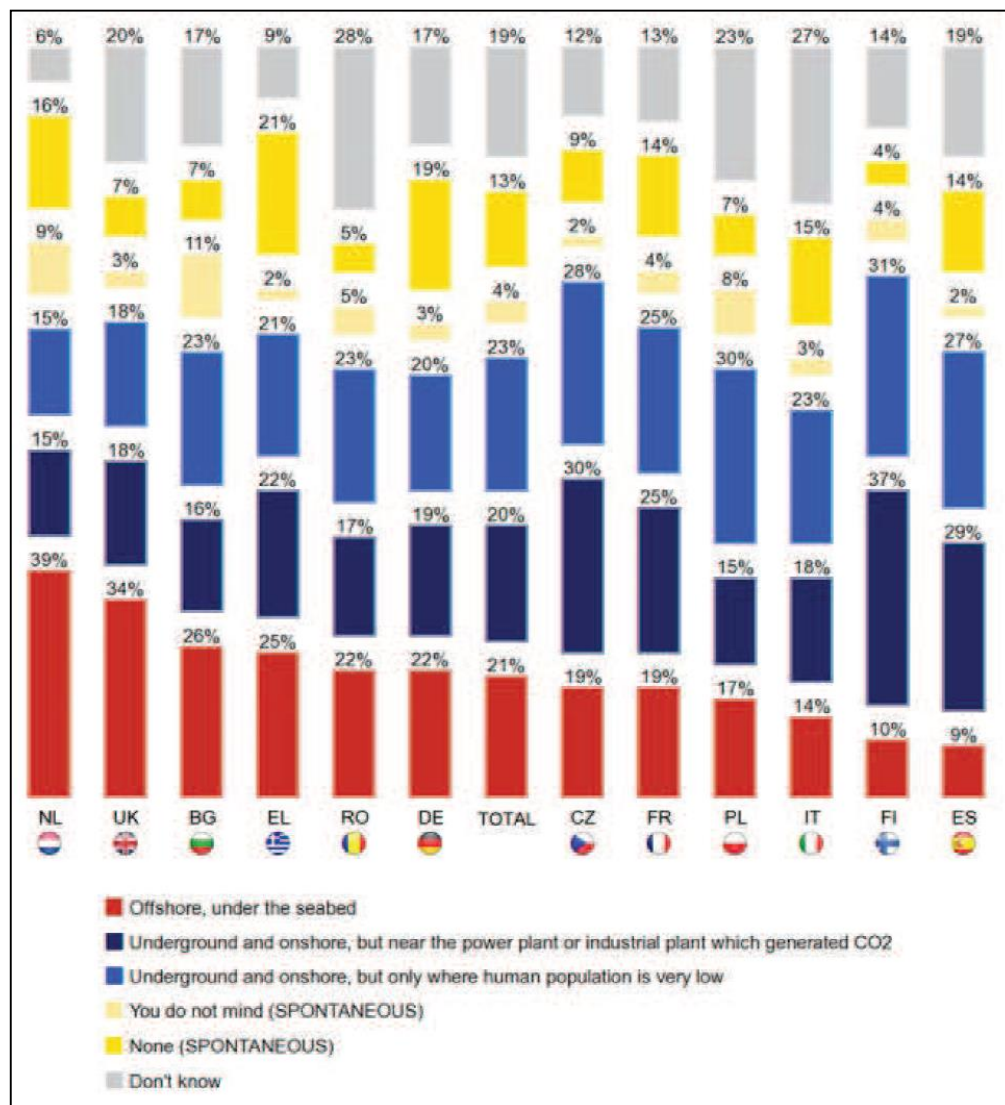


Why would you be worried?



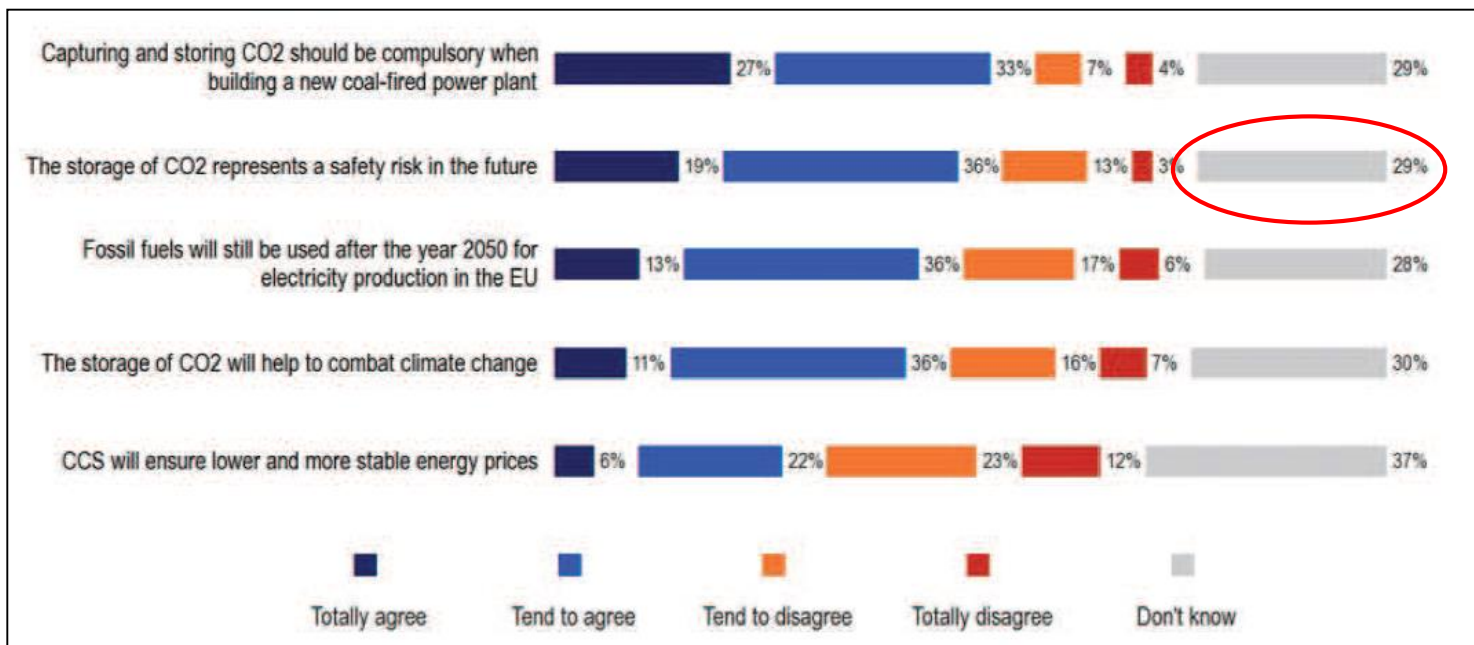
The two main concerns people had about CO2 storage were 'effects on the environment and health' and the 'risk of leaks while the site was in operation'

For future use of CCS in the EU, which of the following options concerning the storage of CO₂ would you prefer?



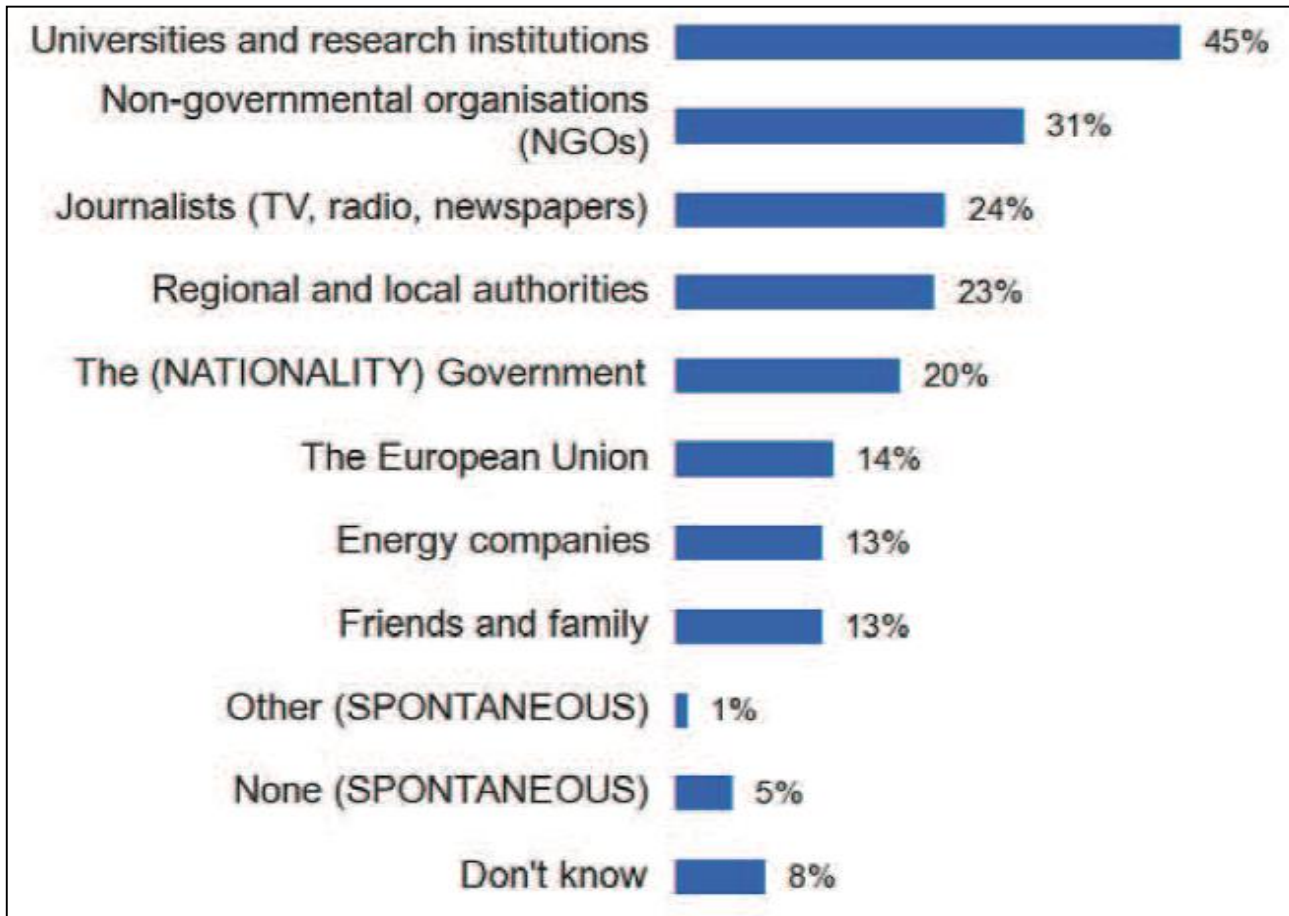
Public opinion was almost evenly divided about the best ways to store captured CO₂ emissions: under the seabed, in areas of low population density and near the facility that produced the emissions

Please tell me whether you totally agree, tend to disagree or totally disagree with each of the following statements.



Almost one third of respondents don't know whether the CO2 storage represents a safety risk in the future.
What are the information channels then, and how people perceive them?

Which tree of the following would you trust most to give you information about CCS?



Universities and research institutions were the most trusted sources of information about CCS, followed by NGOs and journalists

Polish experience with social acceptance in respect to the CCS Belchatow DEMO project which was supposed to be operational in 2016

Main reasons of social concern connected with CCS:

- activity of environmentally friendly NGOs (in this particular case - *The Centre of Sustainable Development*), which fuel the fear while exaggerating the threats and spreading the unproven information
- Natural fear of local societies from the new and not understood form of CO₂ treatment, which in fact is automatically associated with bad connotations (CO₂ – explosive and poisonous gas – wrong identification with CO; gas used in slaughtering breeding animals; CO₂ storage site is associated with a garbage-dump)
- Lack of the effective compensation system for the people living around the potential storage
- Approaching local elections, which radicalized local authorities' and their rivals' attitudes,
- Moderate interest of local authority in information meetings (reactivation only during conflicts)
- Pro-social attitudes deficit,
- The local authority and society have a low level of environmental awareness,
- High efficiency in organizing destructive activities, e.g. protests

What is missing:

There are no nationwide system of information on CCS, which should:

- explain the need for CCS in Poland (media),
- create the image of CCS as a low environmental technology
- inform about the low harmfulness of CO2 underground, and that there is no evidence of a significant impact of CO2 storage sites for the environment
- Improving the image of CO2 by building proper associations: CO2 - Coca-Cola and the atmosphere component which is also necessary for the life of plants

Lack of legislative solutions in the following areas:

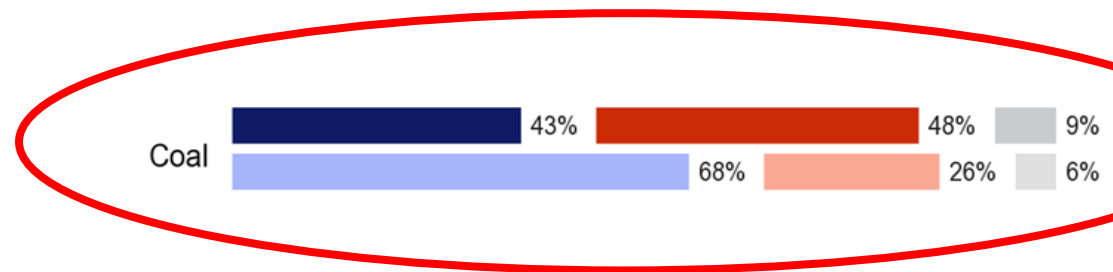
- restrictions on institutions or people that arouse anxieties through the consciously misleading the public

The determination deficit, manifesting itself:

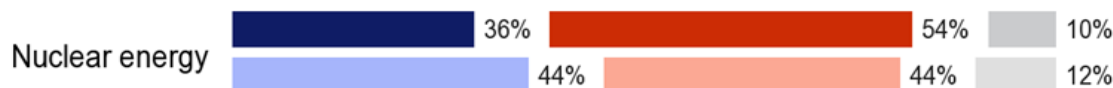
- lack of the conviction that CCS is an important technology for the Polish energy system (including among scientists and policy makers)
- lack of the assurance that industrial CO2 emissions cause the global warming,
- lack of the conviction on the stability of the EU decisions on CO2 emission reductions measures

A blessing in disguise...

To what extent are you in favour of or opposed to the use of the following sources of energy in your country?



Lack of mental change =
lack of need for
alternative energy
resources - which in fact
means a great chance to
convince society for CCS
technology



TOTAL

PL 

Total 'In favour'

Total 'Opposed'

Don't know

Thank you for attention,

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