



Interreg
Atlantic Area



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HYDEA is a 3.5-year Interreg Atlantic Area project with a total budget of €3.43M which aims at boosting the hydrogen transition in the Atlantic Area ports.



A growing Community

HYDEA Community is intended to be across borders forum for all hydrogen stakeholders. To date, 93 participants have been registered as members.

Throughout 2025, the Community successfully organised and executed 3 focus groups dedicated to Hydrogen storage and distribution, Hydrogen production and Hydrogen strategy in ports, respectively. These groups gathered experts from Spain, Portugal, France, and Ireland to analyse challenges, share experiences, and identify collaborative pathways across the hydrogen value chain in port environments.

The discussions and analyses carried out within the focus groups led to the identification of 23 collaboration opportunities. These opportunities cover complementary areas across the hydrogen value chain, including infrastructure, logistics, technological innovation, policy harmonisation, and cross-border hydrogen corridors.

[Join the HYDEA Community](#)

[Download the 2nd year report](#)

A tool to evaluate hydrogen deployment

HyTEA 1.0 is an open-source tool designed to support techno-economic assessment and decision-making in the planning and development of green hydrogen supply chains in ports.

HyTEA provides a flexible framework for assessing and comparing different green hydrogen supply-chain configurations, covering key elements from renewable electricity generation and hydrogen production through to storage, transport and end-use demand. The tool enables users to examine how renewable resources and hydrogen demand affect electrolyser operation, hydrogen production, storage requirements and overall system economics.

A key feature of HyTEA is its ability to integrate multiple location-specific renewable energy sources and hourly generation profiles within a single model. Users can represent

different combinations of renewable resources. HyTEA can also be used to assess and optimise the sizing of electrolyser and hydrogen storage under different conditions.

HyTEA users can explore multiple green hydrogen supply chain scenarios and evaluate their technical and economic implications. The tool calculates key performance indicators, including LCOH and GHG intensity. These indicators provide a basis for comparing different scenarios from both economic and environmental perspectives and identifying potential options for further development.

[Register to attend the workshop in Galway on 29 Sept. 2026](#)



Case studies are released

Building on the opportunities previously identified, partners have selected case studies aligned with their technical expertise and the priorities of participating ports.

Ireland: The Irish case study focused on the SH2AMROCK Hydrogen Valley initiative at the Port of Galway. The study examines the deployment of a hydrogen refuelling station to support hydrogen-powered mobility applications, including buses and heavy-duty vehicles, as part of the wider regional hydrogen ecosystem.

France: The first case study evaluates green hydrogen production from marine and other renewable energy sources, mainly onshore and floating photovoltaics and future offshore wind resources; to understand how local renewable electricity could cover projected hydrogen demand up to 2050. The second case study examines hydrogen production through modular steam methane/

biogas reforming with CO₂ capture and local distribution, associated with H₂X fuel-cell/battery systems for port power uses.

Spain: The case studies developed in the ports of Spain are dual combustion hydrogen/diesel for vessels, retrofit of heavy-duty vehicles, and onshore power supply for vessels.

Portugal: The Portuguese case studies are related to import/export of hydrogen-based energy vectors (e.g. methanol and ammonia), and supply of alternative green fuels from hydrogen and other energy vectors, namely through carbon capture and methanol sources.

[Access case studies](#)



Workshops coming soon

As ports and regional authorities are the targets most directly concerned by HYDEA outputs, several workshops will be organised soon.

Ireland: 29 September 2026

In University of Galway's premises to providing an opportunity to explore the HyTEA tool's capabilities and its application to hydrogen supply-chain planning in greater depth.

Spain: 15 October 2026

In La Coruña.

Portugal: 20 October 2026

In Port of Leixões premises.

France: 19 November 2026

Online event to summarize the main results and achievements of the project useful for French stakeholders of port ecosystem.

[Know more](#)



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