

HERCCULES

full CCUS chain demonstration



**Funded by
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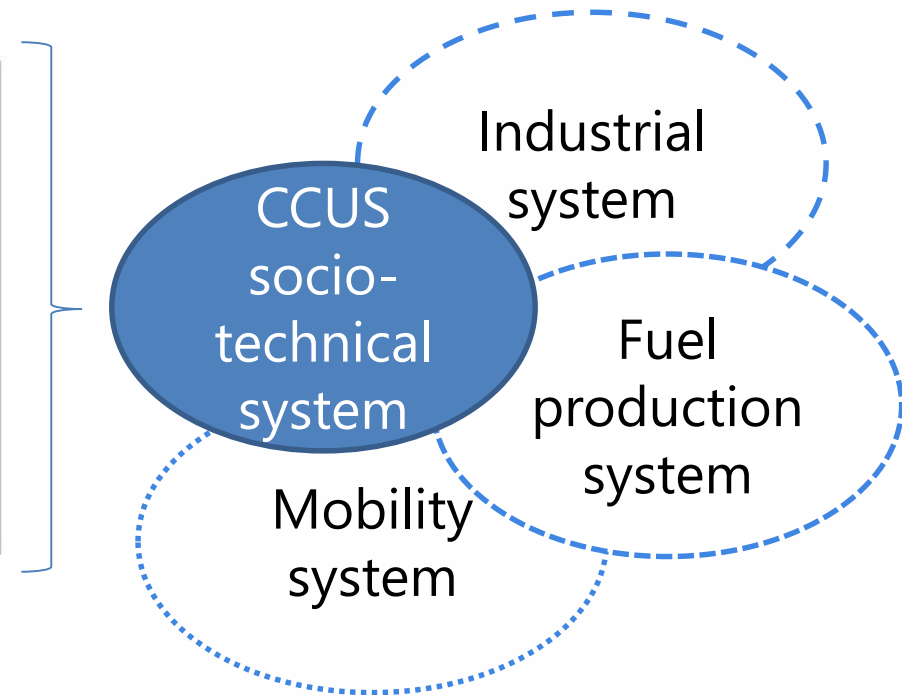
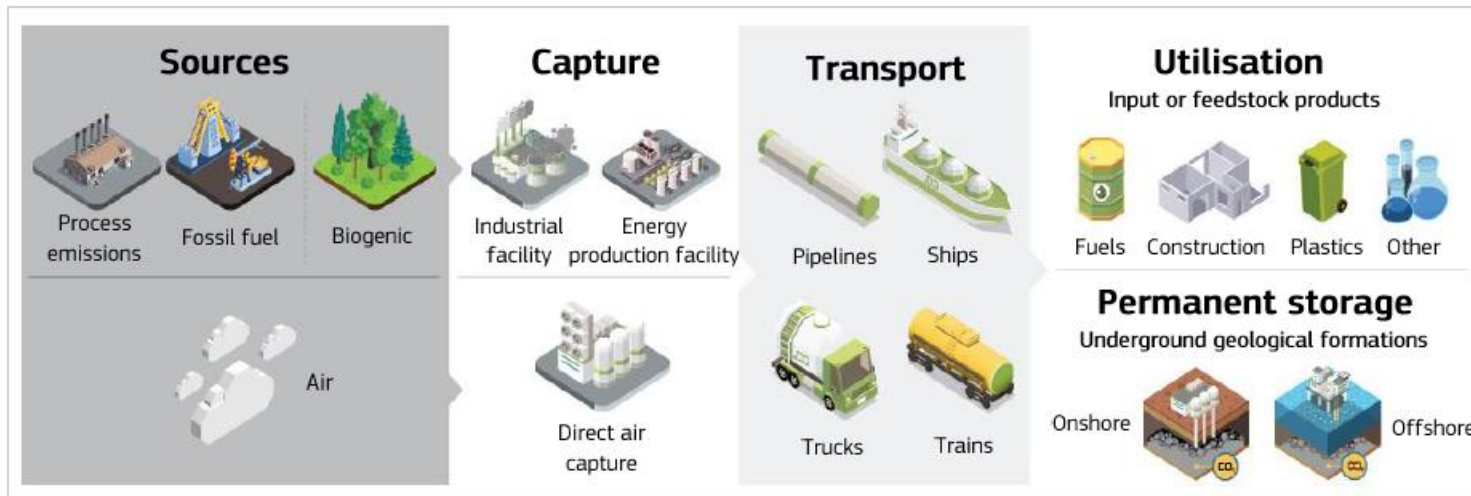


Tallinn, Estonia. 13/06/2024

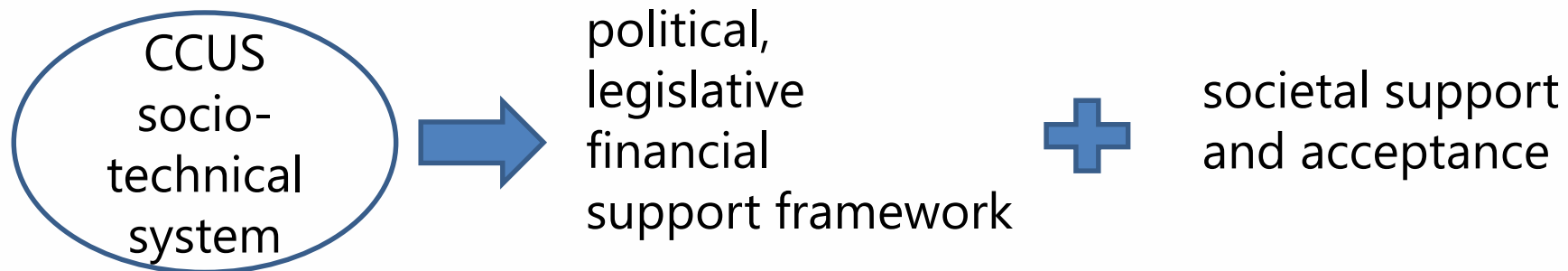
Public acceptance and the role and the potential contribution of the policy

Dr. Anne Kantel / Fraunhofer ISI

CCUS value chain

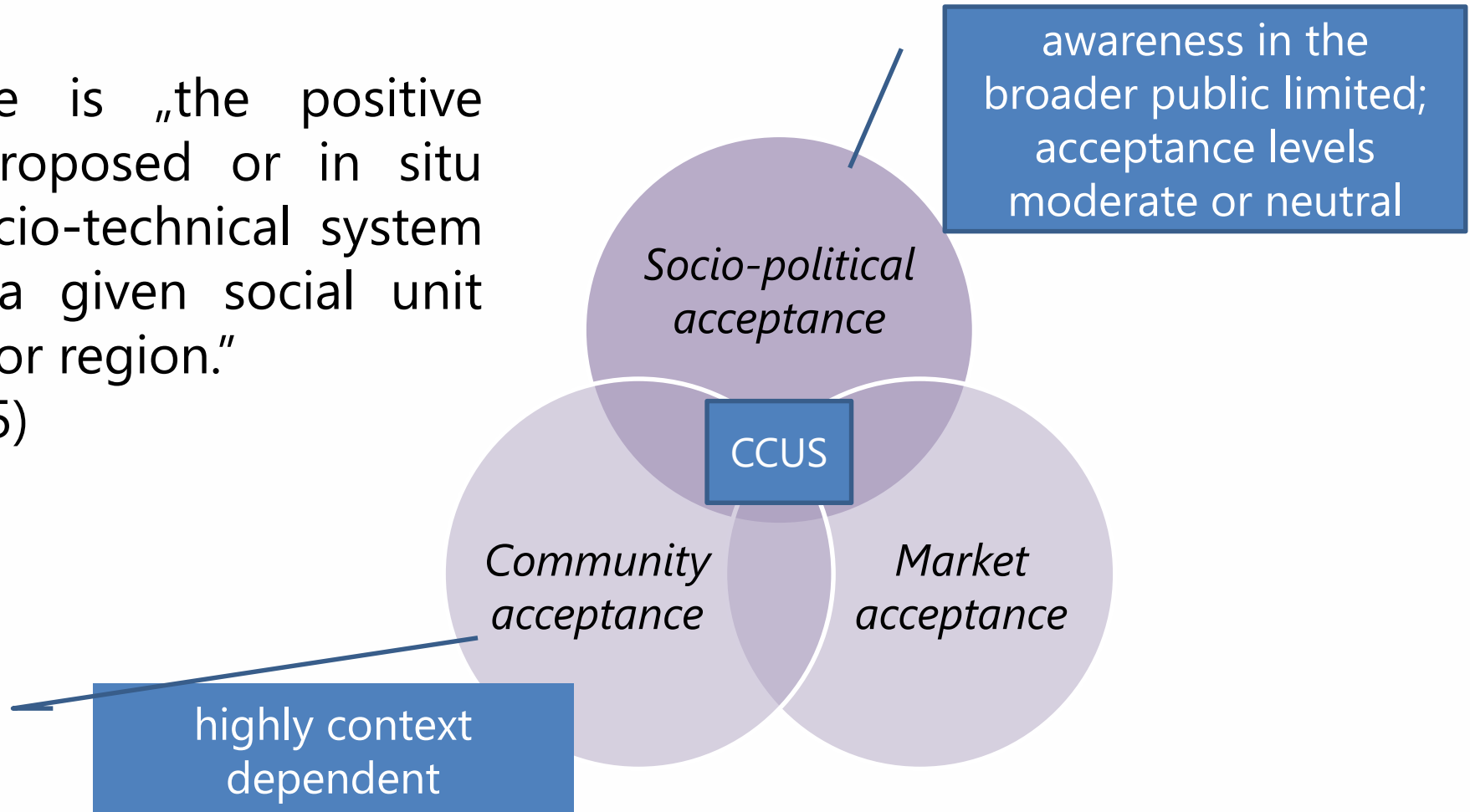


Source:
COM(2024) 62 final



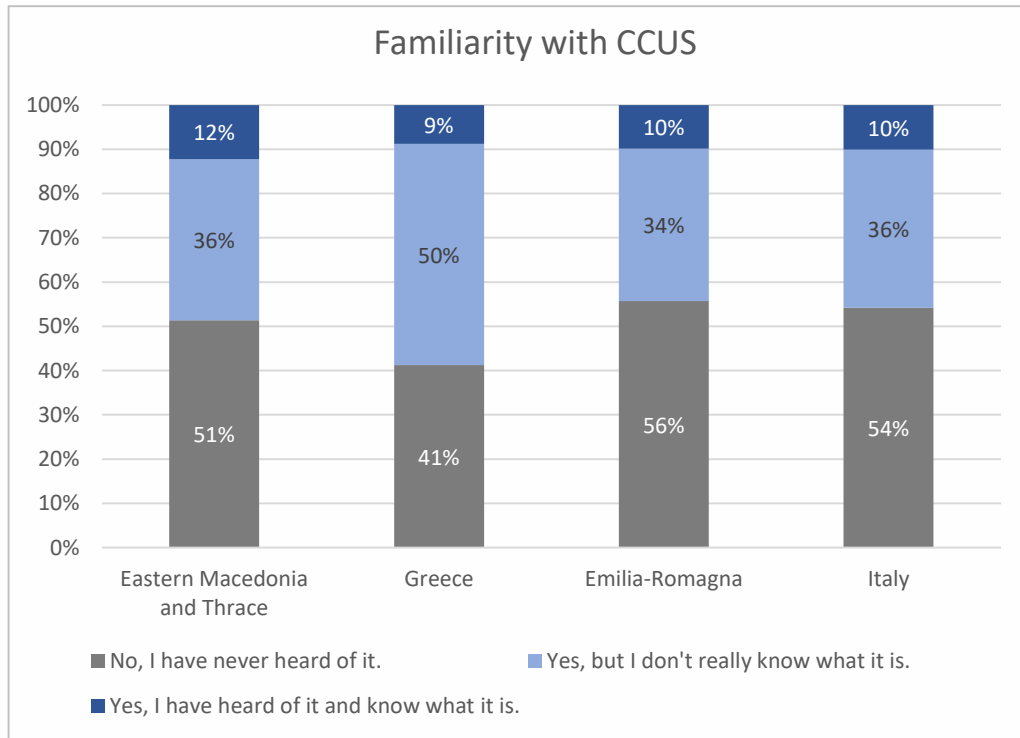
Why public perception & acceptance matter

Social acceptance is „the positive response to a proposed or in situ technology or socio-technical system by members of a given social unit such as a country or region.“
(Upham et al. 2015)

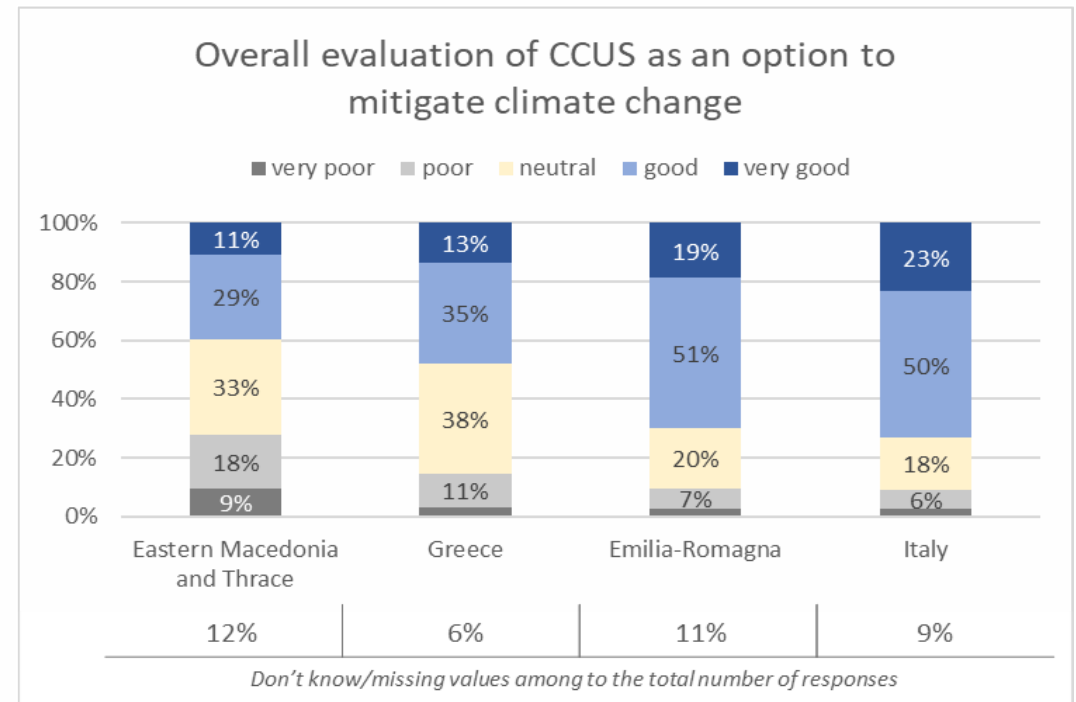


HERCCULES: Public perception of CCUS in Greece and Italy

Familiarity: Reported levels of familiarity are rather low, with less than 13% of respondents in all samples reporting to be familiar with the technology



Overall evaluation of CCUS: Assessment of CCUS as a technology option to reduce CO₂ emissions is mixed; irrespective of the level of assessment, Italian respondents tend to evaluate this option rather positively



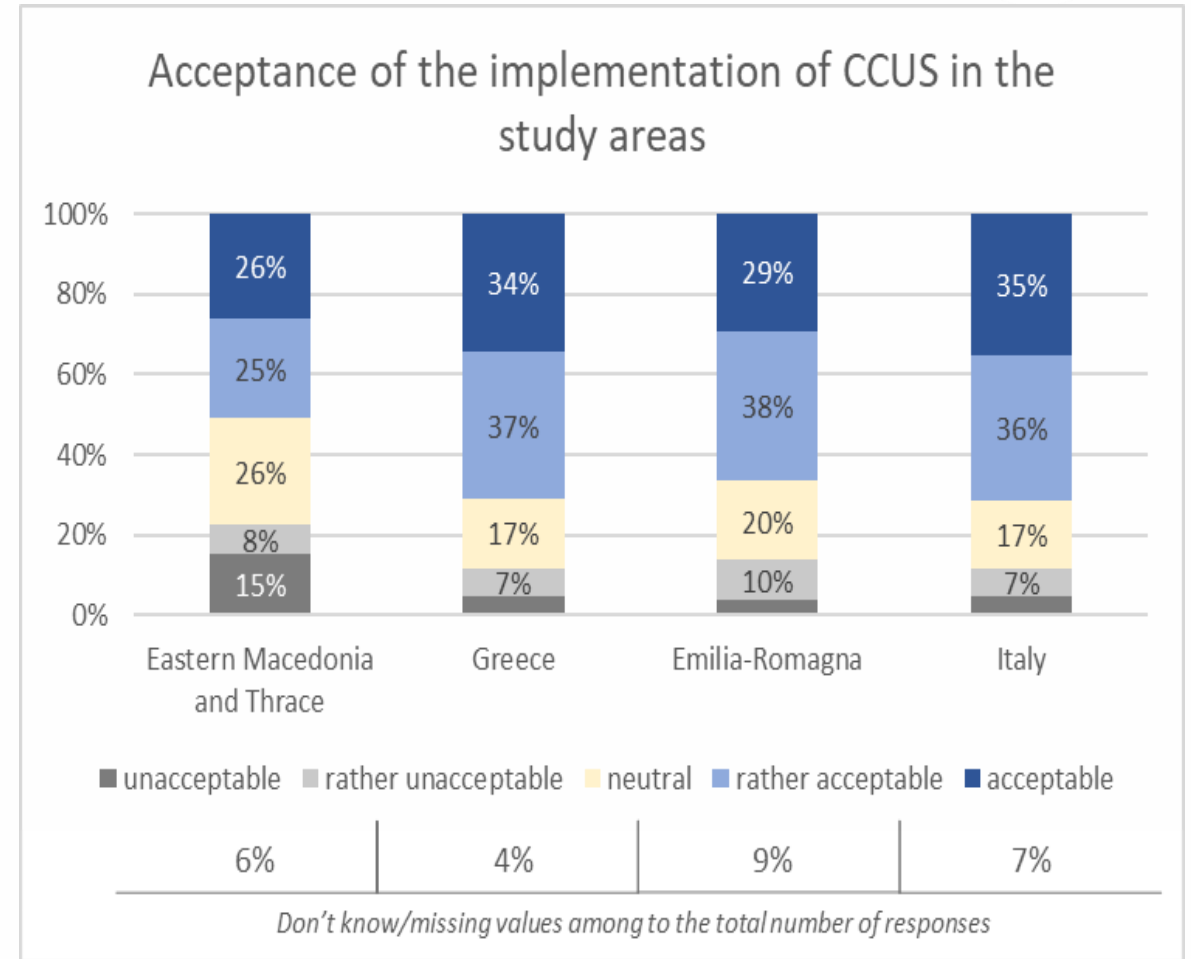
HERCCULES: Public perception of CCUS in Greece and Italy



Acceptance of a potential local implementation of CCUS in the study areas, i.e. Kavala and Thasos (Greece) and Emilia-Romagna (Italy):

Acceptance levels are quite high, with the least favorable responses in Eastern Macedonia and Thrace and comparable levels of acceptance in the other three samples

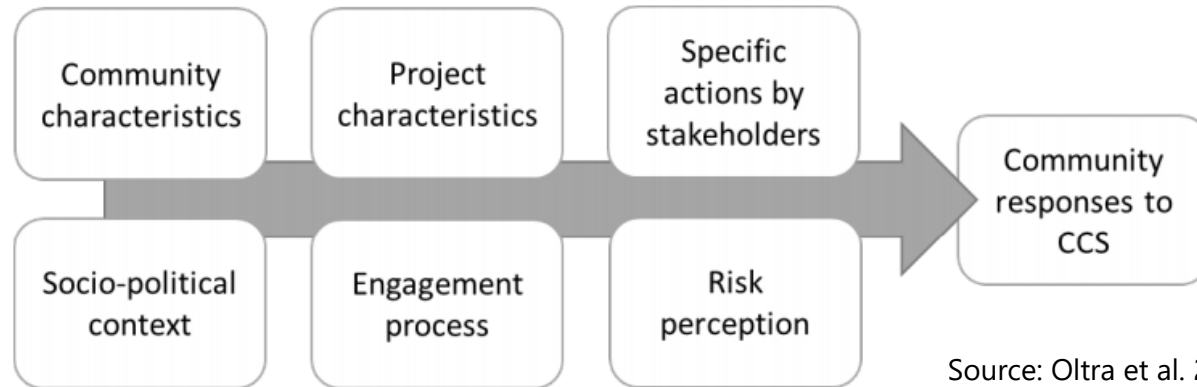
- **Low levels of familiarity often correspond with moderate to higher levels of acceptance**
- **Low levels of familiarity often indicate volatile public perception**
- **Community acceptance linked to and subject to change during project implementation**



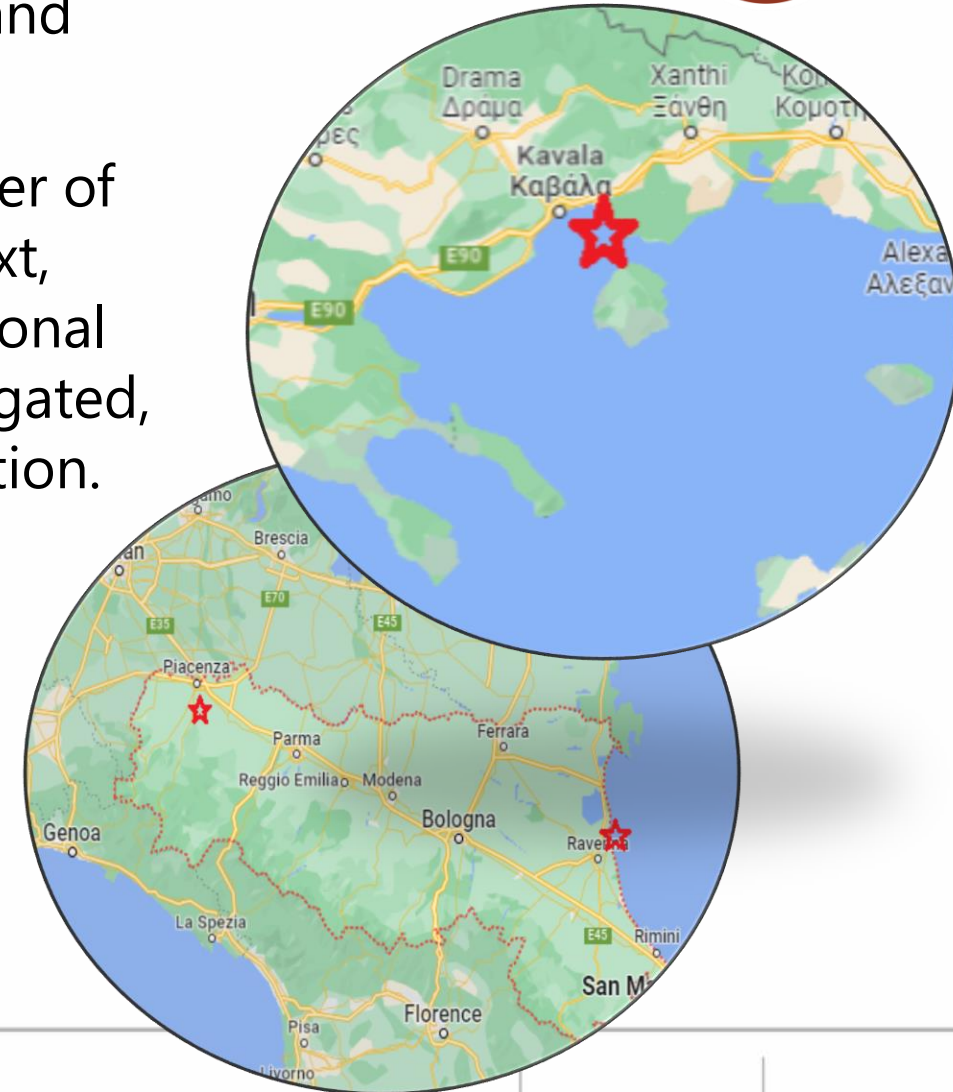
HERCCULES: Regional profiles



- Lack of community acceptance can hinder successful and effective implementation of CCUS projects.
- Perceptions of CCUS technologies vary due to a number of factors, including the geographical and political context, existing levels of acceptance, existing levels of institutional trust, the specific application or pathway being investigated, and the effectiveness of communication and participation.



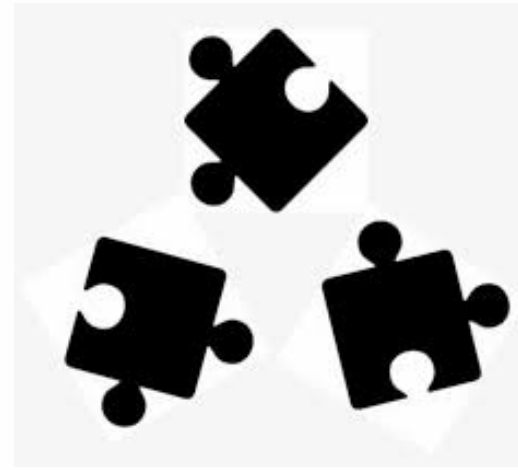
Source: Oltra et al. 2012



Role of policy in CCUS perceptions



- Uncertainty among citizens and stakeholders can be exacerbated by fragmented political signals and potentially incoherent image of CCUS technologies
- On the **EU level**, an important mix of supporting policies and instruments for CCUS exists, but lack of coherent regulatory framework along the entire CO2 value chain
- On the **national level** in EU countries, more fragmented path towards CCUS in member states' legislations and CCUS rarely included in a meaningful way in national climate mitigation measures.



➤ Political willingness as a pre-condition for positive legal, financial frameworks & social acceptance



Conclusion: Role of policy in CCUS public perception



- 1. The realization of a CCUS project requires a positive political, legislative and financial support framework along with societal readiness.
- 2. This requires clear, transparent and coherent legislative frameworks along the entire CCUS value chain outlining risks and potential costs and clear roles and responsibilities of all stakeholders involved.
- 3. Political willingness to aim for ambitious climate targets is a pre-condition for providing such a framework.
- 4. Legislative frameworks need to include clear guidelines for societal readiness and public engagement



Policy recommendations

*** selection from the CCUS Working Group on Public Perception, November 2023

1. It is crucial **to establish the legitimacy of CCUS technology** among the public and to initiate discussion on deployment plans at the national and territorial level. The decisions arising from these discussions will provide the framework for local implementation. **Policymakers play a vital role** in promoting societal discourse on CCUS and should **actively facilitate dialogue and engagement** with the public on this topic.
2. When communicating about CCUS, it is important to bear in mind that this takes place in a **wider context**, including discussions about portfolios of **potential decarbonisation pathways**, and **ongoing transitions** and associated (energy transition and climate targets) on both the EU and national level.
3. To facilitate informed societal decision-making regarding CCUS technologies, it is imperative that communication from policymakers at the EU, national, or project level enables **clear and transparent presentation of the benefits, costs, and risks** associated with CCUS, as well as those associated with alternative pathways. Moreover, regulatory frameworks should strive to **incorporate meaningful public engagement** as an essential component of CCUS policies and subsequent project development.



1. HERCCULES Public Deliverables: <https://www.herccules.eu/results-publications/deliverables/public.html>
 - Deliverable 8.1: "Analysis of policy alignment including country case studies" 2024, available
 - Deliverable 8.2, "Detailed regional profiles", forthcoming
 - Deliverable 8.3, "CCUS public perception in Italy and Greece", forthcoming
2. CCUS Forum WG on public perception of CCUS Working Group Paper, November 2023, available at <https://publica.fraunhofer.de/entities/publication/b0230565-704d-4899-ba50-2ff3814e769a/details>





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