WENDY aims to unravel the factors triggering social acceptance of wind farms through an in-depth analysis at three dimensions: social sciences and humanities, environmental sciences, and technological engineering.

Regional and EU framework conditions affecting turbines' social acceptance.

Deliverable 2.2: Regional and EU framework conditions affecting turbines' social acceptance
WP 2, T 2.2.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Technical references

Project Acronym	WENDY
Project Title	REGIONAL AND EU FRAMEWORK CONDITIONS AFFECTING TURBINES' SOCIAL ACCEPTANCE
Project Coordinator	CIRCE FOUNDACION CIRCE CENTRO DE INVESTIGACION DE RECURSOS Y CONSUMOS ENERGETICOS jperis@fcirce.es
Project Duration	October 2022 – September 2025 (36 months)

Deliverable No.	D2.2
Dissemination level*	PU
Work Package	WP 2 - Preparatory studies related to turbines' social acceptance and wind energy citizenship
Task	T2.2 - Mapping regional and EU framework conditions affecting turbines' social acceptance
Lead beneficiary	8. APPA
Contributing beneficiary/ies	1. CIRCE, 2. WR, 6. MEC, 9. Q-PLAN
Due date of deliverable	31 May 2023
Actual submission date	22 June 2023

- Classified C-UE/EU-C – EU CONFIDENTIAL under the Commission Decision No2015/444
- Classified S-UE/EU-S – EU SECRET under the Commission Decision No2015/444

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

v	Date	Beneficiary
1.0	22/05/2023	APPA Renovables
2.0	9/06/2023	APPA Renovables
3.0	20/06/2023	APPA Renovables

Co-authors	Organization
Irma Villar, Lucía Castillo, Beñat Sanz.	APPA Renovables - Asociación de Empresas de Energías Renovables
Dimitris Katsaprakakis.	MEC - Energeiaki Koinotita Anatolikis Kritis
Michail Mitsouridis, Kosmas Vamvalis, Prodromos Gkalimanis, Evangelos Genitsaris.	Q-Plan - Q-PLAN International Advisors PC
Michail Ntovas, Anastasios Tsakas.	WR - White Research
Héctor Leiva, Talita Peixoto.	CIRCE - Centro de Investigación de Recursos y Consumos energéticos

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Disclaimer of warranties

"This project has received funding from the Horizon Europe Framework Programme (HORIZON) under Grant Agreement No 101084137".

This document has been prepared by WENDY project partners as an account of work carried out within the framework of the EC-GA contract no 101084137.

Neither the Project Coordinator, any signatory party of WENDY Project Consortium Agreement, nor any person acting on behalf of any of them:

(a) Makes any warranty or representation whatsoever, express, or implied,

(i) With respect to the use of any information, apparatus, method, process, or similar item disclosed in this document, including merchantability and fitness for a particular purpose; or

(ii) That such use does not infringe on or interfere with privately owned rights, including any party's intellectual property, or

(iii) That this document is suitable to any user's circumstance; or

(b) Assumes responsibility for any damages or other liability whatever (including any consequential damages, even if Project Coordinator or any representative of a signatory party of the WENDY Project Consortium Agreement, has been advised of the possibility of such damages) resulting from your selection or use of this document or any information, apparatus, method, process, or similar item disclosed in this document.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Executive summary

The WENDY project aims to unravel the factors that trigger the social acceptance of wind farms through in-depth analysis in three dimensions: social sciences and humanities, environmental sciences, and engineering technology.

Finding out the basis of the current barriers towards wind energy acceptance in Europe and understanding the framework conditions that can drive or hinder the social acceptance of turbines is key to further sustainably advancing the sector.

Understanding the status of citizen participation in terms of legal framework conditions, as well as uses and recommendations in different geographical areas, at the regional, national, and EU level, and in the different phases of onshore and offshore wind projects: planning, licensing, implementation, and development. To understand how this ecosystem of regulation, uses and recommendations affects the sustainable development of wind farm projects by addressing the development of good practices that contribute to the social acceptance of wind turbines.

This desk research was carried out at the EU level and in four pilot areas in the following countries: Greece (GR), Italy (IT), Norway (NO), and Spain (ES).

WENDY also focuses on active listening through different agents of the sector, of different typologies and profiles, as well as considering a variety of cross-border geographical areas, which allows having a vision through in-depth surveys, which added to studies related to the social acceptance of wind turbines and the citizenship of wind energy allow to have a broad view on the perception and social acceptance of wind farms. The study analyzes the community reward systems deployed, identifying under what conditions such elements can boost or hinder the success of a project.

In-depth desk research, complemented by:

(i) 17 semi-structured interviews with key stakeholders across the EU (3 per pilot area, that are: Greece, Spain, Italy, and Norway; 5 interviews at EU level).

(ii) Results from quantitative databases (EUROSTAT, PATSTAT, WIND EUROPE.ORG, IRENA).

(iii) Reference of previously funded European research projects.

The evaluation templates created for the analysis and the interviews conducted with the different actors in the sector are attached as Annexes I and II.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

It should be noted that the information and conclusions in this deliverable feed into the WENDY policy gap identification component in Task 6.3 of the project.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

TABLE OF CONTENTS

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

LIST OF FIGURES

LIST OF TABLES

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

1. Introduction

This document presents the framework of regional and EU conditions affecting the social acceptance of wind projects under the WENDY EC-GA project contract no. 101084137. The deliverable D2.2 is part of Work Package 2 which is related to studies of the social acceptance of wind turbines and wind energy by citizens. As a contribution to this study, Task 2.2 deals with the "Mapping of regional and EU framework conditions affecting the social acceptance of turbines" within the Action Description of the WENDY project.

The main objective of this work is to map the framework conditions that can drive social acceptance of wind turbines, as well as to identify the basis of current barriers to wind energy acceptance at a regional, national, and European level, and to identify the drivers that contribute to the social acceptance and the sustainability of the sector.

Based on an analysis of the current regulatory framework, focusing on European directives and their implementation in various Member States, this study considers the recommendations and practices proposed by the EU to facilitate and promote public participation.

The main objective of this study is to determine the degree of implementation of European directives and recommendations in the four pilot regions investigated. In addition, it aims to assess the regional regulations that facilitate or hinder the development of wind farms.

Considering each of the phases of a wind project, namely planning, licensing, and development, it is essential to have a thorough understanding of public participation. Therefore, this study examines and evaluates the level of citizen participation, collaborative planning, and the application of community reward systems at each stage of the process.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

2. Desk research and methodology

2.1 Desk research methodological approach

Within the framework of regulatory conditions, a thorough investigation of the regulatory context at European and regional levels has been carried out, as well as a detailed mapping of social acceptance throughout the different planning, permitting, and development procedures applied to both onshore and offshore turbine installations. Public participation, collaborative planning, and existing community reward systems for this type of facility were evaluated.

To ensure consistency in the study, guidelines, and templates were provided to each of the members involved in this task (see Annex I).

- *The planning phase*. At this stage, the following are established: project objectives, scope, planning of tasks and resources, and expected results. The socio-economic dimension of the project and the relevant baseline studies on the feasibility of the project in terms of location and other requirements are defined.

- *The licensing phase* involves obtaining the necessary permits and authorizations for the construction and exploitation of wind projects. It requires coordination between the project developers, the pertinent Administrations, and the stakeholders.

- *The development phase*. It includes the project development and operation. Monitoring and control of the project are carried out using indicators to verify the correct development of the project. In case of significant deviations, the objectives should be redefined, and the necessary changes should be made.

Project phases vs. citizen participation

For a better understanding of the methodology used, the information related to citizen participation in the different phases of the project has been crossed in the form of a matrix, where the y-axis indicates the different phases of a wind project: Planning, Licensing and Development; and the x-axis indicates the regulatory conditions or recommendations related to Public (Citizen) Participation, Collaborative Planning, and Community Reward. This approach provides information on the status of citizen involvement in each phase according to the legal framework or recommendations.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Phases of a wind project	Public participation	Collaborative planning	Community reward
Planning			
Licensing			
Development			

Figure 1. Project phases vs. citizen involvement. Regulatory conditions. *Source: own elaboration.*

Supporting or hindering factors vs citizen participation

Special attention has been given to identifying factors that support and encourage Public Participation, Collaborative Planning, and Community Reward, as well as identifying barriers or factors that hinder citizen participation.

	Public participation	Collaborative planning	Community reward
Supporting factors			
Hindering factors			

Figure 2. Supports and hinders factors vs. citizen involvement. Regulatory conditions. *Source: own elaboration.*

2.2 Results of desk research at the EU Level

DIRECTIVE (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources is one of the implementation bases and recommendations used by EU Member States.

Throughout this Directive, the concepts of citizen involvement and social acceptance are mentioned in various articles, playing a key role in the development of the sector. The following articles and recommendations are worth noting.

Among the first considerations are:

- (17) Small-scale installations can boost public acceptance and ensure the development of renewable energy projects but may require specific conditions, such as feed-in tariffs.
- (27) Infrastructure planning for renewable electricity production must consider policies regarding the participation of the local population.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

- (67)(70)(71) The involvement of renewable energy communities can provide opportunities to improve energy efficiency and reduce it.

- Energy poverty, increasing local acceptance, and generating local investment. Member States should allow any form of entity for renewable energy communities, as long as they can exercise rights and be subject to obligations acting on their behalf.

- (125) This Directive should be by the provisions of the Convention on Access to Information, Public Participation, and Access to Justice in Environmental Matters and Directive 2003/4/EC, as they are applicable.

Article 4 highlights the importance of allowing non-discriminatory participation of small players and local authorities (4.8.d), and of ensuring local acceptance (4.8.f).

Article 18.6 establishes that Member States must provide information and training programs to inform citizens about the use of renewable energies and their rights as active consumers, as well as involve local and regional authorities in this process.

Article 22.4.f mentions that participation in renewable energy communities must be accessible to all consumers.

A) PLANNING PHASE FINDINGS

Several general guidelines and recommendations can be applied to ensure citizen participation in the process.

Directive 2018/2001 gives relevant space to the citizens; it is considered a necessary element for the expansion of renewable energy projects. These concepts can be transferred to the planning phase of a wind project to ensure that all stakeholders are considered.

In addition, some other agreements and initiatives promote public participation in the planning of renewable energy projects, such as the EU 2020 Guidance Document on Wind Energy Projects and Nature Protection Legislation. This document states that extending stakeholder consultation and participation processes to the planning phase positively influences the development of a project.

Another example worth highlighting in this area is the Aarhus Convention, an international protocol that establishes three fundamental pillars for access to information, public participation, and access to justice in environmental matters. This convention has been ratified by all members of the European Union and transposed by Directive 2003/35/EC.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

In this sense, the ideas of collaborative planning and community reward can be taken up at the planning phase of the project to ensure an involved, active, and supportive society with wind farms. This can help to explore possible areas of conflict or issues with local citizens.

B) LICENSING PHASE FINDINGS

Public participation and stakeholder involvement is a legal requirement in the European Union and is regulated by the Environmental Impact Assessment Directive (2014/52/EU). This directive establishes the obligation for developers to involve and to provide clear and transparent information about the project and its impacts:

- Article 6.2 states that the public should be informed electronically and by public notices or other means, about environmental decision-making procedures to ensure effective participation of the public concerned.

- Article 9.1 specifies that when it is decided to grant or refuse an authorization, the public and the competent authorities shall be informed without delay and the information shall be made available to them.

As stated in the 2020 Guidance Document on wind energy projects and EU nature protection legislation, "*public participation is legally embedded in the EIA and EEM procedure. Recent judgments handed down by the EU Court of Justice have clarified that this also applies to the appropriate assessment procedure*.". It is also mentioned that Stakeholder involvement should start in the early planning stages of a wind energy project. Stakeholder consultation should continue throughout the later planning and permitting stages.

In this phase, collaborative planning input is linked to public participation through consultation periods that inform the public about the details and scope of the project and promote dialogue, transparency, and cooperation.

The use of community compensation schemes is not mandatory, but it is an effective tool to promote project acceptance. Community incentive schemes are one way to compensate the community for the development of the wind project. This may include the purchase of shares or bonds by the community, the creation of a community compensation fund, the payment of rent for land use, or the implementation of renewable energy projects in the community.

C) DEVELOPMENT PHASE FINDINGS

As advised in Directive 2018/2001 and promoted in the 2020 Guidance Document on wind energy projects and EU nature protection legislation, and the Aarhus agreement, it is positive to keep the public involved in the development phase.

Throughout the development of the wind project, the success of the negotiations and the public participation and consultation process will be appreciated. It offers an important

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

opportunity to measure the effectiveness of the participation and dialogue measures implemented to achieve social acceptance of the project.

In addition, it will be possible to assess whether social concerns have been adequately addressed. On the other hand, it will consider whether stakeholder expectations regarding the expected goals as well as whether constructive and collaborative relationships between the parties have been established and maintained.

2.3 Desk research findings at the pilot level

2.3.1 Greece pilot area

Directive (EU) 2018/2001 was recently introduced into Greek law after the March 2023 vote. Also on March 28, 2023, Law 5037/2023, which introduces special provisions for RES projects, came into effect.

In Greece, local communities are highly valued and supported, and promoted by different entities and institutions. Law 4513/2018 recognizes and regulates energy communities.

A) PLANNING PHASE FINDINGS

During the planning phase, the wind project site is selected based on potential and outside of any restriction zones. The plan is presented to the board and approved on behalf of the Community. This is done internally, without involving any other external actor or stakeholder.

Furthermore, before obtaining a license, various fundamental preliminary studies are conducted to assess, among other factors, the potential effects on the local cultural environment and human activities. These studies encompass the creation of a noise diffusion map, an evaluation of the visual shadow cast on nearby settlements, the identification of visual impact zones, and the production of photomontages showcasing representative locations in the vicinity.

B) LICENSING PHASE FINDINGS

In the early stages of site licensing, a representative of the local community is involved for the first time. Initial contacts are made with some of the licensing authorities. If they have serious objections to the project, possible modifications are examined.

With the issuance of the first required approvals, the prepared documentation is formally submitted to the authorities requesting the issuance of their approvals for the construction of the project. These approvals will be included in the main licensing process of the project. Licensing stakeholders are involved in the project.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

To sensitize the municipality, once the project approval is obtained, the project is presented in detail to the mayor, his closest collaborators, and the municipal council. The Community will also try to ensure the support of the local Municipality for the implementation of the project.

In Greece, renewable energy projects, including wind farms and energy communities, need to be approved:

- Energy Production Certificate, which was introduced with law 4685/2020.
- Issuance of the environmental license, introduced by law 4014/2011.
- Issuance of the Conditions of Connection of the project to the electricity grid, the issuance of the Installation Permit, and the issuance of the Operating Permit.

The environmental licensing process aims at the final issuance of the Environmental Terms Approval (ETA), which process is defined in Law 4014/2011. For all projects subject to the environmental licensing obligation, the approvals issued by the Licensing Authorities will be used and are expected to significantly speed up the issuance of the ETA. The new project or activity is categorized, obviously regarding its type and size, according to the definition in the Ministerial Decisions presented previously: Ministerial Decision 1958/2012, number DIPA/oik. 37674, number oik. 2307 and number YPEN/DIPA/74463/4562.The energy community licensing process is defined in the legislation and is carried out by the Energy Community. Local community participation is guaranteed, although the local community most likely does not have to participate in the licensing process, as it is a typical administrative process.

Of course, their approval and involvement in the project will be presented and passed on to the licensing authorities through the submitted applications to create a positive attitude during the licensing evaluation. The community will also present in the applications all the approvals and letters of support they have received from the local Municipality, Regional Authority, and other interested parties - organizations representing local communities.

C) DEVELOPMENT PHASE FINDINGS

In the implementation of the project within the energy community framework, the participation of citizens in the process and construction of the project is active. One of the main objectives will be to maximize the participation of local experts, engineers, manufacturers, machine owners, and operators, etc., in the project to maximize the added value of the project in the local community.

Representatives of local communities can, of course, participate in the construction of the project as supervisors - inspectors, to ensure that impacts on existing local human activities and the natural environment are minimized.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Local communities can also protect and guarantee the normal installation of the project, against any other negative reactions that may be organized by people irrelevant to the local area, who simply oppose wind farms. The local community and the local authorities involved can also contribute to the dissemination of the project results, as a success story, which can constitute a pilot case to be replicated also in other regions.

2.3.2 Italy pilot area

The stakeholders in Italy can participate without barriers (EC, 2022). For each stage of the decision-making process (in particular: zoning, and authorization procedures), the "existence and quality of tools and spaces" can be analyzed and assessed to "each level of public engagement", information, consultation, and participation (Luca, E. et al, 2020). An EU research project, WinWind, comparatively assessed the policies and measures promoting procedural justice in various European contexts, including Italy, by comparing certain community acceptance factors (Luca, E. et al, 2020). Based on the search of the different measures for public engagement levels (in particular: information, consultation, participation) conducted by Luca, E. et al (2020), in the case of Italy, for both the decision-making procedures of (a) wind energy zoning, and (b) authorization, there are only a few examples of punctual provisions for "information" and "consultation", and no measures or instruments for "participation", contrary to other countries.

Concerning the financial participation which reflects and shapes the so-called distributional justice, in general, Luca, E. et al (2020) identify various forms of active and passive financial participation of local communities and citizens in wind farms.

In Italy, various regions have introduced renewable energy communities as a means of encouraging active financial participation (Luca, E. et al, 2020). Regarding the voluntary measures in Italy, Luca, E. et al (2020) state that no measures/instruments exist for active financial participation, and a moderate number of examples or provisions exist for passive financial participation. In practice, community energy models range (Krug, M., Di Nucci, M. R., 2020):

a. from wind farms entirely community-owned and community-led that are initiated and operated by the local community, or "community of locality" which (i) decides turbine siting, (ii) has most voting rights during the development, and (iii) benefits most from the revenue.

b. to commercial developer-driven and investor-driven wind farms, in the frame of which citizens can purchase shares or individual turbines.

The main regulatory framework for wind farms in Italy that defines the authorization perspective, includes among others:

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

- Legislative Decree n. 387/2003, setting the reference framework for the authorization of renewable energy plants (Martorana, C., Tedeschi, A., 2022, WinWind, 2019c).
- Legislative Decree n. 28/2011 (Romani Decree), integrating the renewable energy plants authorization regime (Martorana, C., Tedeschi, A., 2022, WinWind, 2019c).
- Legislative Decree No. 152/2006 approving the Code on the Environment, defining the environmental procedures (Martorana, C., Tedeschi, A., 2022, WinWind, 2019c).
- Legislative Decree no. 42 of 2004, better known as the Code of Cultural Heritage and Natural Landscape (WinWind, 2019c).
- Minister Decree 21/9/2010, Guidelines for renewable energy power plants approval (WinWind, 2019c).
- Law 241/1990, concerning administrative provisions (WinWind, 2019c).

Various laws, royal decrees, ministerial decrees, and other pieces of legislation, as well as specific regulations introduced by Parliament, the government, and ARERA, shape the framework of rules related to wind energy projects (Martorana, C., Tedeschi, A., 2022, WinWind, 2019c):

- Edilizia Libera regime: it applies to small-scale plants and foresees that no formal authorization title is necessary, and the intervention can be performed by simple notice to the municipality. Nevertheless, it does not exempt such projects from requiring any necessary environmental authorizations.
- Certified works declaration (DILA): it provides a simplified authorization and is certified by a technician being filed with the municipality and allowing the applicant to start the works without waiting.
- PAS ("Procedura Abilitativa Semplificata", Decree 28/2011): it must be filed with the municipality at least 30 days before work begins. It concerns wind power plants, up to 60 kW, and anemometric towers of more than 36 months duration (WinWind, 2019c).
- Communication: a very simplified process for several small wind power plants.
- Single authorization: it comprises the main authorization for renewable energy plants and is adopted by the relevant region or province.

A) PLANNING PHASE FINDINGS

Regarding spatial planning (zoning/siting), although, the wind farms sitting was for a long period a disputed and controversial matter between the national government and the

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

regions/municipalities of Italy, it was found that Italy today belongs among the countries which have spatial plans at national or regional level designating wind energy zones (Luca, E. et al, 2020). However, land use planning concerning wind farm siting is not envisaged in Italy, and Regions can identify areas not suitable for the installation of wind turbines (Regional guidelines), without any legally binding effect (WinWind, 2018).

B) LICENSING PHASE FINDINGS

The responsibility for energy policy is shared between the central government and the Regions. The licensing and authorization process for wind energy projects is regulated by: Legislative Decree 387/2003, Ministerial Decree of 10 September 2010, Legislative Decree 3 March 28/2011, Legislative Decree No 112/1998, Legislative Decree n. 152/2006 which regulates the Environmental Impact Assessment (EIA) process (WinWind, 2018). The Ministry for the Environment, Land and Sea is responsible for issuing the "integrated pollution prevention and control" - IPPC permit, undertaking Environmental Impact Assessment (EIA), and Strategic Environmental Assessment (SEA) for farms falling under the government's competence (WinWind, 2018). The Ministry of Cultural and Landscape Heritage provides feedback about cultural and landscape impact (WinWind, 2018).

In the general procedure foreseen by the Legislative Decrees 387/2003, setting the reference framework for the authorization of renewable energy plants, the public is not involved, however, regions can establish forms of public consultation. In addition, the public is involved in general in the process of an EIA, whenever it is required, following the relevant procedures (WinWind, 2018). Renewable energy projects must undergo an Environmental Impact Assessment (EIA) to ensure no negative impacts, with either a screening or EIA procedure concluded by the competent authority, according to the Environmental Code (Martorana, C., Tedeschi, A., 2022). An ad hoc EIA committee at the Ministry of Ecological Transition (MITE) is now responsible for conducting the EIA procedure for offshore plants, and onshore wind plants beyond 30MW (Martorana, C., Tedeschi, A., 2022). If a project interferes with protected areas, the VINCA procedure (as regulated under Presidential Decree No. 345/1997) is conducted within the EIA (Martorana, C., Tedeschi, A., 2022). Cultural heritage and landscape aspects are regulated under the Cultural Heritage Code, and specific authorization must be obtained from the competent authority in case a project interferes with constrained areas of the landscape or cultural heritage items (Martorana, C., Tedeschi, A., 2022).

Italy does not have any specific provision for public engagement, apart from the public engagement requirement within the Environmental Impact Assessment (EIA) which comprises the only formal possibility for citizens to be engaged (Luca, E. et al, 2020) in the stage of the licensing a wind farm by the competent authorities. Although the implementation of the EIA offers a standard procedure that incorporates forms of citizens' participation, EIA is limited in general in the way it is applied, and it is foreseen only for certain cases, based on the number and capacity of wind turbines (Luca, E. et al, 2020). In summary, in the case of a mandatory

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

EIA procedure, the public is informed by the publication of the preliminary environmental report on the competent authority website and can submit remarks on it in written form, within 45 days after the report's publication (WinWind, 2019c).

C) DEVELOPMENT PHASE FINDINGS

Public participation in the development phase of a wind farm project is more possible in the framework of community-owned or community-driven farms. Recently, a regulatory framework for the development of renewable energy communities (REC´s) has been created that materialized the concept of community ownership. While this framework could be interpreted as a positive step towards promoting citizen participation and engagement, it should be noted that it cannot address citizen participation in corporate-driven wind energy projects.

2.3.3 Norway pilot area

The Norwegian Energy Act of 1991 establishes rules for the installation of wind turbines and for zoning based on the division of the country into grid cooperation zones.

The Norwegian Ministry of Environment has proposed guidelines for the planning and installation of wind turbines as part of wind energy development in Norway. The guidelines aim to ensure that wind energy development is managed together with other important societal interests and to improve the efficiency and predictability of the planning and permitting processes. Although the guidelines are not legally binding, they form the basis for the assessment of concessions under the Energy Act. The guidelines contain precise standards and specific prerequisites, leaving less discretion to administrative authorities.

In Norway, the average lead time for wind power projects is typically between 2 and 4 years. These lead times are due to guidelines for the planning and siting of wind turbines, as well as time limits for the Norwegian authorities when preparing concession decisions.

A) PLANNING PHASE FINDINGS

There are three levels of wind farm planning in Norway: national, regional, and municipal. At the national level, general planning objectives are set to be applied at the regional and municipal levels. To achieve the national objectives, the Norwegian government has established guidelines for wind farm installations, which, although not legally binding, provide details on potential conflicts and ways to resolve them. The Norwegian Directorate of Water Resources and Energy (NVE) actively promotes these guidelines.

Wind farm areas in Norway are designated in regional plans, which guide both municipal and national planning and act as a bridge between the two. However, this creates a strict planning system that lacks effective regional planning or enforcement mechanisms.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Notably, private actors can propose detailed plans in Norway, and while municipalities have the final say on these plans, it is generally more difficult to reject a proposal than to avoid setting up a plan altogether. Although landscape protection organizations advocate for more power for municipalities, the Norwegian government has not allowed this, as it could harm investment in wind power.

Norway has a system in which national policy plays an important role in the planning process and facilitates wind farm development. The Environmental Impact Assessment (EIA) of wind power installations is a procedure for granting permits for the construction of wind farms in Norway. The planning system is used to address siting issues. There are also laws specific to wind energy, such as the Norwegian Energy Act of 1991, which sets rules for the installation of wind turbines and the granting of area concessions based on the country's division into network cooperation areas.

The Norwegian Ministry of the Environment has proposed guidelines for the planning and siting of wind turbines as part of the development of wind energy in Norway. These guidelines have been prepared to address the challenges of wind power development, which requires large areas of land or water and can lead to conflicts between different interests. The guidelines aim to ensure that wind energy development is managed together with other important societal interests and to improve the efficiency and predictability of the planning and permitting processes.

B) LICENSING PHASE FINDINGS

Wind farm licenses in Norway are granted by the Norwegian Directorate of Water Resources and Energy (NVE), which is the national authority responsible for the licensing process. Before 2008, wind farm developers were required to apply to the municipality where their project was located for land-use changes, resulting in a complex licensing process. However, after the Planning and Building Act was amended, energy installations were exempt from municipal land-use planning procedures, simplifying the licensing process. This change was supported by most politicians and important stakeholders in the energy sector.

Currently, the licensing process for wind power projects is under the control of the NVE and the Norwegian Ministry of Petroleum and Energy (OED), with various authorities and stakeholders having the ability to object to this process. The Norwegian Environment Agency advises the NVE on environmental issues associated with proposed projects, while the Ministry of Climate and Environment inspects projects in the event of objections. The County Council is responsible for cultural heritage issues in the region, and the County Governor's Office oversees environmental issues. At the local level, the host municipality, landowners, environmental NGOs, and other stakeholders are consulted. National and regional power companies, as well as smaller companies, are responsible for developing wind power projects.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Large wind power projects (over 10 MW) require full licensing, which includes an Environmental Impact Assessment (EIA) since 2005. Small projects (between 1 and 10 MW) require a simpler licensing process, which includes a simplified EIA since 2017. The NVE assesses the environmental impacts, benefits, and costs of wind power projects based on EIAs, hearings, and other relevant information. The final decision for licensing includes the approval of changes in land use within the area planned for the wind farm.

The licensing process begins with the project developer notifying the NVE at an early stage of the project. The developer must identify a suitable area for wind power development. The licensing process includes a public hearing of the notification and the EIA program proposal, approval of the EIA program, submission of the full license application, and holding another public hearing on the application.

The NVE organizes a public meeting in the siting municipality during the project notification stage and a second public hearing when the project developer has submitted a complete application. At these public hearings, stakeholders provide comments on issues such as nature conservation, noise, visibility, and impacts on recreational activities and tourism. Any public authority that believes the proposed project conflicts with its jurisdiction can file a formal objection. The NVE is obligated to consider any formal objection from such authority and organize a mediation meeting to discuss the complaint and possible solutions. If the complainant maintains the objection after this meeting, it becomes a formal 'complaint' which will be considered by the OED if the NVE decides to grant the license. In the final stage, the NVE decides whether to grant or refuse a license for the construction and operation of the wind farm, including connection to the grid.

C) DEVELOPMENT PHASE FINDINGS

Wind power has seen significant expansion in recent years, particularly after the introduction of green certificates in 2012. In 2020, Norway led all European countries in terms of wind power installations. While most of the hydropower production in Norway is owned by the government, foreign investors hold a majority stake in wind power production.

The Norwegian Electricity Certificate Act promotes the use of renewable energy sources by implementing a market-based system known as the electricity certificate scheme. Under this scheme, producers of renewable electricity receive one certificate for every MWh produced for up to 15 years. This applies to all types of renewable electricity production, including hydropower, wind power, and bioenergy. To obtain certificates, production facilities must comply with the rules, be approved by the NVE, and meet the necessary metering and reporting requirements. The legislation applies to facilities constructed after specific dates and those that have increased their production capacity due to construction. Electricity suppliers and certain end-users are required to purchase certificates. The NVE approves

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

facilities, while Statnett, the system operator of the Norwegian power system, manages the registry and distributes certificates. The electricity certificate scheme is set to expire in 2036.

Despite receiving substantial subsidies, wind power producers have struggled to turn a profit, with 73% experiencing losses in 2019. Additionally, environmental costs associated with wind farm development have presented challenges. Nonetheless, projections indicate that demand for wind power will continue to increase until 2040, potentially leading to higher electricity prices.

2.3.4 Spain pilot area

The National Integrated Energy and Climate Plan 2021-2030 (PNIEC) recognizes the need to include the social perspective in the set of proposed measures and to promote a proactive role of citizens in the energy transition. It also stresses that knowledge and information are the basis for greater citizen involvement in the energy field. For this reason, the action mechanisms envisaged include the implementation of awareness-raising campaigns to improve citizens' understanding of their relationship with energy, as well as information and training campaigns on energy and climate issues.

To encourage the participation of citizens and local authorities in renewable energy projects, Royal Decree-Law 23/2020, of June 23, incorporates the definition of renewable energy communities, provided for in Directive 2018/2001/EU. This Royal Decree-Law lays the groundwork for the promotion of citizen participation in the renewable energy sector to enable increased local acceptance and greater citizen participation in the energy transition.

A) PLANNING PHASE FINDINGS

There is no regulation focused on public participation concerning wind farms. However, numerous recommendations come from Europe and highlight the value of involving the public during the early stages of a wind project. For example, this concept is reflected in the National Integrated Energy and Climate Plan (PNIEC) throughout several of the measures.

In terms of collaborative planning, at this stage project developers can maintain a dialogue with regional and local administrations, to whom they can pass on any questions and doubts from the local population that may have arisen. The promoters can also hold informal meetings with the population to increase social acceptance, provide information on the specific effects of the project and clarify doubts. They must be held at this stage so that citizens feel truly included in the process.

B) LICENSING PHASE FINDINGS

Directive 2014/52/EU is transposed into the Spanish legal system through Law 9/2018, of December 5, which amends Law 21/2013, of December 9, on environmental assessment, the basic standard for environmental assessment in Spain. Law 21/2013 regulates the process of

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

public participation in wind energy projects in Spain and the projects included in the scope of the application must submit both the project and the environmental impact study to public information and consultation with the affected Public Administrations and interested parties, prior announcement in the Official State Gazette (Boletín Oficial del Estado - BOE) or the corresponding official gazette and the electronic headquarters of the corresponding substantive body. Citizens and organizations are allowed to submit relevant allegations during this public consultation period. In addition, Law 21/2013 provides for a new process of public information and consultation with the affected Public Administrations and interested parties if the project developer introduces modifications to the project or to the environmental impact study that may have a significant environmental impact different from that initially foreseen.

Public participation, public information, and consultation with the affected public administrations and interested parties will be carried out by electronic means and through public announcements or other appropriate means that guarantee maximum dissemination to the public in the affected and neighboring municipalities.

Subsequently, a technical analysis of the file is carried out to evaluate, among other aspects, how the comments and opinions received in the consultation process have been considered.

Before the environmental impact study, and voluntarily, the project developer may request the environmental agency to prepare the scoping document, which involves consultation with the affected public administrations and interested parties.

Project developers often hold voluntary information meetings to provide detailed information and answer questions from the local community about wind energy projects. The main objective of these meetings is to increase social acceptance of wind projects and raise public awareness, as well as to establish a relationship of trust with the local community and foster an open and transparent dialogue.

In June 2022, the Ministry for Ecological Transition and the Demographic Challenge conducted a public consultation to ensure the participation of public and private agents, particularly the wind and offshore energy sectors, in the regulatory framework for the development of offshore wind and offshore energy facilities. Participants were asked about encouraging the participation of all actors, establishing effective dialogue channels, and enhancing positive socio-economic impacts. Previously, the Ministry had conducted a public consultation on the roadmap for offshore wind and marine energy development and adapting the regulatory framework.

On the other hand, community compensation schemes are not regulated by law.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

C) DEVELOPMENT PHASE FINDINGS

During the development, consultations are conducted. However, further meetings may be held with the local community to follow up on issues that may arise during development and to respond to their complaints.

At this stage, it is possible to have an overview of how the submitted comments have been considered and the outcome of the actions undertaken in the previous stages.

Community incentive schemes are not regulated at the Spanish level, although at the autonomous community level, we can find certain specifications. However, the Autonomous Community of Aragon, where the Spanish pilots considered in this project are located, does not have a regulated community incentive system.

2.4 Support and hinder factors

Having compiled the regulatory conditions related to onshore and offshore turbine installations and the levels of public participation, some elements and conditions that can drive or hinder the acceptance of wind farms have been identified.

The supporting factors and barriers identified in the different project phases: planning, licensing, and development, as well as the concepts explored: public participation, collaborative planning, and community reward, are shown below.

In the tables, it can be seen in the left column the issues identified, and in the right columns, if these issues have been identified in the different territorial areas: Europe, Greece, Italy, Norway, and Spain. If there is a cross, it means that this topic has been identified in the research region.

A) PLANNING

Table 1. Compilation of the support and barrier factors identified in the planning phase at the public participation assessment. *Source: own elaboration.*

SUPPORT factors	**EU**	**GR**	**IT**	**NO**	**ES**
Clear and accessible information	x	x		x	x
Policies that encourage and promote it	x			x	x
Proactive prevention of potential impacts	x			x	x
Inform about the role of renewable energies	x	x			
Pilot projects used as an example and reference	x		x		
Transparent procedures in the implementation				x	x
Involvement of the relevant authorities		x	x	x	x

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

BARRIERS factors	EU	GR	IT	NO	ES
Complex technical vocabulary for citizens	x				x
Apparently pre-determined project decisions	x				
Lack of commitment by project proponent	x				
Negative social perception of wind structures	x	x		x	
Public participation process little publicized to citizen			x		x
Lack of a specific national regulatory framework		x	x	x	x
Low level of awareness		x	x		x

Factors that improve citizen participation include access to information and a proactive approach to prevent possible impacts. Factors such as improved communication and transparency in procedures are enablers. Barriers related to technical understanding, transparency in decisions, regulatory framework, and citizen awareness need to be addressed.

Table 2. Compilation of the support and barrier factors identified in the planning phase at the collaborative planning assessment. *Source: own elaboration.*

SUPPORT factors	EU	GR	IT	NO	ES
Availability of collaborative technologies and tools	x		x		x
Experienced organizations		x		x	
Proactive approach by stakeholders	x			x	x
Activities to raise public awareness of the importance of wind energy	x		x		x
Clear and accessible information	x	x			x
BARRIERS factors	**EU**	**GR**	**IT**	**NO**	**ES**
Lack of coherent regulations to promote it	x	x	x		x
Lack of trust between developers and the community				x	
Lack of transparency in the information provided	x				
Lack of a culture of dialogue and collaboration	x		x	x	
Minority opposition to wind energy				x	x

Several supporting factors are of interest to a facilitator, such as the availability of collaborative tools, accessible information, and encouraging a proactive approach by stakeholders. These supporting factors reflect the interest in participation and transparency in wind farm planning. A consistent and robust regulatory framework needs to be established,

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

complemented by open and open communication that promotes trusting relationships and dialogue.

Table 3. Compilation of the support and barrier factors identified in the planning phase at the community reward assessment. *Source: own elaboration.*

SUPPORT factors	**EU**	**GR**	**IT**	**NO**	**ES**
Promoting a culture of corporate social responsibility	x	x	x		NA
Tangible incentives to the community	x	x			NA
Willingness of all involved parties to collaborate			x	x	NA
BARRIERS factors	**EU**	**GR**	**IT**	**NO**	**ES**
Lack of reference programs and guidelines	x	x			x
Lack of a remuneration framework	x		x	x	x

The promotion of a culture based on corporate social responsibility, the provision of tangible incentives to the community, and the willingness of stakeholders to collaborate are the supporting factors identified for the successful development of wind energy projects. The main barriers to establishing community reward systems in the planning phase are due to the lack of regulations and guidelines for establishing them.

B) LICENSING

Table 4. Compilation of the support and barrier factors identified in the licensing phase at the public participation assessment. *Source: own elaboration.*

SUPPORT factors	**EU**	**GR**	**IT**	**NO**	**ES**
Transparent information and mitigation strategies	x	x	x	x	x
Simple and accessible participation mechanisms	x				
Citizen committees for community involvement	x		x	x	x
Effective communication channels between the community, developers, and administrations	x	x			
BARRIERS factors	**EU**	**GR**	**IT**	**NO**	**ES**
Lack of clear and accessible information	x	x	x		
Lack of resources and support	x	x	x		
Possible non-inclusive public participation processes		x		x	
Social movement against these projects	x	x		x	x
Absence of a regulatory framework			x		

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

The tables highlight the importance of involving the community by providing clear and accessible information and establishing inclusive participation processes. During permitting, citizen participation faces different obstacles that need to be addressed, such as lack of resources and lack of clear and accessible information. Therefore, there is a need to improve communication and manage society's preoccupations.

Table 5. Compilation of the support and barrier factors identified in the licensing phase at the collaborative planning assessment. *Source: own elaboration.*

SUPPORT factors	**EU**	**GR**	**IT**	**NO**	**ES**
Clear and effective communication for dialogue	x	x	x	x	x
Resource and information provision for stakeholders	x	x	x	x	
Respect and consideration of the diversity of opinions, perspectives and needs of the community	x	x			
Conflict resolution mechanisms	x	x			
BARRIERS factors	**EU**	**GR**	**IT**	**NO**	**ES**
Lack of complete and accessible information	x	x			
Lack of national and regional regulatory framework	x		x		x
Lack of direct dialogue between developers and the community			x		x
Social movement against these projects				x	

In terms of collaborative planning, it is important to promote and support clear and effective communication between the parties, providing resources and simple information. In addition, to achieve social acceptance at this level, it is important to develop conflict resolution mechanisms. The barriers identified reflect the need to address the lack of complete and accessible information, as well as to establish a solid dialogue between the parties. This requires a strong regulatory framework at national and regional levels.

Table 6. Compilation of the support and barrier factors identified in the licensing phase at the community rewards assessment. *Source: own elaboration.*

SUPPORT factors	**EU**	**GR**	**IT**	**NO**	**ES**
Corporate social responsibility by project promoters	x	x	x		
Tangible community benefits		x			x
Recognition of the community's cultural and traditional values	x	x			

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Indirect benefits for citizens			x	x	
Willingness of all involved parties to collaborate			x	x	
BARRIERS factors	**EU**	**GR**	**IT**	**NO**	**ES**
Lack of long-term commitment	x	x			x
Coordination issues between stakeholders	x	x			
Lack of regulatory framework	x	x	x	x	x

These factors identified, regarding community rewards, reflect the importance of establishing relationships of trust and collaboration among stakeholders to maximize benefits and minimize negative impacts. Factors hindering the integration of community rewards in the permitting phase are the lack of a regulatory framework.

C) DEVELOPMENT

Table 7. Compilation of the support and barrier factors identified in the development phase at the public participation assessment. *Source: own elaboration.*

SUPPORT factors	**EU**	**GR**	**IT**	**NO**	**ES**
Clear, accessible, and transparent information on project progress and approach	x	x		x	NA
Inform and consult the community in case of changes	x	x	x		NA
BARRIERS factors	**EU**	**GR**	**IT**	**NO**	**ES**
Lack of institutional support	x	x			
Social movement in opposition	x	x	x	x	x
Lack of a regulatory framework			x		x
Lack of trust in government			x	x	

The tables highlight the need for clear, accessible, and transparent information, as well as the fact that involving citizens in decision-making processes can build trust and improve community engagement. In contrast, the main obstacle during the development phase is a consequence of the negative perception of wind farms, supported by the lack of trust in institutions and the absence of a regulatory framework.

Table 8. Compilation of the support and barrier factors identified in the development phase at the collaborative planning assessment. *Source: own elaboration.*

SUPPORT factors	**EU**	**GR**	**IT**	**NO**	**ES**
Active conflict resolution mechanisms	x	x			
Policies that encourage and promote it		x	x		x

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

BARRIERS factors	EU	GR	IT	NO	ES
Lack of commitment on the part of the authorities	x	x	x		x
Changes in the political and regulatory environment	x	x			
Labor conflicts could generate stakeholders' tensions	x	x			
Difficult communication with company				x	x
Lack of communication channels and media			x	x	

Establishing effective mechanisms to address conflicts and developing policies that promote collaboration and resolution is crucial to ensure successful project implementation. Lack of commitment from entities and changes in the political and regulatory environment are some of the main barriers identified that need to be managed.

Table 9. Compilation of the support and barrier factors identified in the development phase at the community reward assessment. *Source: own elaboration.*

SUPPORT factors	EU	GR	IT	NO	ES
Acquiring jobs from the local community	x	x			x
Favorable operating conditions and requirements	x	x			
Develop projects of common interest and benefits		x	x	x	
Efommunication channels for stakeholder engagement	x		x	x	
BARRIERS factors	**EU**	**GR**	**IT**	**NO**	**ES**
Differing stakeholder expectations on project rewards	x	x			
Difficulties in the distribution of benefits	x	x	x		
Lack of adequate monitoring and evaluation	x	x		x	
Lack of a national remuneration framework			x		x

Supporting factors identified include prioritizing local employment opportunities, creating favorable conditions, and involving stakeholders. These factors drive community participation and project acceptability. However, addressing stakeholder expectations, overcoming benefit-sharing challenges, implementing robust monitoring and evaluation, and establishing a national remuneration framework are key elements in fostering stakeholder satisfaction.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

3.Complementary research

3.1 Interviews. Methodology & results

Seventeen semi-structured interviews have been conducted with key stakeholders across the EU. The aim is to gain first-hand knowledge of opinions and perceptions in five zones within the EU. Following the guidelines of the study, five interviews are conducted with personnel belonging to wind energy sector organizations with European-wide responsibility, and three interviews per region, Greece, Italy, Norway, and Spain, with people with different profiles always within organizations and companies within the onshore or offshore wind sector.

To ensure the uniformity of the study, each of the members who participated in this task was provided with a guideline and the questions that constituted the interview (see Annex II).

Each interview was structured in 6 parts:

- Part 1: questions 1 to 5. The aim is to understand the interviewee's view of citizen involvement in wind projects.
- Part 2: questions 6 to 11. To go deeper into the planning phase of a wind project, to have a more detailed view of how citizens are involved.
- Part 3: questions 12 to 17 - and part 4 of the interview from question 18 to question 23 - repeat the questions from part 2 but about the licensing and development phases (respectively) of a wind project.

The questions are either Yes or No, therefore the results of these questions have been collected quantitatively (see Table 10) to have an overall view of the answers obtained. However, space has also been given to the interviewees to develop their answers in more depth (questions 11, 17, 23)

- Part 5: questions 24 to 28. The aim is to identify the factors that support and encourage citizen involvement in wind projects.
- Part 6: questions 29 to 32. To identify those barriers that complicate citizen involvement in wind projects.

These questions are developmental or scoring questions to accurately identify those elements that drive or hinder citizen involvement in wind projects (see Annex I).

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Interviews profile

The following table shows the different profiles of the interviewees. All these professionals work directly in the onshore-offshore wind energy sector.

Through these different selected profiles, a wide perspective on the state of social acceptance of wind energy has been achieved.

Table 10. Compilation of the interview's profiles. *Source: own elaboration.*

	Interviews profile
EU	- Director Onshore Wind & PV Development EU & Australia - Strategic Communication Advisor - Policy officer at Marine Renewable Energy European Commission - Policy Director at Ocean Energy Europe - Project Manager, Energy Cluster Europe Region
Greece	- Regional authority - Technical chamber - Energy community
Italy	- Renewable energy producer/developer - Academic researcher in environmental engineering - Governmental entity in renewables
Norway	- Project manager in offshore wind projects - Industry manager business development - EU advisor on wind projects
Spain	- General director on environmental and development of wind energy - Director-Social impact evaluation and measurement - Site engineer-Renewable energy

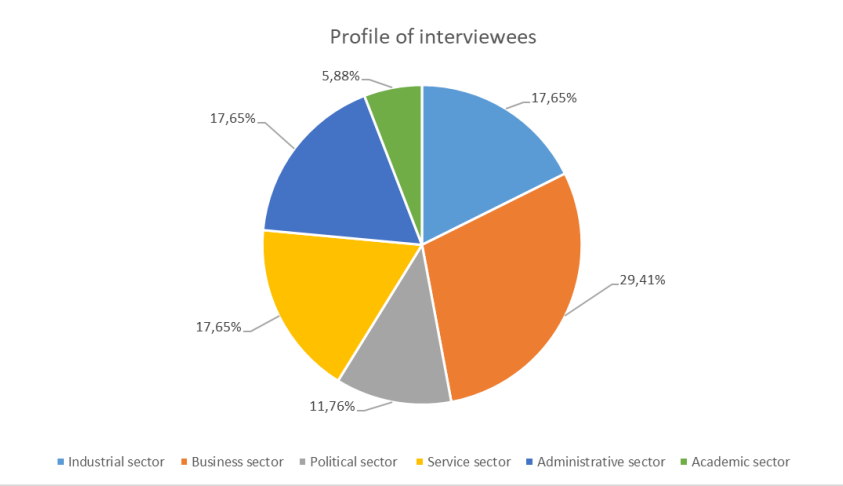

Figure 3. Compilation of the interview's profiles (%). *Source: own elaboration.*

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

3.1.1 Quantitative results

A total of 32 questions were asked to the 17 interviewees and these results have been the basis for the key findings of the interview part.

Below are the results of 21 of the questions asked with options: yes, no, it depends or not available (Yes, No, D, NA). The results expressed are in percentage terms and aggregated including 5 interviews at the European level, 3 interviews at the Greek level, 3 interviews at the Italian level, 3 interviews at the Norwegian level, and 3 interviews at the Spanish level, a total of 17 interviews.

Table 11. Summary of the main results, represented in percentage terms, obtained from the stakeholder interviews. Source: *own elaboration.*

Part 1 |Background Information	**% YES**	**% NO**	**% D**	**% NA**
1. In general, do you consider that the implementation of wind projects has been carried out with an open, transparent approach and in pursuit of the common benefit of the region?	76,47	17,65	5,88	0,00
2. Do you perceive the political will to stimulate public participation in wind energy projects?	58,82	35,29	5,88	0,00
3. Does the administration provide sufficient mechanisms/channels for stakeholders to participate in the stage of A) Planning? B) Permitting? C) Development?	64,71	35,29	0,00	0,00
4. Is there a legal regulatory procedure that establishes the requirements for public participation in this type of project?	58,82	11,76	5,88	23,53
5. Do you perceive interest from the stakeholder involved in public participation related with wind energy projects?	70,59	5,88	5,88	17,65
Part 2 |During the planning stage of the wind projects	**% YES**	**% NO**	**% D**	**% NA**
6. Do you consider that wind energy projects are properly submitted to public participation in your region?	47,06	35,29	5,88	11,76
7. Do you perceive an open and transparent collaborative planning process in which interests and views are considered?	58,82	23,53	5,88	11,76
8. Do you perceive stakeholders' interest in participating in the process? If not, what do you think is the main reason?	76,47	5,88	5,88	11,76
9. Is there any rewarding scheme for participants in the public participation process?	17,65	82,35	0,00	0,00

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

10. Do you think it is worth establishing a reward scheme to stimulate public participation during this stage?	35,29	64,71	0,00	0,00
Part 3 | During the permitting stage of the wind projects	**% YES**	**% NO**	**% D**	**% NA**
12. Do you consider that wind energy projects are properly submitted to public participation in your region?	64,71	23,53	5,88	5,88
13. Do you perceive an open and transparent collaborative planning process in which interests and views are taken into account?	58,82	17,65	5,88	17,65
14. Do you perceive stakeholders' interest in participating in the process?	70,59	0,00	5,88	23,53
15. Is there any rewarding scheme for participants in the public participation process?	29,41	58,82	0,00	11,76
16. Do you think it is worth establishing a reward scheme to stimulate public participation during this stage?	29,41	52,94	0,00	17,65
Part 4|During the development stage of the wind projects	**% YES**	**% NO**	**% D**	**% NA**
18. Do you consider that wind energy projects are properly submitted to public participation in your region?	35,29	47,06	0,00	17,65
19. Do you perceive an open and transparent collaborative planning process in which interests and views are considered?	29,41	29,41	5,88	35,29
20. Do you perceive stakeholders' interest in participating in the process? If not, what do you think is the main reason?	64,71	5,88	5,88	23,53
21. Is there any rewarding scheme for participants in the public participation process?	23,53	58,82	5,88	11,76
22. Do you think it is worth establishing a reward scheme to stimulate public participation during this stage?	29,41	47,06	0,00	23,53
Part 5 || Drivers/Supporting Factors	**% YES**	**% NO**	**% D**	**% NA**
24. Is there any public consultancy agency for the implementation of these projects?	17,65	58,82	5,88	17,65

To compliment the results obtained (table 11), two more questions were asked to the interviewees to explore their perception of the acceptability of wind energy.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Through questions number 28 and 32, the interviewees valued their agreement or disagreement on a scale of 1 to 5 (from low to high) in relation to several key topics.

These results have been very valuable in complementing the regulatory analysis by obtaining a direct perspective from front-line professionals in the wind energy sector.

Details of the responses obtained can be consulted in the tables of Annex II.

3.1.2 Key findings from interviews at the EU level

The overall perception of interviewees at the EU level is that the implementation of wind projects has been carried out in an open and transparent approach and for the common benefit of the region. Here are some of the highlights raised:

- There is a whole set of legal obligations for public consultation from European legislation that show the procedure for public participation. Administrative processes include regional and local regulations to be complied with and public exhibitions to citizens for transparency and possible comments on projects.

- The construction of a wind farm has contributed to the creation of local jobs, the improvement of the local economic situation, and the creation of infrastructure beneficial to the local community.

- Governments are also aware that involving local communities in a project is beneficial to the success of the project. Several European countries have also established guidelines on how to approach communities.

- The more direct the interaction between local stakeholders, the greater their support for the project.

- Transparency, public participation, and information are considered to gain local approval.

The right direction is being taken, but there is still some way to go. There is always room for continuous improvement, but wind deployments have typically been transparent and open.

Therefore transparency, public participation, and information are necessary to achieve local approval. The promotion of mechanisms and channels for stakeholder participation is one of the main areas to work on. Currently, the main tool for public participation is the public exposure of the project for public appeals or allegations.

Throughout Europe, there are multiple opportunities for stakeholders to contribute to planning, permitting, and development. Stakeholder engagement" is a core competency of all renewable energy project developers. There are different types of channels for each phase, for each region studied, and for each type of project in terms of size, so there are cases where citizen participation is more invoked than in others.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

It is worth remarking on the answers obtained about the reward system, in most of cases it is pointed out:

- There is no need for a specific reward system, just the fact of being informed and having an opinion during the process. It is very important to avoid the "commercialization" of this process.

- The rewards are intrinsic: the opportunity to have your voice heard, to learn more about the project, to engage with your community, and to shape your project.

Supporting factors suggested by interviewees:

- Developers should ensure that information about the project is provided at a very early stage, in a transparent manner, and accessible to all stakeholders: early engagement can build support for projects among the public - not just avoid opposition.

- Consider potential impacts on local stakeholders. Project developers should also consider the sense of place, attachment, and connection to the landscape and environment.

- The creation of effective and clear communication channels will allow for a two-way exchange between developers and local communities.

- Wind projects generate socio-economic benefits in areas that are often rural or peripheral, so it is important to support the direct involvement of key local actors and the activation of the local economy. This includes local contracting, local financing (e.g., through local and regional banks), training, apprenticeships, and partnerships with local energy service companies.

Barriers or hindering factors mentioned by the interviewees:

- Lack of clarity in communication from the authorities to the local population.

- Complicated permitting procedures. Too many actors involved create confusion about how developers can include local people.

- Clearer rules on when citizens should be involved in the processes.

- Often, the challenge is to respect the views of the "silent majority," who have positive or neutral opinions about development but are less incentivized to participate than a vocal minority who may oppose it.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

3.1.3 Key findings from interviews at the pilot areas

Greece

The perception is that wind energy projects are not implemented with open, transparent procedures. Local communities are not consulted and, unfortunately, citizens are not involved at any stage of the process.

- The procedures are not guided by the common interest and do not promote access to information so that citizens can obtain the information needed to proceed with investments aimed at the utilization of wind energy.
- Even though in the long term, any wind energy project is about the common good (helping to disengage from fossil fuels and leading to renewable energy production), the investment system in Greece does not include an institutional, systemic evaluation of whether the investment serves the common benefit.
- The government prioritizes large investments, while there should also be focusing on encouraging the participation of the local community in these projects.
- There is no distinction in the legislation for the procedures concerning wind farm projects about the procedures concerning, for example, an industrial investment or a tourist investment.
- There is a public objection to wind energy projects. To mitigate these reactions, people should be informed and participate in projects that will allow for a positive predisposition of the local society from the beginning.
- Also, substantive discussions with the local community should be part of the process.
- Incentive schemes that ensure the participation of local communities and agencies, or guarantee contributory benefits in the future, will help to make planning and licensing more transparent and participatory.

The interviews conducted suggest that there is no real political drive to improve public participation in wind energy projects. Recent changes in the regulatory framework mostly encourage investments by large companies. It is considered that there are insufficient stakeholder engagement mechanisms or channels for participation in wind energy projects at any of the three stages. Social rejection is perceived in recent years and a decrease in interest from some stakeholders. Incomplete access to public information on projects does not help either.

Supporting factors suggested by interviewees

- Public participation should be actively practiced and present during the operational stage of the wind farm so that the local community should not feel left out.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

- Create some contributory benefits to society (energy upgrading of buildings, the provision of free energy to vulnerable social groups, projects related to the protection of the environment, anti-flooding projects, or the opening of new paths in the mountains).

- Good information-Good implication. If the public is informed from the beginning of the planning stage about the long-term benefits, there would be an incentive for people to advocate or even make suggestions for improvement.

- Reliable dialogue and the help of reliable mediators in this dialogue. To be objective, independent third parties need to be involved and mediate.

- Greater transparency and simplification of procedures and finally informing local communities.

Barriers or hindering factors mentioned by the interviewees

- The general obsolescence of the decision-making system and procedures is a key inhibiting factor for broad, social participation in wind farm development projects.

- Lack of legal framework to improve information and public activation.

- Lack of an appropriate Zoning Plan. That would ensure any necessary evaluation from the Archaeological Services, environmental services, etc. before the beginning of the construction.

- Lack of a development and investment plan that includes, among other things, the utilization of renewable energy sources and the plan of each investor/promoter.

Italy

The implementation of a new project is done in a transparent way following all the steps required by law. For national projects, all the documentation is fully accessible on the portal of the Ministry of Environment and Energy Security. EIA is carried out by the NRRP-NECP Technical Committee.

- In recent times there is more attention in involving, even from the initial stages, the citizens who compared to the past must be properly informed to disseminate knowledge and increase awareness.

- But in general, private participation in the investment for a wind farm (with "participatory" investment/ financing) is not regulated.

The perception of the interviewees is that there is a lack of a regulatory framework for public participation in the planning and development phase, with public participation recognized in the permit application phase.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

The opinion is that public participation should be regulated at the national level and encouraged to provide more opportunities for public involvement beyond the permitting phase. Greater public participation at all stages is identified in the case of energy communities.

To stimulate public participation, it is suggested to conduct information campaigns and instill confidence in citizens about the economic and environmental benefits of a project.

Recently, interest has been growing and some private developers in Italy are launching initiatives to finance new renewable projects open to all citizens.

Supporting factors suggested by interviewees

- Information, dialogue, and transparency. Address the barriers through an open and honest dialogue.
- From the very beginning of the project involved citizens by running some information activities and by allowing them to participate financially in the project, even with small shares to get discounts on their bills.

Barriers or hindering factors mentioned by the interviewees

- Complex authorization procedures
- Social movements against wind farm projects
- Fear from the side of developers/promoters
- Low trust in the procedures from the side of local communities

Norway

The Norwegian culture of cooperation is, in general, at an advanced stage in terms of stakeholder participation. Processes are usually lengthy because the government talks to all stakeholders (citizens, municipalities, organizations, etc.) and everyone takes responsibility for the project.

- In Norway, all official documents are available to anyone, so most of the information is public. Wind project plans have been developed in Norway for several years, so most parties have had the opportunity to participate in the process.
- In the Norwegian regulations, the objectives are quite clear: wind farms must have a positive development for society and no negative effects, and this is made very clear in the planning and permitting phases.
- The implementation of the wind projects (onshore and offshore) has been carried out in an open and transparent approach and for the common benefit of the region.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

- There is some difference between offshore (central government) and onshore (where municipalities have taken the development into their own hands within the central government) projects.

- In the past, there were some social problems related to onshore wind farms. However, the perception is that in the development process of offshore wind turbines stakeholders are involved and informed throughout the process.

In Norway, the political will for such wind energy projects, both onshore and offshore wind, is quite positive.

In the Norwegian regulations, the objectives are quite clear: wind farms must have a positive development for society and no negative effects, and this is very clear in the planning and permitting phases.

The new regulation gives more say to municipalities in onshore wind farms to improve local acceptance of projects.

Everything is provided for in the planning and permitting phases, but frameworks and mechanisms are missing in the development and operation phases. If you are a stakeholder in the wind farm value chain, you can participate.

There are several hearings during the concession process where everyone can have their say and there is also a local project meeting, a physical meeting, and a hearing session where you can present your views.

Although there are procedures where the public must be heard and consulted, there are certainly conflicts with some areas or some projects.

Supporting factors suggested by interviewees

- Good, smooth communication from the early stages (face-to-face meetings) and clear facts.

- Facilitate more briefings, to explain the scope of the project as well as the social, economic, and environmental impact.

Barriers or hindering factors mentioned by the interviewees

- Stakeholders: lack of confidence in the government in terms of not being listened to.

- Lack of involvement of some stakeholders. The public must understand why they should be involved in the planning, permitting, and development of the project.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Spain

Wind projects have always looked for the common good (environmental purpose), but the open and transparent approach has not been taken seriously until the social mobilizations and regulatory changes of recent years.

- Capacity tendering is used to incorporate social and economic criteria in Spain.
- There are sufficient windows of participation and here there is a GAP between reality and the perception of society. There is part of society that claims that this process is being carried out in offices without considering their opinion.
- Some cases are exemplary, but in general, they are not. The communities do not feel that they have a real say in the projects. They do not feel entitled to participate.
- There is a need for more awareness on the part of the promoters. The project has a life in the local community, so we need more commitment, and more attachment, which implies actions such as supporting other projects in the community environment.

Regarding the political will to stimulate public participation in wind energy projects, there are a series of regulatory changes that have taken place since 2020. The regulation of capacity tenders and the whole development of the electricity sector from the public authorities has tried to encourage and legislate the part of social benefit sharing and social acceptance.

- At the national level, the social acceptance of projects > 50MW) is also evaluated.

- At the regional level, it depends on the territory. Some of them require projects to have participation through a social acceptance analysis but in other regions, there is no interest in participatory processes.

- Theoretically, there are sufficient instruments for public participation from a regulatory framework. The Administration must carry out a guaranteed administrative process regulated by administrative law in which public information is regulated, but the process is very rigid, and the information periods are scarce, as is the dissemination of information.

- It depends on the type of phase but, in general, the real perception is that there are not enough mechanisms for participation.

- The planning and authorization phases are better covered but it is still difficult for citizens to find out about the existence of an open process of information and allegations.

In terms of stakeholder involvement, there is a willingness at the political level and efforts are being made to disseminate participation processes.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Supporting factors suggested by interviewees

- The commitment of the promoter to develop the project in a specific region where it will coexist with the people of the environment, business activities, economic activities, and tourism.
- Strengthen the consultation mechanisms and communication. Establish a good framework, communicate well, disseminate well, and explain well.
- Encourage participation through partnerships and associations.
- Improve bilateral contact between the developers/promoters and the communities.
- Sustainability reports as an element of the principle of a company's true and fair view, not only the accounting framework.
- Establish KPIs that are easily comparable to determine whether a project is good or bad.

Barriers or hindering factors were mentioned by the interviewees

- The lack of knowledge of administrative law and how it works.
- Digitalization of the administration. There must be offices for people with difficulties in digital media.
- Conviction of the promoter. Some promoters do not believe in public participation. There is not much willingness and interest to have a real participatory process because it makes the process more complicated for them.

3.2 Data Bases (EUROSTAT, EPO PATSAT, WIND EUROPE, EWEA, IRENA)

To contextualize the wind energy sector in terms of its current situation and the evolution of the last years, a series of databases have been taken into consideration in which the evolution of the installed wind energy capacity onshore and offshore in Europe in the last years, the number of technological patents registered in Europe that give a vision of the progress in this field. It also shows the number of direct jobs worldwide in the wind energy sector, and other findings to be taken into consideration that provide a broader view of the magnitude of this sector.

A) Evolution of installed wind power capacity in the EU

According to information published by EUROSTAT, wind energy has become one of the most important renewable energy sources in Europe in recent decades. Regarding the evolution and growth of onshore and offshore wind in Europe, it can be said that:

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

- Onshore wind energy has experienced steady growth in Europe in the last decades. In 2021, the installed capacity of onshore wind power in Europe reached 197 GW.

- On the other hand, offshore wind power has experienced rapid growth in Europe in recent years, reaching an installed capacity of offshore wind power in Europe of 25 GW in 2021.

Taking 2015 European Wind Energy Association (EWEA) data as a reference, the installed capacity of wind power in Europe in that year was 141.6 GW, of which, onshore wind power accounted for 88 % of the total installed capacity, with a total installed capacity of 125 GW and offshore wind power accounted for 12 % of the total installed capacity, with a total installed capacity of 16.6 GW.

Importantly, installed wind power capacity in Europe has experienced significant growth since 2015, with a 56 % increase in total installed capacity to 222 GW in 2021. This growth has been driven by both onshore and offshore wind, although offshore wind has experienced faster growth in recent years.

Europe is a leader in wind power, with installed capacity accounting for approximately 40 % of total installed capacity worldwide. The leading countries in installed wind power capacity in Europe are Germany, Spain, the United Kingdom, France, and Italy, although other countries such as Denmark, the Netherlands, and Sweden also have a significant presence in offshore wind power.

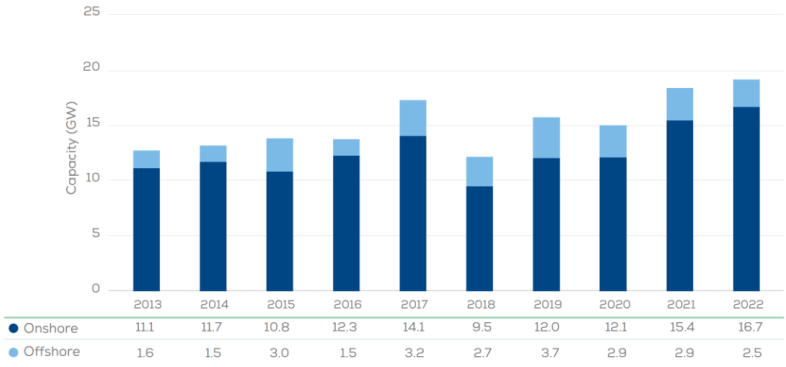

Figure 4. Evolution of installed onshore and offshore capacity in Europe for the period 2013 to 2022. *Source: EUROSTAT.*

B) Evolution of the number of wind energy patents in the EU

Wind energy Patents evolution Europe. Taking as a source the information provided by IRENA INSPIRE based on the information in EPO PATSAT 2021 in the autumn edition and updated in November 2022 and in the Climate Change Mitigation Technologies (Y02) classification by EPO, it is possible to have a comprehensive idea, which does not mean exhaustive, of the information concerning the field of patents registered in the wind energy sector. The following image shows the evolution of the number of patents filed between 2009 and 2021 in Europe.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

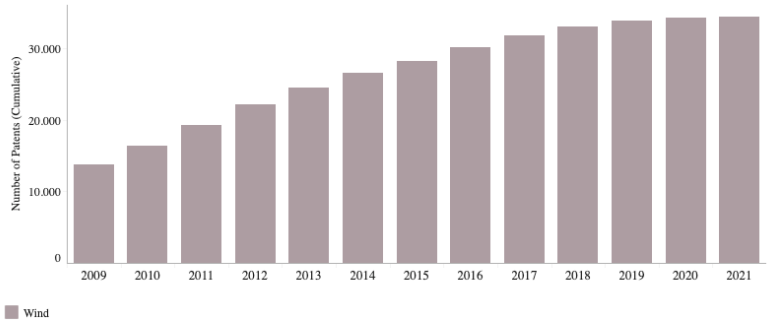

Figure 5. Renewable Energy Patents Evolution. *Source: IRENA INSPIRE.*

C) Growth Employment worldwide

Wind Energy Employment worldwide. Sourcing to IRENA and ILO (2022) in their annual review 2022, International Renewable Energy Agency, global onshore and offshore wind employment grew to 1.4 million jobs in 2021, up from 1.25 million in 2020. Most wind employment is concentrated in a relatively small number of countries. Asia accounted for 57 %, Europe 25 %, the Americas 16 % and Africa and Oceania 2 %.

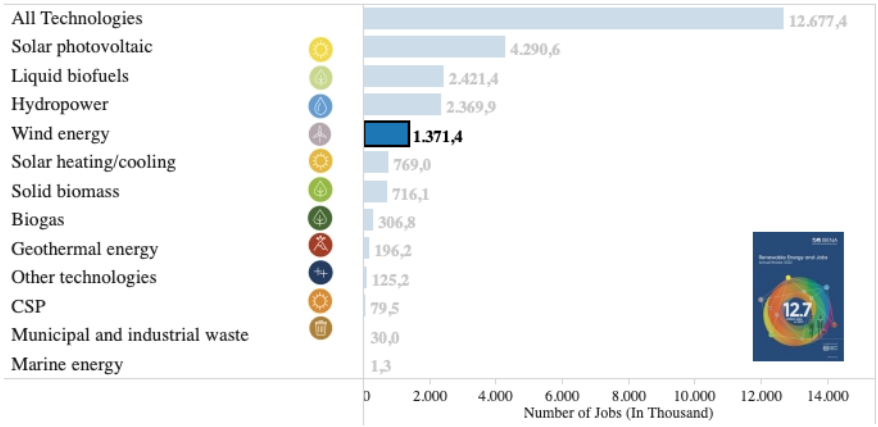

Figure 6. Renewable Energy Employment by Technology in 2021 (Worldwide). *Source: IRENA and ILO.*

D) Other findings. Future installed capacity growth targets for EU (*source WindEurope*)

- In 2022, new wind installations in Europe totaled 19.1 GW (16.7 GW onshore and 2.5 GW offshore). Despite the difficult economic environment and supply chain difficulties, this was a record year for installations in Europe, with a 4% increase compared to the previous year. However, installations fell short of expectations from 2021 of 12% and were well below the rates needed to meet Europe's climate and environmental targets.

- 87% of new wind installations in Europe last year were onshore wind. Sweden, Finland, Germany, and France built the most onshore wind power. Europe now has 255 GW of wind capacity.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

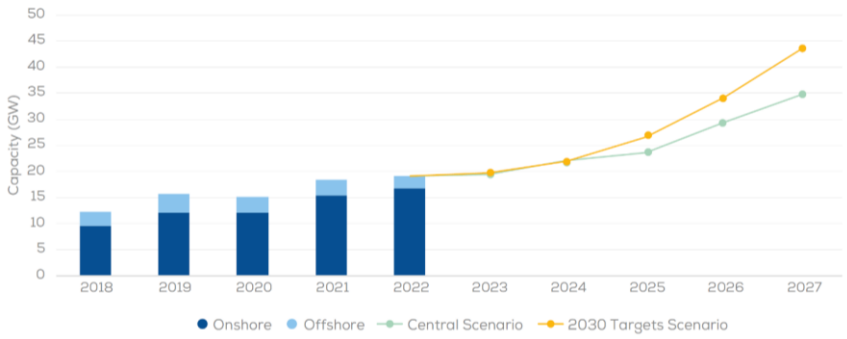

Figure 7. New installations in the EU until 2022 and its projection to 2027. *Source: WindEurope.*

Europe is expected to install 129 GW of new wind farms during the 2023-2027 period, with the EU-27 installing 98 GW of that figure. Three-quarters of the new capacity added in 2023-27 will be onshore wind and one-quarter offshore wind.

3.3 Similar EU-funded research projects

A. Mistral (Multi-sectoral approaches to Innovative Skills Training for Renewable energy & sociAL acceptance) aims to train a new generation of researchers capable of assessing the complexity of societal acceptance issues facing the deployment of renewable energy infrastructures and proposing innovative solutions in various research, governmental and business contexts. MISTRAL received funding as an Innovative Training Network from the European Union's Horizon 2020 research and innovation program under the Marie Skłodowska-Curie Actions (Grant Agreement No. 813837).

Figure 8. Mistral project logo. *Source: Mistral*.

1. Understanding the drivers of social acceptance: The project aims to analyze the factors that influence social acceptance of renewable energy projects, including the role of public attitudes, beliefs, and values, and the influence of institutional and political contexts.

2. Developing tools for stakeholder engagement: The project aims to develop and test innovative tools and approaches for stakeholder engagement, including participatory methods and co-creation processes.

3. Assessing the impacts of renewable energy deployment: The project aims to assess the social, economic, and environmental impacts of renewable energy deployment, and to develop methods for evaluating these impacts in a comprehensive and integrated manner.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

4. Building capacity for social acceptance: The project aims to build capacity for social acceptance among key stakeholders, including policymakers, developers, and civil society organizations, through training, workshops, and knowledge-sharing activities.

The MISTRAL project is focused on enhancing the social acceptance of renewable energy technologies, to accelerate the transition to a more sustainable and decarbonized energy system. By developing tools and approaches for stakeholder engagement and building capacity for social acceptance, the project aims to promote greater participation and collaboration among different stakeholders and to help ensure that renewable energy deployment is done in a manner that is socially and environmentally sustainable.

B. WinWind is a project under the EU H2020 research and innovation program. The overall objective of WinWind is to enhance the socially inclusive and environmentally sound market uptake of wind energy by increasing its social acceptance in 'wind energy scarce regions' (WESR). The specific objectives are: screening, analyzing, discussing, replicating, testing & disseminating feasible solutions for increasing social acceptance and thereby the uptake of wind energy. The aims are to enhance the socially inclusive and environmentally sound market uptake of wind energy by increasing its social acceptance. WinWind received funding from European Union's Horizon 2020 Research and Innovation program under Grant Agreement Nº 764717.

Figure 9. WinWind project logo. Source: WinWind.

WinWind analyzes the specificities of six regional communities (Germany, Italy, Latvia, Norway, Poland, and Spain) in terms of socio-economic, spatial, and environmental characteristics and the reasons for slow market implementation in the selected target regions. In doing so, all individual and collective rights of local indigenous peoples are considered (Article 27. UN Human Rights Committee).

Best practices to overcome identified obstacles are evaluated in this project and, to the extent possible, will be transferred. The project focuses especially on new informal/voluntary participation measures, direct and indirect financial participation measures, and benefit sharing. It also draws policy lessons valid throughout Europe and promotes recommendations.

The project started in October 2017. Under the coordination of the Freie Universität Berlin - Research Center for Environmental Policy (FFU) and ended in March 2020.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

4. Conclusions

4.1 EU Level

Directive (EU) 2018/2001 has been and is a key element in the development of renewable energies in the European Union. This Directive establishes the basis for encouraging the use of renewable energies and highlights the importance of citizen participation and social acceptance in the sector. It serves as a fundamental framework to guide Member States in the implementation of policies and practices related to renewable energies.

Therefore, Europe has established guidelines and procedures of action are established to promote renewable energies, including the effectiveness of giving value and voice to the community. As the results of the interviews suggest, public participation in wind energy projects is essential, as it allows stakeholder interests and views to be adequately addressed. The degree of stakeholder participation differs from each country and there are still important challenges and improvements to be achieved.

A) PLANNING PHASE

In the planning phase of wind energy projects, there are no specific legal requirements at the European level. However, both Directive 2018/2001 and the EU 2020 Guidance Document on Wind Energy Projects and Nature Protection Legislation recognize the importance of citizen participation in all phases of renewable energy development. The need to include all stakeholders and to encourage consultation and active participation of society in the planning of wind projects is highlighted. Collaborative planning is presented as a positive element to address potential conflicts and promote a society involved and supportive of wind farms.

The results of the interviews conducted at the European level support these concepts; in general, interviewees consider public participation in the planning phases of wind energy projects in the EU to be well-regulated and open. They perceive that stakeholders are interested in participating. In addition, the inclusion of citizens in the planning process is also noticed as beneficial to support the successful implementation of wind projects, reduce potential conflicts and improve the social acceptability of these projects.

B) LICENSING PHASE

In the licensing phase, there are binding legal documents that require citizen participation and stakeholder involvement. The Environmental Impact Assessment Directive (2014/52/EU) establishes the obligation of developers to provide clear and transparent information on the project and its impacts, as well as to inform and consult the local community. It also recommends and underlines the importance of initiating stakeholder involvement from the earliest planning stages and maintaining it throughout the licensing process.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Interviewed EU-level stakeholders express that public participation in this is, in general, well-regulated, and transparent. They consider that wind energy projects are adequately subject to public participation, recalling that they differ by country.

C) DEVELOPMENT PHASE

In the development phase of wind energy projects, there are no specific legal requirements regarding citizen involvement. However, European discourse underlines the importance of maintaining the public participation and community dialogue implemented in previous phases during this phase. This provides an opportunity to monitor the effectiveness of the participation actions implemented and to evaluate the social acceptance of the project. It also enables an opportunity to address social preoccupations, meet stakeholder expectations, and establish constructive and collaborative relationships between interested parties.

Interviewees' perception is that wind energy projects involve citizens during the development phase through procedures that ensure transparency and address stakeholder concerns. It is appreciated that an effort is made to sustain an open and transparent collaborative process, although continuous improvement is needed to better deal with the interests and viewpoints of all parties involved. In addition, they detect a growing interest from stakeholders to participate during the development phase.

In general, interviewees do not see the necessity of any specific reward system to stimulate participation. They emphasize avoiding financial incentives that could compromise the interests of local communities and highlight the importance of considering the views of those who do not actively participate. Therefore, although community reward is not actively promoted from a European context, it is important to consider the perceptions of local stakeholders and consider approaches that may improve the social acceptability of wind projects.

In summary, Directive 2018/2001 has established a solid framework to promote the implementation of renewable energy in the European Union. This directive guides Member States in the implementation of policies and practices related to renewable energies in their respective territories. However, despite the progress made, challenges are still to be overcome. Interviewees suggest, to ensure effective and significant involvement of local communities and stakeholders at all stages of the process, it is necessary to address those barriers faced by wind projects such as simplifying administrative procedures, improving transparency, and enhancing communication. In addition, there is a requirement to address existing preconceptions, encourage collaboration, and provide more opportunities for stakeholder participation. These actions will help to increase public and social support for wind energy projects and ensure their acceptability in society.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

The European Union is committed to the dissemination of the fundamental role of renewable energy both now and in the future. This factor supports the social acceptance of projects in the early stages, such as the planning process. In addition to disseminating information to the community, implementing pilot projects is encouraged with the aim of promoting dissemination at the local level and providing tangible examples to promoters, so that their experience can be taken as a reference.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Table 12. Support and barrier factors at EU level for each project phase. *Source: own elaboration*.

	Supporting factors	Hindering factors
Planning	▪ Clear and accessible information ▪ Policies that encourage and promote it ▪ Proactive and transparent prevention of potential impacts ▪ Informing on the present and future role of renewable energies ▪ Pilot projects used as an example and reference ▪ Availability of collaborative technologies and tools ▪ Promotion of a culture of corporate social responsibility ▪ Tangible incentives to the community	▪ Technical vocabulary difficult to understand by the citizen ▪ Decisions about the project that appear to be made in advance ▪ Negative social perception of wind structures ▪ Lack of coherent regulations to promote it ▪ Lack of transparency in the information provided ▪ Lack of a culture of dialogue and collaboration ▪ Lack of reference programs and guidelines
Licensing	▪ Transparency. Detailed information potential impacts and how they will be addressed ▪ Simple and accessible participation mechanisms ▪ Citizen participation committees to ensure community involvement ▪ Clear and effective communication for constructive dialogue ▪ Provision of resources and information for all stakeholders ▪ Respect the diversity of opinions, perspectives and needs of the community ▪ Corporate social responsibility on the part of the project proponents	▪ Lack of clear and accessible information ▪ Lack of resources and support ▪ Social movement against these projects. Negative social perception ▪ Lack of regulatory framework at national and regional levels ▪ Lack of long-term commitment ▪ Coordination issues between the different stakeholders
Development	▪ Clear, accessible, and transparent information on project progress and approach. ▪ Inform and consult the community in case of changes ▪ Active conflict resolution mechanisms ▪ Acquiring jobs from the local community ▪ Favorable operating conditions and requirements ▪ Effective communication channels and stakeholder engagement	▪ Social movement in opposition ▪ Lack of commitment on the part of the authorities ▪ Changes in the political and regulatory environment ▪ Labor conflicts can generate tensions among stakeholders ▪ Different stakeholders may have different expectations about the project ▪ Difficulties in the distribution of benefits ▪ Lack of adequate monitoring and evaluation

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

4.2 Regional level. Greece

Directive (EU) 2018/2001 was recently introduced into Greek law following the March 2023 vote. Also on March 28, 2023, Law 5037/2023, which introduces special provisions, came into force. Local communities are highly valued and supported and promoted by different entities and institutions. Law 4513/2018 recognizes and regulates energy communities.

A key aspect is the recognition of the key role of public participation in shaping and supporting wind farm development and achieving a greener and more resilient energy future for the nation.

The interviews conducted highlight the need to place special emphasis on recognizing the critical role of public participation in shaping and supporting wind farm development and achieving a greener and more resilient energy future for the nation.

A) PLANNING PHASE

The analysis of the results of the desk research and interviews highlights the need for increased public participation, a revised legal framework, wide dissemination of information, transparency, and the implementation of reward systems in the planning phases of wind energy projects in Greece. By addressing these aspects, Greece can promote a more inclusive and sustainable approach to the implementation of wind energy projects, ensuring stakeholder participation and support in the process.

Interviewees indicate that it would be desirable to expand the existing legal framework for wind energy projects to facilitate broader public participation in the Planning phase. This includes the promotion of public dialogue, the establishment of preparatory plans for the management of renewable energy sources, and the involvement of local government organizations in the process. References are also made to a possible improvement in terms of transparency and information during the project design phase. The importance of public dialogue and preparatory planning is a common denominator and is considered crucial to foster social acceptance and ensuring effective project planning.

Likewise, the importance of dissemination and communication as a driver, is another aspect mentioned by the interviewees, as the rate of social acceptance is increased through adequate dissemination of information and the establishment of effective communication channels with the local community. It is imperative to increase public awareness and understanding of wind energy projects.

B) LICENSING PHASE

The regulatory framework of the energy communities for renewable energy projects, including wind farms in which the participation of the local community is guaranteed, is

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

highlighted. Local community representatives are involved in the licensing process. Initial contacts are established with the licensing authorities, who consider objections, allegations, and possible modifications.

The ideas and input provided by the interviewees highlight the importance of improving public participation, establishing an information body, providing guidance to stakeholders, and considering the potential benefits of implementing a reward system. These measures have the potential to encourage a broader and more participatory approach, which will ultimately contribute to the successful implementation of wind energy initiatives.

C) DEVELOPMENT PHASE

Citizen participation in the projects that are carried out under the energy community format is high, however, in this phase of development and execution, there is not for other types of projects a sufficient regulatory framework specifying the different actions between public participation and the rest of the agents of the sector.

One of the main objectives and therefore facilitators is to maximize the participation in the project of local experts, engineers, manufacturers, machinery owners, operators, etc., to maximize the added value of the project in the local community.

The results of the desk research and interviews demonstrate insufficient public participation at this stage, the need for a more transparent planning process, the importance of stakeholder education, and the potential benefits of a reward system. These results highlight the importance of addressing these issues to promote transparency, inclusiveness, and stakeholder participation in wind energy development in Greece.

The results of the desk research and interviews agree on the need to improve public participation, transparency, and communication in the different project phases. Clear legislation, wide dissemination of information, public dialogue, involvement of independent third parties, and implementation of reward systems are key recommendations to improve public participation and ensure a more sustainable and inclusive implementation of wind energy projects.

While there are positive factors that drive and support public participation, such as cultural background, information agencies, and engagement strategies, there are also notable barriers to participation, such as lack of trust, inadequate information and communication, and the need for clearer legislation. Therefore, the policy approach, with specific regulations and incentives, demonstrates a commitment to promote public participation in the interest of fostering social awareness, environmental, and technological advances, and economic benefits understood as community compensation. All this is conducive to a more sustainable and inclusive implementation of wind energy projects.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Table 13. Support and barrier factors at regional level (Greece) for each project phase. *Source: own elaboration.*

	Supporting factors	Hindering factors
Planning	▪ Clear and accessible information ▪ Informing on the present and future role of renewable energies ▪ Involvement of the relevant authorities ▪ Experienced organizations to facilitate implementation. ▪ Clear and accessible information ▪ Promotion of a culture of corporate social responsibility ▪ Tangible incentives to the community	▪ Negative social perception of wind structures ▪ Lack of a specific national regulatory framework to improve it ▪ Low level of awareness ▪ Lack of coherent regulations to promote it ▪ Lack of reference programs and guidelines
Licensing	▪ Transparency. Detailed information on the project, potential impacts and how they will be addressed ▪ Clear and effective communication for constructive dialogue. Effective communication channels. ▪ Provision of resources and information for all stakeholders ▪ Respect consideration of the diversity of opinions ▪ Conflict resolution mechanisms ▪ Corporate social responsibility on the part of the project proponents ▪ Recognition of the community's cultural and traditional values	▪ Lack of clear and accessible information ▪ Public participation processes that may exclude certain groups of citizens ▪ Social movement against these projects. Negative social perception ▪ Lack of complete and accessible information ▪ Lack of long-term commitment ▪ Coordination issues between the different stakeholders ▪ Lack of regulatory framework
Development	▪ Clear, accessible, and transparent information on project progress ▪ Inform and consult the community in case of changes ▪ Active conflict resolution mechanisms ▪ Policies that encourage and promote it ▪ Acquiring jobs from the local community ▪ Favourable operating conditions and requirements ▪ Construction of new developmental projects of common benefit - interest in the region	▪ Lack of institutional support ▪ Social movement in opposition ▪ Lack of commitment on the part of the authorities ▪ Changes in the political and regulatory environment ▪ Labor conflicts can generate tensions among stakeholders ▪ Different stakeholders may have different expectations ▪ Difficulties in the distribution of benefits ▪ Lack of adequate monitoring and evaluation

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

4.3 Regional level. Italy

According to the transposition of Directive (EU) 2018/2001 and the development of the regulatory framework in Italy through Legislative Decree 387/2003, Ministerial Decree of 10 September 2010, Legislative Decree 3 March 28/2011, Legislative Decree n. 112/1998, Legislative Decree n. 152/2006 regulating the Environmental Impact Assessment (EIA) are the bases for the development of renewable energy in the country.

Stakeholders in Italy can participate in the different phases of wind projects (EC, 2022), having a greater presence of public participation in zoning, and public permitting procedures.

A common denominator in the survey results is that wind energy projects are not adequately subject to public participation in Italy at all stages of the project. Public participation is focused on the permitting phase when the environmental impact assessment is carried out. However, there have been recent developments in this regard, with a growing trend to involve citizens in the early stages of wind energy projects.

In terms of financial participation, various forms of active and passive financial participation of local communities and citizens in wind farms are identified. In Italy, several regions have introduced renewable energy communities to foster active financial participation with different modalities of wind farms, some entirely community-owned and community-led that are initiated and operated by the local community, or commercial wind farms driven by developers and investors, under which citizens can buy shares or individual turbines.

A) PLANNING PHASE

It has been found that Italy is today among the countries that have national or regional territorial plans that designate wind energy zones. However, within the regions, it is possible to identify areas that are not suitable for the installation of wind turbines. Regarding this issue, according to the interviewees, there is a barrier that refers to the lack of complete alignment between national and regional policies.

Thus, developing a comprehensive regulatory framework for public participation at this early stage of the project, allowing for the establishment of public spaces and initiatives that encourage debate and participation, improve participation mechanisms, and increase awareness and knowledge about the project, would help to build trust among stakeholders.

According to interviewees, it is essential at this stage to provide clear and transparent information on project plans, locations, and schedules. Listening to concerns and receiving feedback from people and stakeholders. It is also important to introduce regulations that facilitate and encourage citizen participation and investment through financial initiatives open to local people.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

B) LICENSING PHASE

The licensing and authorization process for wind energy projects is regulated by Legislative Decree 387/2003, among others already mentioned above. It establishes the reference framework for the authorization of renewable energy plants. Public participation is collected and limited in the Environmental Impact Assessment (EIA) process, following the pertinent procedures. Some regions can establish their forms of public consultation.

Respondents' answers on this phase of the project indicate that there have been improvements in the process in recent years, but that there is still room for further progress. The permitting phase is considered adequate, however, the difficulty of the authorization procedures, which hinder public participation, is noted as a barrier, and an improvement in the simplification of these procedures.

There is a perception of a collaborative, open, and transparent planning process. However, emphasis is placed on the need to encourage community dialogue and address relevant public participation, comments, and input.

In terms of reward systems, interviewees propose recommendations for non-financial/monetary compensatory measures. These measures may include environmental improvement interventions, energy efficiency initiatives, promotion of renewable energy installations, and public awareness.

C) DEVELOPMENT PHASE

A regulatory framework for the development of renewable energy communities (RECs) has recently been created that implements the concept of community ownership. It is a framework that can be interpreted as a positive step toward promoting citizen participation and engagement. This framework does not allow for addressing citizen participation in company-driven wind energy projects.

About the responses of the interviewees in this phase, it is generally indicated that public participation in the development phase is not sufficient, although there have been improvements in recent years, there is still room for further progress, so there is a mixed perception as to whether the process is open and transparent collaborative. It is mentioned that there are no community reward systems.

There is interest in greater local involvement in terms of commitment, promoting financial participation among all citizens, and carrying out information campaigns to improve public participation during the development phase.

Social protest and pressure groups against this type of project are other barriers identified by all interviewees.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Italy has made progress in public participation in wind energy projects. However, throughout this study, it has been identified that the sector is undergoing exponential growth and that the regulatory framework needs to be aligned with the growth of the onshore and offshore wind sectors. More specific regulations and guidelines are needed at the national and regional levels to promote and regulate public participation in all phases of wind energy projects.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Table 14. Support and barrier factors at regional level (Italy) for each project phase. *Source: own elaboration.*

	Supporting factors	Hindering factors
Planning	▪ Pilot projects used as an example and reference ▪ Involvement of the relevant authorities ▪ Availability of collaborative technologies and tools ▪ Promotion of activities that increase society's awareness about wind energy ▪ Willingness of all involved parties to collaborate	▪ Public participation process little publicised to the citizen ▪ Lack of a specific national regulatory framework to improve it ▪ Lack of coherent regulations to promote it ▪ Lack of a culture of dialogue and collaboration ▪ Lack of a remuneration framework
Licensing	▪ Transparency. Detailed information potential impacts and how they will be addressed ▪ Citizen participation committees to ensure community involvement ▪ Clear and effective communication for constructive dialogue ▪ Respect the diversity of opinions, perspectives and needs of the community ▪ Conflict resolution mechanisms ▪ Indirect benefits for citizens	▪ Lack of clear and accessible information ▪ Lack of resources and support ▪ Lack of regulatory framework at national and regional levels ▪ Lack of direct dialogue between project developers and the local community
Development	▪ Inform and consult the community in case of changes ▪ Policies that encourage and promote it ▪ Construction of new developmental projects of common benefit - interest in the region ▪ Effective communication channels and stakeholder engagement	▪ Social movement in opposition ▪ Lack of a regulatory framework ▪ Lack of trust in government ▪ Lack of commitment on the part of the authorities ▪ Lack of communication channels and media ▪ Difficulties in the distribution of benefits

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

4.4 Regional level. Norway

The Norwegian Ministry of the Environment based on the Norwegian Energy Act of 1991 sets standards for the installation of wind turbines and for zoning based on the division of the country into grid cooperation zones. There is planning for the installation of wind turbines as part of an overall plan for wind energy development in Norway.

There is an extensive framework of guidelines, which although not legally binding, constitute the basis for the assessment of concessions under the Energy Law. This framework of guidelines contains precise guidelines and specific prerequisites, leaving less discretion to the administrative authorities. In Norway, the management of onshore and offshore wind energy is aligned with improving the efficiency and predictability of the planning and permitting processes together with societal interests.

From the interviews conducted, the perception is aligned that there is a positive political climate in Norway about wind energy projects, although there are different perspectives among local municipalities compared to the more positive stance of the government. It has been pointed out in the results that there is a legal regulatory procedure that establishes requirements for public participation in wind projects through public consultations, hearings, and meetings for stakeholders to express their views, being that the final decision belongs to the energy authority.

Likewise, it is perceived that the implementation of wind projects in Norway has generally been carried out with an open and transparent approach, and most of the information is available to the public.

A) PLANNING PHASE

Norway has a system in which national policy plays an important role in the planning process and facilitates wind farm development. The Norwegian Directorate of Water Resources and Energy (NVE) actively promotes guidelines for the installation of wind farms that provide details on potential conflicts and ways to resolve them.

While there are three levels of wind farm planning in Norway: national, regional, and municipal, they are designated in regional plans, which guide both municipal and national planning and serve as a bridge between the two, which supports communication with stakeholders.

Interviewees see it as a facilitator that at this phase, the aim is to involve stakeholders and address their concerns. Efforts are made to involve actual stakeholders related to the project area, adjust project configurations, and conduct environmental impact assessments. On the other hand, the process of planning to the specific needs of the municipalities and enhancing communication on technical aspects are identified as areas for improvement. The use of

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

reward systems for participation receives mixed opinions, with some advocating for dialogue-based engagement rather than economic incentives.

In Norway, planning and permitting are closely linked processes. To obtain a permit, developers need to have comprehensive plans for technical, commercial, and environmental aspects. Local communities and stakeholders, such as fisheries organizations, are involved in the process, emphasizing the holistic nature of planning, and permitting.

B) LICENSING PHASE

The licensing process for wind energy projects is under the control of the Norwegian Water Resources and Energy Directorate (NVE) and the Norwegian Ministry of Petroleum and Energy (OED). It should be noted that not only environmental aspects are considered, but also heritage and cultural aspects.

Participation is encouraged through local consultations with the host municipality, landowners, environmental NGOs, and other interested parties. There are public hearings where interested parties comment on issues such as nature conservation, noise, visibility, and impacts on recreation and tourism. Any formal objections are dealt with according to the procedures of the NVE, which is obliged to organize a mediation meeting to discuss the complaint and possible solutions. From the results of the interviews conducted, the perception of public participation on the one hand, it is mentioned that the public is involved during the official procedures of the permitting phase, however, other responses refer to the previous phase (planning phase), which suggests a lack of clarity on public participation during the permitting phase.

It is mentioned in the interviews that historically, concessions were granted without much involvement of local communities, nowadays, the current situation requires the approval of local communities. Likewise, reference is made to the Stakeholder Forum, a space in which the developers, the Ministry of Energy, and regional authorities participated to facilitate discussions and collaboration.

C) DEVELOPMENT PHASE

The information analyzed and interviews conducted on this phase of implementation and development of wind energy projects in Norway are limited in terms of public participation, stakeholder interest, reward systems, and the level of transparency and collaboration during this phase.

It is mentioned that in the development phase, there are fewer opportunities for public participation compared to the planning and permitting phases. Also, interviewees indicate there is insufficient information to determine whether there is an open and transparent collaborative planning process during the development phase.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

To improve public participation in wind power projects in Norway, the following suggestions can be considered: extend the length of public consultation periods to allow for more meaningful participation; increase clarity on the implementation in all phases of the project, including development and operation, strengthen the involvement of municipalities and ensure their active participation by encouraging communication, dialogue, and consideration of stakeholder perspectives.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Table 15. Support and barrier factors at regional level (Norway) for each project phase. *Source: own elaboration.*

	Supporting factors	Hindering factors
Planning	▪ Clear and accessible information ▪ Policies that encourage and promote it ▪ Proactive and transparent prevention of potential impacts ▪ Informing on the present and future role of renewable energies ▪ Pilot projects are used as an example and reference ▪ Availability of collaborative technologies and tools ▪ Promotion of activities that increase society's awareness about the importance of wind energy ▪ Promotion of a culture of corporate social responsibility	▪ Technical vocabulary difficult to understand by the citizen ▪ Decisions about the project that appear to be made in advance ▪ Lack of commitment by project proponent ▪ Negative social perception of wind structures ▪ Lack of coherent regulations to promote it ▪ Lack of transparency in the information provided ▪ Lack of a culture of dialogue and collaboration
Licensing	▪ Transparency. Detailed information potential impacts and how they will be addressed ▪ Citizen participation committees to ensure community involvement ▪ Clear and effective communication for constructive dialogue ▪ Provision of resources and information for all stakeholders ▪ Respect the diversity of opinions, perspectives and needs of the community ▪ Conflict resolution mechanisms	▪ Lack of clear and accessible information ▪ Lack of resources and support ▪ Social movement against these projects. Negative social perception ▪ Lack of complete and accessible information ▪ Lack of regulatory framework at national and regional levels ▪ Lack of long-term commitment ▪ Coordination issues between the different stakeholders
Development	▪ Clear, accessible, and transparent information on project progress and approach ▪ Inform and consult the community in case of changes ▪ Active conflict resolution mechanisms ▪ Acquiring jobs from the local community ▪ Favourable operating conditions and requirements ▪ Effective communication channels and stakeholder engagement	▪ Lack of institutional support ▪ Social movement in opposition ▪ Lack of commitment on the part of the authorities ▪ Changes in the political and regulatory environment ▪ Labor conflicts can generate tensions among stakeholders ▪ Different stakeholders may have different expectations about the project and the rewards ▪ Lack of adequate monitoring and evaluation

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

4.5 Regional level. Spain

The guidelines and lines of action established in the European Directive 2018/2001 for the promotion of renewable energies have defined the ideas and concepts included in the National Energy and Climate Plan (PNIEC).

The PNIEC recognizes the importance of including the social perspective in the actions proposed for the implementation and development of renewable energies, as well as promoting a proactive role of citizens in the energy transition.

A) PLANNING PHASE

Although Spain does not have specific regulations regarding public participation during the planning phase, the PNIEC has incorporated and adapted European recommendations. The importance of maintaining an open dialogue with regional and local administrations, as well as with the community, during the early stages of a wind project should be emphasized. One of the supporting factors for the acceptance of this type of project is the implementation of informative meetings, as this is essential to achieve the inclusion and involvement of citizens in the process.

Interviewees at the Spanish level consider that the public participation process has the potential for improvement. Although existing formats and procedures are in operation, there is a demand for more significant participation, transparency, and comprehensive planning. Stakeholder interest in participating is evident and appreciable, with a desire for involvement and influence over aspects of the project.

B) LICENSING PHASE

For the licensing of wind projects, Spanish legislation has transferred the ideas settled from Europe by the European Directive 2014/52/EU through Law 21/2013. Law 21/2013 on environmental assessment establishes the obligation of developers to provide clear, transparent, and accessible information on the project and its impacts, as well as to inform and consult the local community.

In this context, public participation is promoted through electronic channels and the opportunity to submit relevant allegations is provided during the public consultation period. However, interviewees perceive a citizenry interested in participation and collaboration that demands more opportunities for involvement and participation.

Spain, in line with European ideas, underlines the importance of initiating stakeholder participation from the earliest stages of planning and maintaining it throughout the licensing process.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

C) DEVELOPMENT PHASE

In Spain is emphasized the importance of maintaining public participation and dialogue with the local community during the development phase of wind projects. The value of evaluating the effectiveness of implemented actions and addressing social concerns is also recognized.

Although there are no specific legal requirements in Spain for citizen involvement at this phase, there is an effort to ensure a collaborative, transparent, and open process. In this context, the significance of considering the perceptions of stakeholders and adopting approaches that improve the social acceptability of wind projects is evident.

In general, the analysis extracted from the interviews at the Spanish level indicates the importance of continuous participation, consideration of local communities, and promoting a sense of involvement and support for wind energy projects during the development phase.

Spanish legislation does not directly provide for community reward systems for wind projects. At the European level, the Spanish interviewees do not consider it essential to implement reward systems as a mechanism to improve social acceptance of wind energy.

In summary, Spain has adopted European guidelines to promote citizen participation in wind energy projects through the PNIEC and the transposition of other relevant directives in its legislation.

However, challenges and opportunities for improvement exist to ensure effective and significant participation of the local community and stakeholders in all phases of the process. It is essential to address barriers such as administrative obstacles, limited early involvement of communities, or legislative incoherencies in the different regions.

Spain is engaged in improving the elements that support the acceptability of projects, such as improving transparency and promoting communication to increase social support and acceptability of wind energy projects in Spanish society.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Table 16. Support and barrier factors at regional level (Spain) for each project phase. *Source: own elaboration.*

	Supporting factors	Hindering factors
Planning	▪ Clear and accessible information ▪ Policies that encourage and promote it ▪ Proactive prevention of potential impacts ▪ Transparent procedures in the implementation ▪ Involvement of the relevant authorities ▪ Availability of collaborative technologies and tools ▪ Proactive approach by stakeholders ▪ Activities to raise public awareness of the importance of wind energy	▪ Complex technical vocabulary for citizens ▪ Public participation process little publicized to citizen ▪ Lack of a specific and coherent national regulatory framework ▪ Low level of awareness ▪ Minority opposition to wind energy ▪ Lack of reference programs and guidelines
Licensing	▪ Transparent information and mitigation strategies ▪ Citizen committees for community involvement ▪ Clear and effective communication for dialogue ▪ Tangible community benefits	▪ Social movement against these projects ▪ Lack of direct dialogue between developers and the community ▪ Lack of long-term commitment ▪ Lack of regulatory framework
Development	▪ Policies that encourage and promote it ▪ Acquiring jobs from the local community	▪ Social movement in opposition ▪ Lack of a regulatory framework ▪ Lack of commitment on the part of the authorities ▪ Difficult communication with company

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

5. Bibliography

A) EU

European Parliament and Council. (2018). DIRECTIVE (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources. From: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018L2001.

European Commission. (2020, November 18). Commission Notice: Guidance Document on Wind Energy Developments and EU Nature Legislation (C (2020) 7730 final). From: https://ec.europa.eu/environment/nature/natura2000/management/docs/wind_farms_en.pdf.

European Parliament and Council. (2003). DIRECTIVE 2003/35/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 26 May 2003 providing for public participation in respect of the drawing up of certain plans and programs relating to the environment and amending public participation and access to justice. From: https://eur-lex.europa.eu/resource.html?uri=cellar:4a80a6c9-cdb3-4e27-a721-d5df1a0535bc.0004.02/DOC_1&format=PDF.

European Parliament and Council (2014). DIRECTIVE 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment. Environmental Impact Assessment Directive. From: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0052&rid=1.

B) GREECE

Law 4513/2018, of 23 January on Energy Communities and other clauses. (Official Governmental Gazette 9A' / 23-1-2018).

Law 5037/2023, of 29 March on Renaming of the Regulatory Authority of Energy to Regulatory Authority of Waste, Energy and Water and investigation of its objectives with responsibilities on the water and urban waste management, support of the water policy – Update of the legislation for the use and the production of electricity from renewable energy sources with the inclusion of the European Directives 2018/2001 and 2019/944 – Specific clauses on the renewable energy sources and the protection of the environment. (Official Governmental Gazette 78A' / 29-3-2023).

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Law 4685/2020, of 7 May on Update of the environmental legislation, embodied in the Greek legislation of the European directives 2018/844 and 2019/692 of the European Parliament and Council and other clauses. (Official Governmental Gazette 92A΄ / 7-5-2020).

Law 4964/2022, of 30 July on Clauses for the simplification of the environmental licensing of offshore wind parks, the treatment of energy crisis, the environmental protection, and other clauses. (Official Governmental Gazette 150A΄ / 30-7-2022).

Law 4014/2011, of 21 November on Environmental licensing of projects and activities, regulation of illegal buildings about the introduction of environmental balance and other clauses on topics under the responsibility of the Ministry of Environment, Energy and Climate Change. (Official Governmental Gazette 209A΄ / 21-11-2011).

Ministerial Decision 1958/2012, of 13 January on Categorization of public and private projects and activities in categories and sub-categories according to clause 1, paragraph 4 of the law 4014 / 21-09-2011. (Official Governmental Gazette 21B΄ / 13-1-2012).

Number DIPA/oik. 37674, of 10 August on Amendments and codification of the Ministerial Decision 1958/2012 - Categorization of public and private projects and activities in categories and sub-categories according to the clause 1, paragraph 4 of the law 4014 / 21-09-2011, as it has been modified and is valid. (Official Governmental Gazette 2471B΄ / 10-8-2016).

Number oik. 2307, of 14 February on Amendment of the DIPA/oik 37674/27-7-2016 decision of the Minister of Environment, Energy and Climate Change "Categorization of public and private projects and activities in categories and sub-categories according to the clause 1, paragraph 4 of the law 4014 / 21-09-2011", about the categorization of specific projects and activities of the 1 st, 2 nd, 3 rd, 4 th, 5 th, 6 th, 7 th, 8 th, 9 th, 10 th, 11 th and 12 th groups. (Official Governmental Gazette: 439B / 14-2-2018).

Number YPEN/DIPA/74463/4562 of 21 September on Amendment of the DIPA/oik. 37674/27-7-2016 (B΄2471) decision of the Minister of Environment, Energy and Climate Change "Categorization of public and private projects and activities in categories and sub-categories according to the clause 1, paragraph 4 of the law 4014 / 21-09-2011", about the categorization of specific projects and activities of the 10 th group. (Official Governmental Gazette: 3291B / 6-8-2020).

Number oik. 170225, of 27 January on The particularization of the application content for the environmental licensing of projects and activities of category A of the Ministerial Decision of the Minister of Environment, Energy and Climate Change with no. 1958/2012, as it is valid, according to clause 11 of the law 4014/2011 (A΄ 209), as well as any other relevant detail. (Official Governmental Gazette: 135B / 27-1-2014).

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Number D6/F1/oik. 13310 of 10 July on Procedure for the issuance of the Installation Permit and the Operation Permit for electricity production plants with the use of renewable energy sources. (Official Governmental Gazette 1153B΄ / 10-7-2007)

Katsaprakakis, D. Al., Proka, A., Zafirakis, D., Damasiotis, M., Kotsampopoulos, P., Hatziargyriou, N., Dakanali, E., Arnaoutakis, G., & Xevgenos, D. (2022). Greek Islands' Energy Transition: From Lighthouse Projects to the Emergence of Energy Communities. Energies, 15(16), 5996.Dimitris A. Katsaprakakis, Eirini Dakanali, Apostolos Dimopoulos, Yiannis Gyllis. Energy Transition on Sifnos: An Approach to Economic and Social Transition and Development. Applied Sciences 2022, 12, 2680.

Katsaprakakis, D. Al., Michopoulos, A., Skoulou, V., Dakanali, E., Maragkaki, A., Pappa, S., Antonakakis, I., Christakis, D., & Condaxakis, C. (2022). A Multidisciplinary Approach for an Effective and Rational Energy Transition in Crete Island, Greece. Energies, 15, 3010.

Prados, M.-J., Iglesias-Pascual, R., & Barral, Á. (2021). Energy transition and community participation in Portugal, Greece, and Israel: Regional differences from a multi-level perspective. Energy Research & Social Science, 87, 102467.

C) ITALY

APPROVE. (2019). Report on good practices, APPROVE Project/INTERREG EUROPE - Advancing Public Participation and stakeholder engagement for the improvement of renewable Energy policies. Retrieved February 14, 2023, from https://projects2014-2020.interregeurope.eu/fileadmin/user_upload/tx_tevprojects/library/file_1576529920.pdf.

Biresselioglu, M. E., Limoncuoglu, S. A., Demir, M. H., Reichl, J., Burgstaller, K., Sciullo, A., & Ferrero, E. (2021). Legal Provisions and Market Conditions for Energy Communities in Austria, Germany, Greece, Italy, Spain, and Turkey: A Comparative Assessment. Sustainability, 13(20), 11212. MDPI AG. Retrieved from http://dx.doi.org/10.3390/su132011212.

Candelise, C., & Ruggieri, G. (2020). Status and Evolution of the Community Energy Sector in Italy. Energies, 13(8), 1888. MDPI AG. Retrieved from http://dx.doi.org/10.3390/en13081888.

Candelise, C., & Ruggieri, G. (2017). Community Energy in Italy: Heterogeneous institutional characteristics and citizens engagement. IEFE Working Papers 93, IEFE, Center for Research on Energy and Environmental Economics and Policy, Universita Bocconi, Milano, Italy. Retrieved from https://ideas.repec.org/s/bcu/iefewp.html.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Cavicchioli, C., & Garofalo, E. (n.d.). IEA WIND TASK 28, Social acceptance of wind energy projects "Winning Hearts and Minds", State-of-the-art report, Country report of ITALY. International Energy Agency. Retrieved from http://www.socialacceptance.ch/images/State-of-the-Art_countryreport_Italy.pdf.

CDCA. (2020). Centro Documentazione Conflitti Ambientali, Atlante Italiano dei Conflitti Ambientali. Retrieved from http://cdca.it.

Corrias, P., & Felici, B. (2019). Accettazione sociale delle tecnologie energetiche: il territorio tra vocazioni, sviluppo locale e obiettivi di decarbonizzazione. Il ruolo di una pianificazione condivisa. 2019 ENEA Agenzia nazionale per le nuove tecnologie, l'energia e lo sviluppo economico sostenibile. Retrieved from https://www.pubblicazioni.enea.it/le-pubblicazioni-enea/edizioni-enea/anno-2019/accettazione-sociale-delle-tecnologie-energetiche-il-territorio-tra-vocazioni-sviluppo-locale-e-obiettivi-di-decarbonizzazione.html

Grignani, A., Gozzellino, M., Sciullo, A., & Padovan, D. (2021). Community Cooperative: A New Legal Form for Enhancing Social Capital for the Development of Renewable Energy Communities in Italy. Energies, 14(21), 7029. MDPI AG. Retrieved from http://dx.doi.org/10.3390/en14217029.

European Commission (EC). (2022). Directorate-General for Energy. Tallat-Kelpšaitė, J., Brückmann, R., Banasiak, J. Technical support for RES policy development and implementation: simplification of permission and administrative procedures for RES installations (RES simplify): interim report. Publications Office of the European Union. Retrieved from https://data.europa.eu/doi/10.2833/239077.

JRC - Joint Research Centre. (2015). Institute for Energy and Transport. Local Arántegui, R., Serrano González, J. The regulatory framework for wind energy in EU Member States: part 1 of the study on the social and economic value of wind energy - WindValueEU. Publications Office, 2015. Retrieved on January 9, 2023, from https://data.europa.eu/doi/10.2790/282003.

Firestone, J., Hoen, B., Rand, J., Elliott, D., HÃbner, G., & Pohl, J. (2018). Reconsidering barriers to wind power projects: community engagement, developer transparency, and place. Journal of Environmental Policy & Planning, 20(3), 370-386. Retrieved on January 9, 2023, from https://pdxscholar.library.pdx.edu/cgi/viewcontent.cgi?article=1061&context=rri_facpubs.

Krug, M., Di Nucci, M. R., Caldera, M., & De Luca, E. (2022). Mainstreaming Community Energy: Is the Renewable Energy Directive a Driver for Renewable Energy Communities in Germany and Italy? Sustainability, 14(12), 7181. MDPI AG. Retrieved from http://dx.doi.org/10.3390/su14127181.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Krug, M., & Di Nucci, M. R. (2020). Citizens at the heart of the energy transition in Europe?: Opportunities and challenges for community wind farms in six European countries. Renewable Energy Law and Policy Review, 9(4), 9-27. Retrieved from https://www.jstor.org/stable/26912434.

Kunze, C., & Becker, S. (2014). Energy democracy in Europe - A survey and outlook. Roza Luxemburg Stiftung, Brussels, July 2014. Retrieved from https://www.rosalux.de/fileadmin/rls_uploads/pdfs/sonst_publikationen/Energy-democracy-in-Europe.pdf.

Luca, E., Nardi, C., Giuffrida, L., Krug, M., & Di Nucci, M. (2020). Explaining Factors Leading to Community Acceptance of Wind Energy. Results of an Expert Assessment. Energies, 13. Retrieved on January 9, 2023, from https://doi.org/10.3390/en13082119.

Maleki-Dizaji, P., del Bufalo, N., Di Nucci, M.-R., & Krug, M. (2020). Overcoming Barriers to the Community Acceptance of Wind Energy: Lessons Learnt from a Comparative Analysis of Best Practice Cases across Europe. Sustainability, 12(9), 3562. MDPI AG. Retrieved on February 14, 2023, from http://dx.doi.org/10.3390/su12093562.

Martorana, C., & Tedeschi, A. (2022). The Renewable Energy Law Review: Italy. Legance - Avvocati Associati, 26 July 2022. Retrieved on February 17, 2023, from https://thelawreviews.co.uk/title/the-renewable-energy-law-review/italy.

Nimbyforum. (n.d.). Retrieved from https://www.nimbyforum.it.

Standal, K., Stine, A., et al. (2021). Assessment report on technical, legal, institutional, and policy conditions for the uptake of RES based community energy. Retrieved on March 30, 2023, from https://come-res.eu/fileadmin/user_upload/Resources/Deliverables/COME_RES_D2.1__Assessment_report_FINAL.pdf.

WinWind. (2019). Report: Transfer Workshop in Italy - TULA, 18 September. WinWind project (RIA) of Horizon 2020 (GA 764717). Retrieved on February 14, 2023, from https://winwind-project.eu/fileadmin/user_upload/Stakeholder_Desks/Report_IT_Tula.pdf.

WinWind. (2019b). Deliverable 4.3 - Synthesis & comparative analysis of best practice case studies for promoting the social acceptance of wind energy, Version 2 (31.05.2019). Retrieved on February 14, 2023, from https://winwind-project.eu/fileadmin/user_upload/Resources/Deliverables/Del_4.3.pdf.

WinWind. (2019c). Deliverable 6.1 Screening of technical and non-technical regulations, guidelines and recommendations (V5), 31/07/2019. Retrieved on February 17, 2023, from

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

https://winwind-project.eu/fileadmin/user_upload/Resources/WinWind_-_Deliverable_6.1_Technical_screening_report.pdf.

WinWind. (2018). Deliverable 2.1: Technical and socio-economic conditions, A literature review of social acceptance of wind energy development, and an overview of the technical, socioeconomic and regulatory starting conditions in the wind energy scarce target regions (29.10.2018), Version 2. Retrieved on February 14, 2023, from https://winwind-project.eu/fileadmin/user_upload/Resources/Deliverables/Del2.1_final.pdf.

WinWind. (n.d.). Distributional Justice (webpage). Retrieved on February 14, 2023, from https://www.pocketwinwind.eu/best-practices/distributional-justice.html.

WinWind. (n.d. - b). Multi-measure approach (webpage). Retrieved on February 14, 2023, from https://www.pocketwinwind.eu/best-practices/multi-measure-approach.html.

D) NORWAY

Darpö, J. (2020). Should locals have a say when it's blowing? Retrieved from https://nordiskmiljoratt.se/onewebmedia/Darpo.pdf.

De Luca, E., Nardi, C., Giuffrida, L. G., Krug, M., & Di Nucci, M. R. (2020). Explaining Factors Leading to Community Acceptance of Wind Energy. Results of an Expert Assessment. Energies, 13(8), 2119. https://doi.org/10.3390/en13082119.

Gulbrandsen, L. H., Inderberg, T. H. J., & Jevnaker, T. (2021). Is political steering gone with the wind? Administrative power and wind energy licensing practices in Norway. Energy Research & Social Science, 74, 101963. https://doi.org/10.1016/j.erss.2021.101963.

Idsø, J. (2021). Growth and Economic Performance of the Norwegian Wind Power Industry and Some Aspects of the Nordic Electricity Market. Energies, 14(9), 2701. https://doi.org/10.3390/en14092701.

Inderberg, T. H. J., Theisen, O. M., & Flåm, K. H. (2020). What influences windpower decisions? A statistical analysis of licensing in Norway. Journal of Cleaner Production, 273, 122860. https://doi.org/10.1016/j.jclepro.2020.122860.

Krug, M. (2020). Citizens at the heart of the energy transition in Europe? Energy Research & Social Science, 9(4), 19. Retrieved from https://www.jstor.org/stable/26912434.

Maleki-Dizaji, P., del Bufalo, N., Di Nucci, M.-R., & Krug, M. (2020). Overcoming Barriers to the Community Acceptance of Wind Energy: Lessons Learnt from a Comparative Analysis of Best Practice Cases across Europe. Sustainability, 12(9), 3562. https://doi.org/10.3390/su12093562.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Pettersson, M., Ek, K., Söderholm, K., & Söderholm, P. (2010). Wind power planning and permitting: Comparative perspectives from the Nordic countries. Renewable and Sustainable Energy Reviews, 14(9), 3116–3123. https://doi.org/10.1016/j.rser.2010.07.008.

WinWind (2018), Deliverable 2.1 Technical and socio-economic conditions (V2), 29/10/2018. Retrieved on 28th April 2023 from: https://winwind-project.eu/fileadmin/user_upload/Resources/Deliverables/Del2.1_final.pdf .

WindEurope. (2022). Norway announces first offshore wind auction. Retrieved from https://windeurope.org/newsroom/news/norway-announces-first-offshore-wind-auction/.

NVE (Norges vassdrags- og energidirektorat). (2019). Descriptive study of Local Energy Communities. A report commissioned by NVE. THEMA Consulting Group Multiconsult Norge AS. Ekstern Rapport Nr 1/2019. Retrieved from https://publikasjoner.nve.no/eksternrapport/2019/eksternrapport2019_01.pdf.

E) SPAIN

Law 24/2013, of 26 December, on the Electricity Sector. BOE-A-2013-13645. Retrieved from https://www.boe.es/buscar/act.php?id=BOE-A-2013-13645.

Law 21/2013, of 9 December, on Environmental Assessment. BOE-A-2013-12913. BOE. Retrieved from https://www.boe.es/eli/es/l/2013/12/09/21/con.

Royal Decree-Law 6/2022 of 29 March adopted urgent measures within the framework of the National Response Plan to the economic and social consequences of the war in Ukraine. BOE-A-2022-4972. Retrieved from https://www.boe.es/buscar/act.php?id=BOE-A-2022-4972.

Ministry for Ecological Transition and Demographic Challenge (MITECO). (n.d.). National Integrated Energy and Climate Plan (PNIEC) 2021-2030. Retrieved from https://www.miteco.gob.es/es/prensa/pniec.aspx.

Royal Decree 1955/2000, of 1 December, which regulates the activities of transport, distribution, commercialization, supply, and authorization procedures for electrical energy installations. BOE-A-2000-24019. Retrieved from https://www.boe.es/buscar/act.php?id=BOE-A-2000-24019.

Royal Decree-Law 23/2020, of 23 June, approving measures in the field of energy and other areas for economic reactivation. BOE-A-2020-6621. Retrieved from https://www.boe.es/buscar/act.php?id=BOE-A-2020-6621#a3.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Ministry for Ecological Transition and Demographic Challenge. (n.d.). Processing of Installations. Retrieved from https://energia.gob.es/electricidad/TramitacionInstalaciones/Paginas/AutorizacionInstalciones.aspx.

Royal Decree-Law 2/2016, of 30 August, on urgent measures for the execution of the sentences, passed about the tenders called within the framework of Decree 124/2010, of 22 June, and the promotion of the production of electricity from wind energy in Aragon. BOA-d-2016-90453. Retrieved from https://www.boe.es/buscar/doc.php?id=BOA-d-2016-90453.

Aragon Government. (2023). Projects open for public information in Aragon. Energy, fuels, and other matters. Portal de Aragon; Government of Aragon. Retrieved from https://www.aragon.es/-/proyectos-en-informacion-publica.

Royal Decree 1028/2007, of 20 July, which establishes the administrative procedure for processing applications for authorization of electricity generation facilities in the territorial sea. BOE-A-2007-14657. Retrieved from https://www.boe.es/buscar/doc.php?id=BOE-A-2007-14657.

Royal Decree 1028/2007, of 24 June, adopting urgent measures in the field of energy taxation and energy generation, and on the management of the regulation canon and the water use tariff. BOE-A-2021-10584. Retrieved from https://www.boe.es/diario_boe/txt.php?id=BOE-A-2021-10584.

Royal Decree 150/2023, of 28 February approved the maritime spatial plans for the five Spanish marine districts. BOE-A-2023-5704. Retrieved from https://www.boe.es/diario_boe/txt.php?id=BOE-A-2023-5704.

Ministry for the Ecological Transition and Demographic Challenge. (n.d.). Roadmap for the Development of Offshore Wind and Marine Energy. Retrieved from https://www.miteco.gob.es/es/ministerio/planes-estrategias/desarrollo-eolica-marina-energias/.

Ministry for Ecological Transition and Demographic Challenge. (n.d.). Public Consultation on the Draft Roadmap for the development of Offshore Wind and Marine Energies in Spain. Retrieved from https://energia.gob.es/es-es/Participacion/Paginas/DetalleParticipacionPublica.aspx?k=431.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

F) OTHER SOURCES

Eurostat. (2023, April). Renewables: main source of energy production in 2021. Retrieved from https://ec.europa.eu/eurostat/web/products-eurostat-news/w/DDN-20230403-1.

IRENA. (n.d.). Renewable Energy Employment by Country. Retrieved from https://www.irena.org/Data/View-data-by-topic/Benefits/Renewable-Energy-Employment-by-Country.

IRENA. (n.d). Employment Time Series. Retrieved from https://www.irena.org/Data/View-data-by-topic/Benefits/Employment-Time-Series.

IRENA. (n.d). Patents Evolution. Retrieved from https://www.irena.org/Data/View-data-by-topic/Innovation-and-Technology/Patents-Evolution

WindEurope. (2023, February). Wind energy in Europe: 2022 Statistics and the outlook for 2023-2027. Retrieved from https://windeurope.org/intelligence-platform/product/wind-energy-in-europe-2022-statistics-and-the-outlook-for-2023-2027/.

WindEurope. (2023, February). Information on the year's on and offshore installations and cumulated capacity per country in Europe. Retrieved from https://windeurope.org/intelligence-platform/product/wind-energy-installations-and-outlook/.

WindEurope. (2023, March). All data by country. Retrieved from https://windeurope.org/intelligence-platform/product/all-data-by-country/.

Mistral. (n.d.). Retrieved from https://mistral-itn.eu.

WinWind. (n.d.). Retrieved from https://winwind-project.eu/home/.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Annexes

Annex I. Guidelines and Templates.

Annex II. Results of the interviews at EU and regional level.

Annex III. Exploitation strategy – IPR.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Annex I

Guidelines and Templates

TABLE OF CONTENTS

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

WENDY aims to unravel the factors triggering social acceptance of wind farms through an in-depth analysis of three dimensions: social sciences and humanities, environmental sciences, and technological engineering.

D. 2.2 Regional and EU framework conditions affecting turbines' social acceptance Task 2.2 REGULATORY FRAMEWORK ANALYSIS GUIDE

Task 2.2: Mapping regional and EU framework conditions affecting turbines´social acceptance.

Leading partner: APPA Renovables
Participants: CIRCE, WR, MEC, Q-PLAN

Contact persons: Lucia Dólera (APPA Renovables), Beñat Sanz (APPA Renovables) and Lucía Paloma Castillo (APPA Renovables)

Purpose of document: Internal use and circulation among partners towards coordinating and facilitating the activity within Task 2.2.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Guidelines for filling the template for the identification of WE farm cases in Task 2.1

Brief introduction

These guidelines are provided in the frame of Task 2.2. The main exercise of Task 2.2 is to analyse **regulatory conditions** and framework settings relevant to wind farms' planning, licensing, and development at the pilots' regional, national, and EU levels.

Next, it´s shown a brief action plan for the organization, implementation, and reporting of T2.2 results, for the analysis of the regulatory conditions and framework settings for wind farms:

1. Preparation and sending to the task partner the guidelines for the analysis of the regulatory conditions by the **category: (i) Planning) (ii) Licensing, (iii) Development,** at the pilot´s regional, national and UE level.
2. Action plans excel with the actions to develop for each partner involved in for the study of mapping regulatory conditions and framework. This excel shows the partner involved and the period to develop the activity.
3. Once the regulatory analysis has been carried out by each partner, they will send the reporting back to the task leader (APPA Renovables).
4. Partners involved in the regulatory analysis:
    - APPA Renovables (EU Level)
    - MEC (Greece pilot)
    - CIRCE (Spain pilot)
    - WR (Norway pilot)
    - Q-Plan (Italy pilot)

T2.2 will inspect the **consenting procedures** applied for onshore/offshore turbines installations, assess the levels of public participation and collaborative planning, and explore the community rewarding schemes deployed, assessing the levels of:

- Public participation
- Collaborative planning
- Explore the community rewarding schemes deployed

It´s crucial to identify under which conditions such elements may drive or hinder a wind farms uptake.

This is where WENDY will map the procedural landscape related to a wind energy project approval, the variations and common standards observed within its planning, and the compensation schemes that reached higher levels of acceptance.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

This document provides guidance for filling the template for the regulatory conditions and framework of wind farms by the partners involved.

Methodology approach for the regulatory analysis

In order to analyze the regulatory conditions and framework settings relevant to wind farm projects applied for onshore/offshore turbine installations, the following aspects have to be analyzed in each of the **three categories** (**planning, licensing, and development)** by each one of the task members named previously.

The partners involved in this analysis will have to assess the regulatory framework of these three categories.

Planning	
Assess the levels of:	Public participation (related to social awareness of the society in this category)
	Collaborative planning
	Explore the community rewarding schemes deployed

It´s highly important to identify in each level which are the Supporting factors, driving the uptake of wind farm projects and which are **the Hindering factors** that constitute a barrier to the uptake of wind farm projects.

Licensing	
Assess the levels of:	Public participation (related to social awareness of the society in this category)
	Collaborative planning
	Explore the community rewarding schemes deployed

It´s highly important to identify in each level which are the **Supporting factors**, driving the uptake of wind farm projects and which are **the Hindering factors** that constitute a barrier to the uptake of wind farm projects.

Development	
Assess the levels of:	Public participation (related to social awareness of the society in this category)
	Collaborative planning
	Explore the community rewarding schemes deployed

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

It´s highly important to identify in each level which are the **Supporting factors**, driving the uptake of wind farm projects and which are **the Hindering factors** that constitute a barrier to the uptake of wind farm projects.

Some ideas for the Supporting and hindering factors for the regulatory evaluation in each category.

In order to provide some ideas for the **supporting factors** that could be analyzed in each level, it´s providing some of them as a possible factor that could be examined (note: not all of them are linked to every level, they are just possible supporting factors that can be applied to one of them or all of them...).

- The policy-driven, through targets and incentives.
- Identify the promotion of activities increasing the environmental awareness of society.
- Promote international cooperation.
- Pilot national projects.
- Organizations with experience facilitate the implementation.
- Support for financing.
- Positive impact on the land/sea...
- The land remains the same once the lifetime of the installations ends.
- Information agencies for the citicens.
- Existing supporting programs for strategic wind farm development (on shore/off shore).
- Financial benefits and improvement of the environmental quality for the citizen´s participation.
- Improve the popularity of community involvement models, taking them as a reference for the rest of the countries...
- Acquire jobs by the local community through a renewable energy model.
- Wind farm projects and people leading the initiatives can boost participation in these renewable projects.
- Energy independence.
- Mitigation of energy poverty.
- Huge range of machines and devices available on the market and each time more efficient.
- Favorurable requirements and exploitation conditions.

Concerning the **hindering factors** that constitute a barrier to the uptake of wind farm projects some of the hindering factors that can be evaluated are:

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

- What are the difficulties in each one of the levels.
- Nonhomogeneous national and regional governments policy, lack of regulatory framework.
- Difficulties on the permitting procedures.
- Social movement against this project.
- Is there any public consultancy agency for the implementation of this project?
- Fossil fuel power plants have the lowest investment costs.
- The level of development between different countries.
- The fisherman movement against this project...
- The use of this renewable technology reduces the implementation of others..
- Lack of promotion of these wind farm projects.
- Negative social perception regarding wind structures.
- The use of the land /sea. These installations require large space for their implementation.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

WENDY aims to unraveling the factors triggering social acceptance of wind farms through an in-depth analysis at three dimensions: social sciences and humanities, environmental sciences, and technological engineering.

D. 2.2 Regional and EU framework conditions affecting turbines' social acceptance Task 2.2. REGULATORY FRAMEWORK TEMPLATE

Task 2.2: Mapping regional and EU framework conditions affecting turbines 'social acceptance.

Leading partner: APPA Renovables
Participants: CIRCE, WR, MEC, Q-PLAN

Purpose of document: Internal use and circulation among partners towards coordinating and facilitating the activity within Task 2.2.

Contact persons: Lucía Paloma Castillo (APPA Renovables), Irma Villar (APPA Renovables) & Beñat Sanz (APPA Renovables).

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

TABLE OF CONTENTS

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Framework conditions affecting turbines' social acceptance

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

4. Development

4.1. Supporting factors

4.2. Hindering factors

5. Others

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

WENDY aims at unravelling the factors triggering social acceptance of wind farms through an in-depth analysis at three dimensions: social sciences and humanities, environmental sciences and technological engineering.

D2.2. Mapping regional and EU framework conditions affecting turbines' social acceptance. Task 2.2. INTERVIEW GUIDELINES AND TEMPLATE

WP 2, T 2.2
APPA Renovables

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Technical references

Project Acronym	WENDY
Project Title	Multicriteria analysis of the technical, environmental, and social factors triggering the PIMBY principle for Wind technologies
Project Coordinator	CIRCE FUNDACION CIRCE CENTRO DE INVESTIGACIÓN DE RECURSOS Y CONSUMOS ENERGÉTICOS jperis@fcirce.es
Project Duration	October2022 – September 2025 (36 months)

Deliverable No.	
Dissemination level*	CO - Confidential, only for members of the consortium (including the EC)
Work Package	WP 2 - Preparatory studies related to turbines' social acceptance and wind energy citizenship
Task	T2.2 - WP2.2 Mapping regional and EU framework conditions affecting turbines' social acceptance

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

INDEX

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

1. Introduction

1.1. Task Description

According to the Grant Agreement, Task 2.2 will inspect the consenting procedures applied for onshore/offshore turbine installations, assess the levels of public participation and collaborative planning, and explore the community rewarding schemes deployed, identifying under which conditions such elements may drive or hinder a wind farm's uptake. This will require in-depth desk research, complemented by (**i) semi-structured semi-structured interviews with key stakeholders across the EU (3 per pilot area; 5 at the EU level) and (ii) findings from quantitative databases (EUROSTAT, PATSTAT) and previously funded European research projects**.

1.2. Objectives

The principal purpose of the interviews is to identify barriers and drivers of public acceptance and participation during the planning, licensing, and development stages of wind farm implementation at the pilots' regional, national, and EU level.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

2. Interview Methodology

In order to carry out this research, it will be applying a methodology comprising the following sections:

1. Sampling Methodology.
2. Target group.
3. Selection criteria.
4. Implementation.

In addition, attached to this document are the Project Consent Form (Annex I) and the Interview Questionnaire / Report Template (Annex II). The following sections provide a comprehensive description of each of the elements included in the methodology applied.

2.1. Sampling Methodology

The interview data will be collected in accordance with a semi-structured, in-depth questionnaire consisting of a set of open-ended questions. The sampling frame should consist of various stakeholder groups and is thoroughly clarified within the following section.

2.2. Target groups

The targeted stakeholders for the WENDY interviews are based on the GA "*regional and national key actors that can act an influence of the public processes that take place during the implementation of a wind farm (planning-permitting and development phases)*". Such key actors are presented, but are not exclusive, in the following list:

Such key actors are presented, but are not exclusive, in the following list:

☐ **Political Dimension (Organized political groups):**

- ☐ National government or authorities / National policy makers.
- ☐ Regional government or authorities / Regional Policy Maker.
- ☐ Local government or authorities/ Local Policy Maker.
- ☐ Representative Political Parties (Opposition Parties).
- ☐ Other…

☐ **Economical Dimension:**

- ☐ **Local & regional economic player related with Wind Energy:**
  - ☐ Industrial Association on Renewables.
  - ☐ Other…

☐ **Local & regional economic player related with other Industrial field:**

- ☐ Economic and local development agency.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

☐ Lobby or sectorial association.

☐ Other industries with a local presence.

☐ Other…

☐ **Social and Environmental Dimension:**

☐ **Individual citizen.**

☐ **Organized stakeholder group.**

☐ Local/Regional ENVIRONMENTAL organization.

☐ Municipal or neighbourhood organization.

☐ Other…

The pilot partners, based on the GA, have to carry out 3 **interviews per pilot, a sum up of 12** in total, in accordance with the agreed PM effort for this task. All the Pilot representatives will be totally accountable for performing 3 interviews per pilot, in which the participants should eventually be one or more of the above-mentioned stakeholders.

2.3. Selection criteria

Criteria for selecting actors/stakeholders:

- Motivation: It is important that stakeholders are interested in participating in the interview. Bored and indifferent participants will not reflect the drivers and barriers for public acceptance and participation in wind turbine development.

- Activity: Stakeholders with the strong power to make changes in regional or national level may be very helpful also for the next steps of the WENDY project. An exposure with them in the beginning of the project could be valuable for the future.

- Objectivity: Stakeholders should be committed to responding fairly, objectively and reflecting reality.

- Wide range of stakeholders' sample: representatives of different parts of the value chain must be interviewed to obtain the best available picture of the drivers and barriers related to public acceptance and participation in wind turbine development at regional and national level.

2.4. Implementation

To carry out the interviews, the heads of each Pilot Area will be responsible for identifying potential interviewees who meet the selection criteria set out in section 2.3.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Therefore, they should contact those candidates and explain in detail the scope of the project and the interview. Depending on the availability and convenience of the interviewee, they will be invited to participate in a face-to-face or telephone/skype interview.

After conducting the interviews and collecting the required information, each AP manager should provide the interview responses following the report template.

The implementation of the interviews should follow the three phases described below:

Phase 1: Identification and contact

The first phase can be split in the following steps:

- *Step 1:* Identify potential participants from the stakeholder based on your organization's availability and network by mapping a minimum of five contacts (to secure 3 interviews).

- *Step 2:* After the initial identification, inviting them (e.g., email invitations) to participate in interviews' process, either in person or remotely. Direct contact by phone is recommended to increase the probability of acceptance.

- *Step 3:* To those who respond positively, provide the **"Consent Form" (Annex I)** prior to the interview. **Participants are expected to sign and send back the Consent Form, before participating.**
  - In the case of a physical interview, the consent form should be signed by each interviewed.
  - In the case of a virtual interview, an online consent form should be prepared by organizers and filled in by the interviewed before the questions take place.

- *Step 4*: When you receive the consent form and **verify** that it is filled-in and signed by the participant, you can proceed and contact them to schedule the interview.

- *Step 5:* You can inform the participant about the required time for the interview (expected time: 30').

- *Optional: Before the interview, you can share the questions with the interviewees, emphasizing the type of answers you expect and indicating which questions may need preparation for answering.*

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

- Step 6: A natural conversation is essential for a successful interview, so be prepared and familiarize yourself with the questions.

Phase 2: Interview

The second phase can be split in the following steps:

- *Step 1:* Start the interview by introducing the project, objectives, partners and countries involved as well as the purpose of the interview.
- *Step 2:* Proceed through the interview by following the questionnaire. Try to keep the time but never interrupt the interviewees.
- *Step 3:* It is recommended to take notes in order not to miss the context of the answer and its content.
- *Step 4:* Always, following an answer from the interviewee, repeat the answer by summarizing it to check if you have capture correct the answer. This method also gives the opportunity to the interviewees to further elaborate.
- *Step 5:* Conclude the interview by thanking the participant.
- *Step 6:* It is recommended to inform the participant that you may contact them via a quick call or e-mail in case you have a quick question or need some clarification.

Phase 3: Reporting

The third phase can be split into the following steps:

- *Step 1:* Transfer your notes to the reporting template; the text in the reporting template must be clear, complete, and coherent. Always bear in mind that the analysis will be done by someone that didn't participate in the interview.
- *Step 2:* Submit the complete reporting template to APPA Renovables for analysis by the 15th of March.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

3. Interview Questionnaire

The intention of these interviews is for regional and national stakeholders (sectorial associations, decision makers. regional governments, etc.) to identify barriers and drivers of public acceptance and participation in wind turbine development.

3.1. Interview Guidelines| Estimated total duration: 30' approx.

- Try to be formal but friendly, polite yet casual. The purpose of the interview is not only to get information but also to get the stakeholders interested in the project.
- Very briefly introduce the project in simple and jargon-free language.
- Make sure that you make clear to the interviewee that there are no wrong or correct answers, and that he/she should freely express his/her opinion.
- In case the interviewee does not understand the question, you should make sure to elaborate on the question.

Check:

- Could you say a little more about...?
- Could you elaborate…
- Are there any reasons why you think that...?
- What did you mean by...?
- Could you please illustrate with an example?

3.2. Interview structure

Part 1 || Background Information

Question 1. In general, do you consider that the implementation of wind projects has been carried out with an open, transparent approach and in pursuit of the common benefit of the region? Y/N.

- If YES, could you please illustrate with an example?
- If NOT, what do you think has been lacking? How would you improve it?

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Question 2. Do you perceive the political will to stimulate public participation in wind energy projects? Y/N.

- If YES, could you please illustrate with an example?
- If NOT, what do you think has been lacking? How would you improve it?

Question 3. Does the administration provide sufficient mechanisms/channels for stakeholders to participate in the **stage of A) Planning? B) Permitting? C) Development?** Y/N.

- If YES. Could you please illustrate with an example?

Question 4. Is there a legal regulatory procedure that establishes the requirements for public participation in this type of project? Y/N.

- If yes, is it transparent and approachable? Is it functional and effective? Is there evidence that is working well?
- I am not aware of its existence.
- NO. There is not.

Question 5. Do you perceive interest from the stakeholder involved in public participation related with wind energy projects? Y/N.

- If NOT, what do you think has been lacking? Do you perceive lack of knowledge about the procedure for public participation and little confidence that it is a productive and reflective process? How would you improve it?

Part 2 || During the planning stage of the wind projects.

Question 6. Do you consider that wind energy projects are properly submitted to public participation in your region? Y/N. If not, how would you improve it?

Question 7. Do you perceive an open and transparent collaborative planning process in which interests and views are considered?

Question 8. Do you perceive stakeholders' interest in participating in the process? If not, what do you think is the main reason?

Question 9. Is there any rewarding scheme for participants in the public participation process? Y/N. If yes, could you say a little bit more about how it works?

Question 10. Do you think it is worth establishing a reward scheme to stimulate public participation during this stage? Y/N. If yes, do you consider it a good mechanism to stimulate participation in this type of process? Why?

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Question 11. Would you like to add anything else about the Public Participation in Planning Stages of wind energy projects?

Part 3 || During the permitting stage of the wind projects.

Question 12. Do you consider that wind energy projects are properly submitted to public participation in your region? Y/N If not, how would you improve it?

Question 13. Do you perceive an open and transparent collaborative planning process in which interests and views are considered?

Question 14. Do you perceive stakeholders' interest in participating in the process? If not, what do you think is the main reason?

Question 15. Is there any reward scheme for participants in the public participation process? Y/N. If yes, could you say a little bit more about how it works?

Question 16. Do you think it is worth establishing a reward scheme to stimulate public participation during this stage? Y/N. If yes, do you consider it a good mechanism to stimulate participation in this type of process? Why?

Question 17. Would you like to add anything else about the Public Participation in the Planning Stages of wind energy projects?

Part 4 || During the development stage of the wind projects.

Question 18. Do you consider that wind energy projects are properly submitted to public participation in your region? Y/N If not, how would you improve it?

Question 19. Do you perceive an open and transparent collaborative planning process in which interests and views are taken into account?

Question 20. Do you perceive stakeholders' interest in participating in the process? If not, what do you think is the main reason?

Question 21. Is there any rewarding scheme for participants in the public participation process? Y/N. If yes, could you say a little bit more about how it works?

Question 22. Do you think it is worth establishing a reward scheme to stimulate public participation during this stage? Y/N. If yes, do you consider it a good mechanism to stimulate participation in this type of process? Why?

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Question 23. Would you like to add anything else about the Public Participation in the Planning Stages of wind energy projects?

Part 5 || Drivers/Supporting Factors

Question 24. Is there any public consultancy agency for the implementation of these projects?

Question 25. In your opinion, what would you say are the drivers for a good involvement in the different phases of the implementation of a wind farm?

A. Planning.
B. Permitting.
C. Development.

Question 26. Could you add a little more about the drivers to public participation in such projects? Could you please illustrate it with an example?

Question 27. Do you have any suggestions for strengthening these drivers?

Question 28. DRIVERS for Public Participation. Indicate your agreement with the following statements using a scale from 1 to 5 [1=Strongly disagree; 2=Disagree; 3=Neither agree nor disagree; 4=Agree; 5=Strongly agree].

- Cultural Background. There is a long tradition of public participation processes in the region. Organizations with experience that facilitate the implementation.
- There are information agencies for the citizens to encourage their participation in participatory processes.
- There is an active presence of sectoral associations representing the interests of the region.
- Existence of Pilot National Projects in community involvement models that could be reference for the rest of the country (countries)
- The policy-driven, through targets and incentives. There are specific regulations, targets, and incentives for public participation.
- Well-designed and implemented public participation strategy. The administration emphasizes the importance of providing comments/opinions during the planning-permitting-development process.
- Well-designed and implemented public participation strategy. Multiple timelines are provided with sufficient time frames to analyse and discuss consultations.
- Social and environmental awareness. Having promotion of activities increasing the environmental awareness of society is worthy to involve citizens in public participation and collaborative planning.
- Social and environmental awareness. Energy independence, Mitigation of energy poverty, Model of sustainable region, etc.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

- Financial benefits and improvement of the environment quality for the citizen´s participation. There are Intrinsic or extrinsic rewards for participants in the consultation process.
- DEVELOPMENT STAGE. Technological and Market Conditions. Huge range of machines and devices available on the market and each time more efficient.
- Business Conditions. Favourable requirements and exploitation conditions.
- Employment and prosperity. Acquire jobs by the local community through a renewable energy model.
- DECOMMISSIONING. The land remains the same once the lifetime of the installations ends (Restored landscape).

Part 6 || Barriers/Hindering factors

Question 29. In your opinion, what would you say are the main barriers that hinder the public involvement in the different phases of the implementation of a wind farm?

- Planning.
- Permitting.
- Development.

Question 30. Could you add a little more about the barriers to public participation in such projects? Could you please illustrate it with an example?

Question 32. Do you have any suggestions for strengthening these barriers?

Question 32. BARRIERS. Indicate your agreement with the following statements using a scale from 1 to 5 [1=Strongly disagree; 2=Disagree; 3=Neither agree nor disagree; 4=Agree; 5=Strongly agree].
The main factors that constitute a barrier to public participation in wind farm projects are:

- Social Barriers. Lack of confidence, dialogue, information, transparency, and privacy.
- Political Barriers. Lack of confidence, legal framework. mass media.
- Logistic Barriers. Few spaces and time for dialogue lack of tools or methods.
- Others:

DURING THE PLANNING STAGE

- Nonhomogeneous national and regional governments policy, lack of regulatory framework.
- Lack of knowledge of the relationship between local community acceptance of specific wind energy projects.
- Negative social perception regarding wind structures
- Few spaces for dialogue to discuss interests. The stakeholders do not have sufficient ways to provide inputs.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

- Few windows of participation and short periods. The stakeholders don't get sufficient or timely information for effective participation.

DURING LICENSING/PERMITTING STAGE

- Difficulties on the permitting procedures.
- Lack of transparency and information. Decision makers drive interests different from those of the local community.
- Social movement against these projects (environmental and primary sectors).

DEVELOPMENT STAGE

- The use of this renewable technology reduces the implementation of others.
- Economic impacts on the primary sector (agriculture, fisheries, livestock).
- Social movements against these projects.
- DECOMMISSIONING. The land does not remain the same once the lifetime of the installations ends (Degraded landscape).

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Annex I – Consent Form

Consent Form

You have been contacted because you have been identified as a key stakeholder for task 2.2 of the WENDY project: Mapping regional and EU framework conditions affecting turbines' social acceptance.

In this context, we would like to learn more about your views and experiences and further identify barriers and drivers of public acceptance and participation in wind turbine development one-to-one meetings.

Project Overview

WENDY is a 36-month project (October 2022 to September 2025) funded by the European Union within the framework of the HORIZON EUROPE Research and Innovation Programme.

WENDY aims at unravelling the factors triggering social acceptance of wind farms through an in-depth analysis at three dimensions: social sciences and humanities, environmental sciences, and technological engineering.

Useful Information

According to the Regulation (EU) 2016/679 of the European Parliament and of the Council of 04/05/2016 you are informed that due to the monitoring and control obligations to which White Research (WR) is subject to the project **WENDY**, in their condition of partner of the mentioned Project together with the rest of Consortium Partners, are obliged to keep records of the activities carried out, including meetings, training and/or dissemination of Project activities, interviews, among others, in the frame of the Project, aiming at performing the actions required by the control bodies and any other competent authorities of the Project.

WENDY aims to fully preserve personal data privacy for those collaborators involved in the WENDY project. Thus, the interviews will be developed according to GDPR regulations. With this consent, you are informed that your personal data will be only employed to plan and carry out the aforementioned meeting and to resolve any ambiguities, questions and other issues that may arise after and as a result of the interview, so as to keep track of the meeting process. The project's deliverables that will be derived by the meeting will not include any of your personal data, nor any other information that could identify you. Your personal data will remain on our written notes (interview's transcript), only to be shared with other WENDY project partners involved in this task, and with EU officials (such as our Project Officer for purposes related to project's evaluation) and/or EU agencies and other authorities for project's auditing purposes, if needed.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Informed Consent form

Therefore, the interviewee states that:

☐ I have been informed about the treatment of my personal data by APPA Renovables and I authorize their use.

WENDY Project would like to acknowledge the support given by different companies, organizations, and/ or individual persons, and thus, your organization shall be included in an acknowledgment list quoting those entities that supported the project.

☐ I agree to be acknowledged publicly in the project acknowledgments to entities who have supported or collaborated with the project.

By participating in the meeting, you voluntarily consent to the collection and use of your information by WENDY as set forth in this informed consent. If you have any questions concerning this policy or our data collection practices, you may contact the project coordinator at jperis@fcirce.es. We reserve the right to change this policy at any time and inform all participants about the updates.

In addition to your opinion, we are collecting some personal information such as name and professional details, and affiliation. The collected data will be saved and used until the end of the research period of the WENDY project. The data will be used for the purpose of the WENDY project, funded under the European Union Horizon Europe program, aiming to unravel the factors triggering the social acceptance of wind farms.

☐ I agree that my anonymized data may be used by others for future research (I will not be identifiable when this data is shared).

☐ I understand that my personal data will be held and processed in confidence and in accordance with the principles laid out by GDPR.

☐ I confirm that I have read, understood, and agreed to all statements mentioned above. I have been given adequate time to consider my participation and I freely consent to take part in this activity of the project.

Contact Information

Organization:

Full name:

e-mail:

Date:

Signature:

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Annex II – Interview questionnaire/reporting template

Interviewee	**[First Name] [Last Name]**	**Title**	
Date	[Date]		
Interviewer	[First Name][Last Name]	Region	

Total estimated duration:45'

Write down your notes in a way that ensures that information is recorded in a comprehensive and distinct way. Always make sure that the answer provided by the interviewee, fully responds to the respective question. Please, include interesting quotations, if possible.

Part 1 || Background Information

Question	Answer
1. In general, do you consider that the implementation of wind projects has been carried out with an open, transparent approach and in pursuit of the common benefit of the region? Y/N. • *If YES, could you please illustrate with an example?* • *If NOT, what do you think has been lacking? How would you improve it?*	

Question	Answer
2. Do you perceive the political will to stimulate public participation in wind energy projects? Y/N. • *If YES, could you please illustrate with and example?* • *If NOT, what do you think has been lacking? How would you improve it?*	

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Question	Answer
3. Does the administration provide sufficient mechanisms/channels for stakeholders to participate in the stage of A) Planning? B) Permitting? C) Development? Y/N. • *If YES, could you please illustrate with an example?*	

Question	Answer
4. Is there a legal regulatory procedure that establishes the requirements for public participation in this type of project? Y/N. • *If YES, is it transparent and approachable? Is it functional and effective? Is there evidence that is working well?*	

Question	Answer
5. Do you perceive interest from the stakeholder involved in public participation related with wind energy projects? Y/N. • *If NOT, what do you think has been lacking? Do you perceive lack of knowledge about the procedure for public participation and little confidence that it is a productive and reflective process? How would you improve it?*	

*Part 2 || During the **planning** stage of the wind projects*

Question	Answer
6. Do you consider that wind energy projects are properly submitted to public participation in your region? Y/N. • *If NOT, how would you improve it?*	

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Question	Answer
7. Do you perceive an open and transparent collaborative planning process in which interests and views are considered?	

Question	Answer
8. Do you perceive stakeholders' interest in participating in the process? Y/N. • *If NOT, what do you think is the main reason?*	

Question	Answer
9. Is there any rewarding scheme for participants in the public participation process? Y/N. • *If YES, could you say a little bit more about how it works?*	

Question	Answer
10. Do you think it is worth establishing a reward scheme to stimulate public participation during this stage? Y/N. • If YES, do you consider it a good mechanism to stimulate participation in this type of process? Why?	

Question	Answer
11. Would you like to add anything else about the Public Participation in Planning Stages of wind energy projects?	

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

*Part 3 || During the **permitting** stage of the wind projects*

Question	Answer
12. Do you consider that wind energy projects are properly submitted to public participation in your region? Y/N. • *If NOT, how would you improve it?*	

Question	Answer
13. Do you perceive an open and transparent collaborative planning process in which interests and views are considered?	

Question	Answer
14. Do you perceive stakeholders' interest in participating in the process? Y/N. • *If NOT, what do you think is the main reason?*	

Question	Answer
15. Is there any rewarding scheme for participants in the public participation process? Y/N. • *If YES, could you say a little bit more about how it works?*	

Question	Answer
16. Do you think it is worth establishing a reward scheme to stimulate public participation during this stage? Y/N. • If YES, do you consider it a good mechanism to stimulate participation in this type of process? Why?	

Question	Answer

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

17. Would you like to add anything else about the Public Participation in Planning Stages of wind energy projects?	

*Part 4 || During the **development** stage of the wind projects*

Question	Answer
18. Do you consider that wind energy projects are properly submitted to public participation in your region? Y/N. • *If NOT, how would you improve it?*	

Question	Answer
19. Do you perceive an open and transparent collaborative planning process in which interests and views are considered?	

Question	Answer
20. Do you perceive stakeholders' interest in participating in the process? Y/N. • *If NOT, what do you think is the main reason?*	

Question	Answer
21. Is there any rewarding scheme for participants in the public participation process? Y/N. • *If YES, could you say a little bit more about how it works?*	

Question	Answer
22. Do you think it is worth establishing a reward scheme to stimulate public participation during this stage? Y/N.	

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

• If YES, do you consider it a good mechanism to stimulate participation in this type of process? Why?	

Question	Answer
23. Would you like to add anything else about the Public Participation in Planning Stages of wind energy projects?	

Part 5 || Drivers/Supporting Factors

Question:	Answer
24. Is there any public consultancy agency for the implementation of these projects?	

Question:	Answer
25. In your opinion, what would you say are the drivers for a good involvement in the different phases of the implementation of a wind farm? A. Planning. B. Permitting. C. Development.	

Question:	Answer
26. Could you add a little more about the drivers to public participation in such projects? Could you please illustrate it with an example?	

Question:	Answer
27. Do you have any suggestions for strengthening these drivers?	

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Question 28. Indicate your agreement with the following statements using a scale from 1 to 5 *[1=Strongly disagree; 2=Disagree; 3=Neither agree nor disagree; 4=Agree; 5=Strongly agree.*

Degree of compliance	Answer				
	1	2	3	4	5
Cultural Background. There is a long tradition of public participation processes in the region. Organizations with experience that facilitate the implementation.					
There are information agencies for the citizens to encourage their participation in participatory processes.					
There is an active presence of sectoral associations representing the interests of the region.					
Existence of Pilot National Projects in community involvement models that could be reference for the rest of the country (countries).					
The policy-driven, through targets and incentives. There are specific regulations, targets, and incentives for public participation.					
Well-designed and implemented public participation strategy. The administration emphasizes the importance of providing comments/opinions during the planning-permitting-development process.					
Well-designed and implemented public participation strategy. Multiple timelines are provided with sufficient time frames to analyze and discuss consultations.					
Social and environmental awareness. Having promotion of activities increasing the environmental awareness of society is worthy to involve citizens in public participation and collaborative planning.					
Social and environmental awareness. Energy independence, Mitigation of energy poverty, Model of sustainable region, etc.					
Financial benefits and improvement of the environment quality for the citizen´s participation. There are Intrinsic or extrinsic rewards for participants in the consultation process.					
DEVELOPMENT STAGE. Technological and Market Conditions. Huge range of machines and devices available on the market and each time more efficient.					

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Business Conditions. Favourable requirements and exploitation condition.					
Employment and prosperity. Acquire jobs by the local community through a renewable energy model.					
DECOMMISSIONING. The land remains the same once the lifetime of the installations ends (Restored landscape).					

Part 6 || Barriers/Hindering Factors

Question:	Answer
29. In your opinion, what would you say are the main barriers that hinder the public involvement in the different phases of the implementation of a wind farm? A. Planning. B. Permitting. C. Development.	

Question:	Answer
30. Could you add a little more about the barriers to public participation in such projects? Could you please illustrate it with an example?	

Question:	Answer
31. Do you have any suggestions for removing these barriers?	

Question 32. Indicate your agreement with the following statements using a scale from 1 to 5. *[1=Strongly disagree; 2=Disagree; 3=Neither agree nor disagree; 4=Agree; 5=Strongly agree.*					
The main factors that constitute a barrier to public participation in wind farm projects are:	Answer				
	1	2	3	4	5
Social Barriers. Lack of confidence, dialogue, information, transparency, and privacy.					
Political Barriers. Lack of confidence, legal framework. mass media.					

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Logistic Barriers. Few spaces and time for dialogue lack of tools or methods.					
Others:					
DURING THE PLANNING STAGE	**Answer**				
	1	**2**	**3**	**4**	**5**
Nonhomogeneous national and regional governments policy, lack of regulatory framework.					
Lack of knowledge of the relationship between local community acceptance of specific wind energy projects.					
Negative social perception regarding wind structures.					
Few spaces for dialogue to discuss interests. The stakeholders do not have sufficient ways to provide inputs.					
Few windows of participation and short periods. The stakeholders don't get sufficient or timely information for effective participation.					
DURING LICENSING/PERMITTING STAGE	**Answer**				
	1	**2**	**3**	**4**	**5**
Difficulties on the permitting procedures.					
Lack of transparency and information. Decision makers drive interests different from those of the local community.					
Social movement against these projects (environmental and primary sectors).					
DEVELOPMENT STAGE	**Answer**				
	1	**2**	**3**	**4**	**5**
The use of this renewable technology reduces the implementation of others.					
Economic impacts on the primary sector (agriculture, fisheries, livestock).					
Social movements against these projects.					
DECOMMISSIONING. The land does not remain the same once the lifetime of the installations ends (Degraded landscape).					

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Annex II

Results of the interviews at EU and regional level

TABLE OF CONTENTS

LIST OF TABLES

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

INTERVIEWS AT EU LEVEL

Table 1. Profile of interviewees at the EU level.

Nº Interviewee	Interviewee profile	Acronym
1	Director Onshore Wind & PV Development EU & Australia	EU-1
2	Strategic Communication Advisor	EU-2
3	Policy officer at Marine Renewable Energy European Commission	EU-3
4	Policy Director at Ocean Energy Europe	EU-4
5	Project Manager, Energy Cluster Europe Region	EU-5

Part 1. Background Information

1. In general, do you consider that the implementation of wind projects has been carried out with an open, transparent approach and in pursuit of the common benefit of the region? Y/N.
    - *If YES, could you please illustrate with an example?*
    - *If NOT, what do you think has been lacking? How would you improve it?*

EU-1. Yes. Administrative processes include Regional and local regulations that have to be fulfilled and also public exhibitions to citizens for transparency and potential allegations to the projects. No developer can just plan a project wherever they want and in case of being against common benefit, it can be rejected.

EU-2. The situation is different per country, developer, and project. Some developers see consulting citizens are early and openly as possible as one of the core parts of developing a project. Some countries have a strong tradition of involving citizens in developing local projects. In very rough trends, involving citizens early in the process happens more in northwestern Europe. In other parts of Europe other local actors such as mayors might be involved at a local stage too.

In many places in Europe, including much of Eastern Europe the construction of a wind farm has contributed to the creation of local jobs, an improvement of the local economic situation, and the creation of infrastructure that is beneficial to the local community.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

In the past, not all developers embraced an interactive strategy with local communities, leading to communication issues and inadequate support for new projects that could persist for an extended period.

EU-3. Certainly yes. Thanks to MSP work, the process is quite transparent. There is public consultation at project levels, but even before there has been some transparency on what and how the countries are going to develop offshore wind. There is a set of regulation in a set that shows the procedure of public participation. Related to the permitting and the public consultation, there is a learning process because of the complexity of the development projects. Some countries have bigger experience (UK and Ireland are doing well in participation). France is learning, doing workshops and there is a learning process. They have put in place a national organization for public debate to Involve actors from the beginning.

EU-4. There is always room for continuous improvement, but wind deployments have typically been transparent and open. Indeed, the permitting framework for renewable projects is much more formalised and demanding than the historical requirements of frameworks that governed infrastructure deployment in the past. Multiple EU-level regulations must be respected and national/regional-level permitting rules to respect.

EU-5. Yes, generally developers try to inform about their projects and collect the ideas of the social environment that is affected by them.

2. Do you perceive the political will to stimulate public participation in wind energy projects? Y/N.
    - *If YES, could you please illustrate with an example?*
    - *If NOT, what do you think has been lacking? How would you improve it?*

EU-1. Yes. In some countries, drafts of new Regulations include a mandatory offer for public or local participation. For example, additional premium tariffs if local citizens are part of the investment in France.

EU-2. Yes. Governments also realise involving local communities in a project is beneficial for the success of the project. However, the complexity of administrative projects to get a permit complicates the situation for project developers.

In some countries, we've seen a centralization of wind energy development though. In Germany, in the mid-2010s many energy communities-built wind farms. This has changed with the more centralized auctions Germany has been organizing afterward. Developers in Germany still have to be in touch with communities. Developers in Germany still have to be in touch with communities but before communities were in charge more.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

We need simplified procedures from Governments. That will make it easier for developers to involve communities at the right time. The wind industry in several European countries has also established guidelines on how to engage with local communities.

EU-3. Yes. As we see in the general press, this topic appears regularly to inform citizens and involved stakeholders. In permitting process there also, a few organizations involved to give advice/opinion to the Administration to run the process.

There is a big push for offshore wind from a high political level. Transparency, public participation, and information are considered to get local approval. At the regional level, some examples show that these factors are important from the early stages.

The level of advancement and public perception regarding wind farms varies across countries. Initially, there may be a negative perception in certain communities, especially those involved in industries such as fisheries and tourism. However, as the project progresses and thorough surveys are conducted, opinions tend to gradually improve. This positive shift in perception is often a result of increased direct interaction between local stakeholders and wind industry representatives. When local agents are actively involved and engaged, they tend to become more supportive of the project.

EU-4. In recent years the political will to stimulate public participation has improved immensely at the EU level. But moves to simplify permitting have been slow to apply 'on the ground'. E.g., 'one-stop shops' for permits have been a requirement for several years now, but implementation has been slow. EU law has created the concept of 'energy communities' but in practice, there could be a lot more done at the national level to incentivize community involvement in wind deployments.

EU-5. Yes, at least our regional government develops the wind energy plan with several workshops with local stakeholders.

3. Does the administration provide sufficient mechanisms/channels for stakeholders to participate in the stage of A) Planning? B) Permitting? C) Development? Y/N.
    - *If YES, could you please illustrate with an example?*

EU-1. Yes, during the public exhibition of the projects, stakeholders can understand better the projects and submit their allegations to the projects. While it is true that ultimately the common benefit should prevail, attaining a complete consensus can prove challenging.

EU-2. Several stakeholders need to be involved in the planning and permitting stage. For example, to get all the right information for the environmental impact assessments. Local governments also need to be involved in planning, citing etc. The involvement of local governments is crucial in various aspects, including planning, permitting, and siting processes.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

The involvement of local citizens is not necessarily regulated by legislation in most countries. However, in some countries, the industry themselves have put up codes of conduct that encourage the industry to reach out to the industry.

EU-3. Yes, during the public exhibition of the projects, stakeholders can understand better the projects and submit their allegations to the projects. While it is true that ultimately the common benefit should prevail, attaining a complete consensus can prove challenging...

EU-4. Yes. Across Europe, there are multiple opportunities for stakeholders to input into planning, permitting and development. 'Stakeholder engagement' is a core competency of all renewable project developers.

EU-5. Yes, but probably more in planning than in permitting or development.

4. Is there a legal regulatory procedure that establishes the requirements for public participation in this type of project? Y/N.
    - *If YES, is it transparent and approachable? Is it functional and effective? Is there evidence that is working well?*

EU-1. Yes, and the main tool is the public exhibition of the project for public appeals or allegations.

EU-2. In some countries, there are legal requirements for local citizens to profit from having a project near their community. Legislation sometimes leaves it open how this is done.

EU-3. There are some requirements in MSP Directive. Also, in Environmental Directive. Coexistence and Public Involvement. The idea is to try to get learnings from one country to another.

All sets of legal obligations on Public Consultation come from European legislation. Some countries are working hard to set a specific framework for permitting and public consultation. The right direction is being taken but there is still some way to go.

EU-4. Yes, there is a legal regulatory procedure that establishes the requirements for public participation in this type of project but there is no evidence that is working well.

EU-5. I don't know.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

5. Do you perceive interest from the stakeholder involved in public participation related to wind energy projects? Y/N.
    - *If NOT, what do you think has been lacking? Do you perceive a lack of knowledge about the procedure for public participation and little confidence that it is a productive and reflective process? How would you improve it?*

EU-1. The level of interest in a project depends on various factors. Controversial projects tend to generate heightened interest due to the potential impacts and differing opinions they evoke. On the other hand, projects that are perceived as beneficial in terms of employment opportunities and potential income for the local area can also generate significant interest. These factors play a crucial role in shaping the level of community engagement and public attention surrounding a project.

EU-2. N/A.

EU-3. Yes**.** But the involvement is more dynamic at the local and regional level. Developers and local authorities try to engage earlier than before with other stakeholders. There is more and more General Public information (conferences, presentation of projects opens to the public).

EU-4. Yes.

EU-5. Yes, society is actively engaged in wind energy development, displaying a predominantly positive attitude. However, the "Not In My Backyard" (NIMBY) phenomenon can sometimes pose challenges and resistance within certain communities.

Part 2. During the planning stage of the wind projects

6. Do you consider that wind energy projects are properly submitted to public participation in your region? Y/N.
    - *If NOT, how would you improve it?*

EU-1. Yes, projects have to fulfil Regulations and submit the project to the public exhibition where everybody that has an interest can participate in the process.

EU-2. It is in some countries but not in others.

EU-3. It is not an easy job but there are rules across Europe in this field, so my perception is that countries have realized that this is a complex issue, and they have to treat it with attention in the early stages. From the developer's side, they also have learned the importance of early interaction with other sectors.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

EU-4. Yes, **EU-5.** Yes.

7. Do you perceive an open and transparent collaborative planning process in which interests and views are considered?

EU-1. Yes, during the public exhibition of the projects, stakeholders can understand better the projects and submit their allegations to the projects. It is true that in the end, the common benefit should apply, and it is difficult to have a full consensus.

EU-2. It is in most countries. Most developers also realize this is necessary these days.

EU-3. It is not an easy job but there are rules across Europe in this field, so my perception is that countries have realized that this is a complex issue, and they have to treat it with attention from the early stages. From the developer's side, they also have learned the importance of early interaction with other sectors.

EU-4. Overall, yes, even if there are isolated examples where improvements can be made. There will always be disputes on this question, as those who did not achieve their interests will often feel that their views were not considered, that there was insufficient transparency, etc.

The key strategic question is: Are sufficient renewable energies being deployed to reach our decarbonization goals for 2030 and 2050? If the answer is 'no,' it suggests that the processes are excessively protecting the interests of those who oppose the deployment of renewable energy sources.

EU-5. Yes.

8. Do you perceive stakeholders' interest in participating in the process? Y/N.
    - *If NOT, what do you think is the main reason?*

EU-1. The level of interest in a project depends on various factors. Controversial projects tend to generate heightened interest due to the potential impacts and differing opinions they evoke. On the other hand, projects that are perceived as beneficial in terms of employment opportunities and potential income for the local area can also generate significant interest. These factors play a crucial role in shaping the level of community engagement and public attention surrounding a project.

EU-2. Yes, most stakeholders show interest in the matter. For local citizens, public information sessions must be well advertised, especially to those who typically do not have access to such information. Wales provides a good example, as mentioned in the compendium I received. In Wales, they utilized various mediums, including online platforms, local newspapers, and even buses, to ensure that people who may not engage with traditional media still have the

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

opportunity to participate. Generally, there is a high level of interest from locals in these initiatives.

EU-3. Yes. There are public consultations, appeal procedures, etc.

EU-4. Yes, **EU-5**. Yes.

9. Is there any reward scheme for participants in the public participation process? Y/N.
    - *If YES, could you say a little bit more about how it works?*

EU-1. Not that I am aware of, there is no specific rewarding system for participants who express their interest either in favor or against the projects.

EU-2. I'm not aware of any.

EU-3. Not really, there isn't a specific reward scheme in place. I don't see the need for one either. I believe stakeholders participate to express their views and hope that they are taken into consideration.

EU-4. The rewards are intrinsic. A chance to make your voice heard, to learn more about the project, to engage with your community, and to shape it.

EU-5 No, I don't think there is any specific reward but the fact of being informed and having an opinion during the process.

10. Do you think it is worth establishing a reward scheme to stimulate public participation during this stage? Y/N.
    - *If YES, do you consider it a good mechanism to stimulate participation in this type of process? Why?*

EU-1. No.

EU-2. It might be able to attract people who don't have a strong opinion on the matter and would normally not bother participating in public information sessions. So, it would be good to attract people different from the clear supporters or opponents of a project. Overall, I don't think it's a good idea though. Interested people will give their opinion through the existing channels. And it would add another administrative cycle.

EU-3. No. I don t see the need for a specific rewarding scheme.

EU-4. No. A small-but-well-organized minority can easily block critical renewable projects that deliver benefits for wider societies. There should not be any additional incentive for this dynamic. Very important to avoid 'commercializing' this process - i.e., offering financial rewards for participation. This could lead to private non-local companies engaging in processes, that are not motivated by the interests of local communities. If someone is not

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

interested in attending a public workshop or completing a survey, then their views are unlikely to be strongly held.

EU-5. No, participation should be raised because of interest. If at some point there is no interest, then probably it means that there are no problems.

11. Would you like to add anything else about the Public Participation in the Planning Stages of wind energy projects?

EU-1. No.

EU-2. Where citizens are involved in the planning stages of a project the support is just much higher. It is very important to include them in this stage and potentially in part of the decision-making process too. When this happens, projects are much less likely to end up in court.

EU-3. No, **EU-4.** No, **EU-5** No.

Part 3. During the permitting stage of the wind projects

12. Do you consider that wind energy projects are properly submitted to public participation in your region? Y/N.
    - *If NOT, how would you improve it?*

EU-1. Yes. Administrative processes include Regional and local regulations that have to be fulfilled and public exhibitions to citizens for transparency and potential allegations to the projects. No developer can just plan a project wherever they want and in case of being against common benefit, it can be rejected.

EU-2. As said above, it depends on the country.

EU-3. Yes. The legislation is there. Long time and resources are dedicated to public participation very seriously.

EU-4. Yes, **EU-5 –** N/A.

13. Do you perceive an open and transparent collaborative planning process in which interests and views are considered?

EU-1. In some countries, draft regulations include provisions for mandatory public or local participation. For instance, in France, there are proposals for additional premium tariffs if local citizens are involved in the investment.

EU-2. Once again, it depends on the country.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

EU-3. Yes, **EU-4.** Yes, **EU-5.** N/A.

14. Do you perceive stakeholders' interest in participating in the process? Y/N.
    - *If NOT, what do you think is the main reason?*

EU-1. During the public exhibition of the projects, stakeholders could gain a better understanding of the projects and submit their allegations. It is indeed true that, in the end, the common benefit should prevail, but achieving a complete consensus can be challenging.

EU-2. Same as above (it depends on the country).

EU-3. Yes. There are many legal proceedings to provide input, both in favor of and against the project.

EU-4. Yes, **EU-5.** N/A.

15. Is there any reward scheme for participants in the public participation process? Y/N.
    - *If YES, could you say a little bit more about how it works?*

EU-1. I am not aware of any specific reward system in place. Essentially, participants can express their support or opposition to the projects, but as far as I know, there is no associated reward system.

EU-2. I don't have this info.

EU-3. No official rewards at European level. There is no need.

EU-4. No, **EU-5.** N/A.

16. Is it worth establishing a reward scheme to stimulate public participation during this stage? Y/N.
    - *If YES, do you consider it a good mechanism to stimulate participation in this type of process? Why?*

EU-1. No, **EU-2.** No, **EU-3.** No. I believe there is no need.

EU-4. No, a small but well-organized minority can easily obstruct crucial renewable projects that provide benefits for broader societies. There should be no additional incentive for this dynamic. It is vital to avoid commercializing this process by offering financial rewards for participation. Such an approach could result in private non-local companies engaging in processes that are not driven by the interests of local communities. If someone is not interested in attending a public workshop or completing a survey, their views should still be taken into consideration.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

EU-5. N/A.

17. Would you like to add anything else about the Public Participation in the Planning Stages of wind energy projects?

EU-1. No, **EU-2.** No, **EU-3.** No, **EU-4.** No, **EU-5.** No.

Part 4. During the development stage of the wind projects

18. Do you consider that wind energy projects are properly submitted to public participation in your region? Y/N.
    - *If NOT, how would you improve it?*

EU-1. Administrative processes include Regional and local regulations that have to be fulfilled and also public exhibitions to citizens for transparency and potential allegations to the projects. No developer can just plan a project wherever they want and in case of being against common benefit, it can be rejected.

EU-2. For many projects, while the construction is taking place contact between citizens and the project developer remains possible. This is always perceived as positive by communities.

EU-3. Yes, this stage is highly significant as it involves tangible interactions during the commencement of the installation, encompassing investments, job creation, and other related factors. It is during this time that the intensity of dialogue needs to be heightened. Furthermore, this phase holds utmost importance in terms of establishing safety rules and regulations. Engaging in dialogue with all stakeholders, including local government and city halls, is crucial. Local authorities need to inform and engage in advance, strengthening the dialogue process. Showcasing the project to citizens ensures their awareness and fosters a sense of ownership.

EU-4. Yes, **EU-5.** N/A.

19. Do you perceive an open and transparent collaborative planning process in which interests and views are considered?

EU-1. In some countries, draft regulations include provisions for mandatory public or local participation. For instance, in France, there are proposals for additional premium tariffs if local citizens are involved in the investment.

EU-2. Perhaps during the development stage, this is lower than during earlier stages as everything has been agreed on already. However, there is always an outlet for communities

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

to file their complaints if there is too much nuisance during the development stage. In the ideal situation, all of it is dealt with at an earlier stage.

In this stage other than before the involvement of local entrepreneurs/companies can be important though. This can boost the local economy. This is good for local support too. So, is important that developers involve local companies.

EU-3. Yes, **EU-4.** N/A, **EU-5.** N/A.

20. Do you perceive stakeholders' interest in participating in the process? Y/N.
    - *If NOT, what do you think is the main reason?*

EU-1. The level of interest in a project depends on various factors. Controversial projects tend to generate heightened interest due to the potential impacts and differing opinions they evoke. On the other hand, projects that are perceived as beneficial in terms of employment opportunities and potential income for the local area can also generate significant interest. These factors play a crucial role in shaping the level of community engagement and public attention surrounding a project.

EU-2. N/A, **EU-3.** Yes, **EU-4.** Yes, **EU-5.** N/A.

21. Is there any rewarding scheme for participants in the public participation process? Y/N.
    - *If YES, could you say a little bit more about how it works?*

EU-1. I am not aware of any specific reward system in place. Essentially, participants can express their support or opposition to the projects, but as far as I know, there is no associated reward system.

EU-2. Not that I'm aware of.

EU-3. Not at the European level.

EU-4. No, **EU-5.** No.

22. Do you think it is worth establishing a reward scheme to stimulate public participation during this stage? Y/N.
    - *If YES, do you consider it a good mechanism to stimulate participation in this type of process? Why?*

EU-1. No, **EU-2.** No.

EU-3. I believe there is no need for a specific reward scheme.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

EU-4. No, a small but well-organized minority can easily obstruct crucial renewable projects that provide benefits for broader societies. There should be no additional incentive for this dynamic. It is vital to avoid commercializing this process by offering financial rewards for participation. Such an approach could result in private non-local companies engaging in processes that are not driven by the interests of local communities. If someone is not interested in attending a public workshop or completing a survey, their views should still be taken into consideration.

EU-5. N/A.

23. Would you like to add anything else about Public Participation in the Planning Stages of wind energy projects?

EU-1. N/A, **EU-2.** No, **EU-3.** N/A, **EU-4.** No, **EU-5.** N/A.

Part 5. Drivers/Supporting Factors

24. Is there any public consultancy agency for the implementation of these projects?

EU-1. N/A, **EU-2.** N/A.

EU-3. It varies from country to country, but there are increasing examples of entities aiming to enhance governance, such as the Netherlands, France, and others.

EU-4. Yes. In many jurisdictions, yes – the planning authority will typically launch public consultations.

EU-5. N/A.

25. In your opinion, what would you say are the drivers for good involvement in the different phases of the implementation of a wind farm?
    - *A. Planning.*
    - *B. Permitting.*
    - *C. Development.*

EU-1. N/A.

EU-2. *Planning.* Developers must ensure that project information is provided at an early stage in a transparent and accessible way to all stakeholders: residents, voluntary groups, local councils, landowners, and environmental organizations. It is essential to offer adequate communication resources during interactions with residents, enabling an understanding of their needs and concerns.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

This approach allows local communities to assess the advantages and disadvantages of a project. Additionally, project developers should demonstrate sensitivity towards people's sense of place and their attachment to the landscape and environment. By establishing effective and clear communication channels, a two-way exchange between developers and local communities can take place. It is important to note that this process should not be regarded merely as a public consultation seeking approval for a project that is already finalized; instead, it should allow for meaningful engagement and collaboration with the community.

*Permitting***.** The above applies to the permitting stage too.

Development. The above applies to the development stage too. Additionally, it is crucial to promote the active involvement of key local stakeholders and stimulate the local economy. Wind projects have the potential to generate significant socio-economic benefits in rural or peripheral areas. This can be accomplished through various means, such as engaging in local contracting, utilizing local financing options (e.g., through local and regional banks), facilitating training programs and apprenticeships, and establishing partnerships with local energy utilities.

EU-3. A. Information. B. Environmental Issues. C. Specific information with direct impacts for the citizens.

EU-4.

A. Planning processes. So, this is the right context for the public to consider potential impacts on local stakeholders' participation.
B. Permitting (as we interpret the term) is mostly focused on environmental impacts. This is a technical and scientifically based process. The subjective views of uninformed stakeholders do not contribute to this process.
C. Project development is more general. So, it is a good occasion for public stakeholders to learn more and input into projects at an early stage, and a higher level of detail. Early engagement can build support for projects amongst the public – not just avoid opposition.

EU-5. I don't think there is an issue with involvement here in the Basque Country. It is more about convincing us that wind energy is necessary and, sometimes, unfortunately, deciding that public interest is more relevant than some particular interests.

26. Could you add a little more about the drivers of public participation in such projects? Could you please illustrate it with an example?

EU-1. No.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

EU-2. National or local government plays a vital role in facilitating this process, while a strong involvement of residents in politics is also crucial. Additionally, a history of active participation in other infrastructure projects can contribute to the successful engagement of locals in wind energy initiatives. The compendium provided contains further examples of such cases.

EU-3. The earlier you start, the best you can reach involvement.

EU-4. No, **EU-5.** No**.**

27. Do you have any suggestions for strengthening these drivers?

EU-1. No, **EU-2.** N/A, **EU-3.** N/A, **EU-4.** N/A, **EU-5.** N/A.

28. Indicate your agreement with the following statements using a scale from 1 to 5.
[1=Strongly disagree; 2=Disagree; 3=Neither agree nor disagree; 4=Agree; 5=Strongly agree].

Table 2. Answers to question number 28 at EU level.

	EU-1	EU-2	EU-3	EU-4	EU-5
Cultural Background. There is a long tradition of public participation processes in the region. Organizations with experience facilitate the implementation.	4	5	4	5	5
There are information agencies for the citizens to encourage their participation in participatory processes.	2	5	4	5	4
There is an active presence of sectoral associations representing the interests of the region.	2	2	5	5	5
Existence of Pilot National Projects in community involvement models that could be reference for the rest of the country (countries).	3	4	4	3	3
The policy-driven, through targets and incentives. There are specific regulations, targets, and incentives for public participation.	4	5	3	4	2
Well-designed and implemented public participation strategy. The administration emphasizes the importance of providing comments/opinions during the planning-permitting-development process.	5	4	4	3	4
Well-designed and implemented public participation strategy. Multiple timelines are provided with sufficient time frames to analyze and discuss consultations.	4	5	3-4	3	4

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Social and environmental awareness. Having promotion of activities increasing the environmental awareness of society is worthy to involve citizens in public participation and collaborative planning.	4	5	5	5	4
Social and environmental awareness. Energy independence, Mitigation of energy poverty, Model of sustainable region, etc.	4	3	5	4	4
Financial benefits and improvement of the environment quality for the citizen´s participation.	4	3	4	1	4
Technological and Market Conditions. Huge range of machines and devices available on the market and each time more efficient.	4	1	4	4	5
Business Conditions. Favourable requirements and exploitation condition.	4	3	3	N/A	5
Employment and prosperity. Acquire jobs by the local community through a renewable energy model.	4	5	4	5	5
Decommissioning. The land remains the same once the lifetime of the installations ends (Restored landscape).	4	3	3	5	4

Part 6. Barriers/Hindering Factors

29. In your opinion, what would you say are the main barriers that hinder public involvement in the different phases of the implementation of a wind farm?
    - *Planning.*
    - *Permitting.*
    - *Development.*

EU-1. The main barriers that hinder public involvement in the different phases of implementing a wind farm are the lack of knowledge of the processes on when and how to provide an opinion to a project.

EU-2. *Planning*: Governments often fail to effectively communicate with local communities, resulting in a lack of clear information about the development of local infrastructure projects. They play a crucial role in ensuring that locals are well-informed about such developments.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Permitting: Complicated permitting procedures can hinder the inclusion of locals in projects. The involvement of numerous actors often leads to confusion and uncertainty for developers regarding how to engage with local stakeholders effectively.

EU-3. N/A, **EU-4.** N/A, **EU-5.** N/A.

30. Could you add a little more about the barriers to public participation in such projects? Could you please illustrate it with an example?

EU-1. In rural areas, the local population could not have access to computers or due to their age, the capacity to handle an administrative process without legal involvement that could be costly and therefore reducing the interest in participation.

EU-2. N/A, **EU-3.** N/A.

EU-4. The challenge is often to respect the views of 'the silent majority' that have positive or neutral views about deployment but are less incentivized to engage than a vocal minority who may oppose it.

EU-5. N/A.

31. Do you have any suggestions for removing these barriers?

EU-1. Online surveys could help increase public participation and assess the population's support for the project. Legally it is more complex since appeals could land in court and therefore the normal process has to be fulfilled.

EU-2. Clearer rules on when citizens need to be involved in processes. Simplification of permitting. For example, a one-stop shop for permitting or clearer division on who does what.

EU-3. N/A.

EU-4. The EU is introducing a legal mechanism that designates renewable deployments as 'in the overriding public interest'. This could be a good way to better represent wider views of those concerned by climate change and the interests of future unborn generations.

EU-5. N/A.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

32. Indicate your agreement with the following statements using a scale from 1 to 5.
[1=Strongly disagree; 2=Disagree; 3=Neither agree nor disagree; 4=Agree; 5=Strongly agree].

The main factors that constitute a barrier to public participation in wind farm projects are:

Table 3. Answers to question number 32 at EU level.

	EU-1	EU-2	EU-3	EU-4	EU-5
Social Barriers. Lack of confidence, dialogue, information, transparency, and privacy	3	N/A	2	1	3
Political Barriers. Lack of confidence, legal framework. mass media.	4	N/A	3	1	3
Logistic Barriers. Few spaces and time for dialogue lack of tools or methods.	4	N/A	2	2	1
PLANNING STAGE					
Nonhomogeneous national and regional governments policy, lack of regulatory framework.	2	5	3	2	2
Lack of knowledge of the relationship between local community acceptance of specific wind energy projects.	1	2	3	2	3
Negative social perception regarding wind structures.	2	2	2	4	3
Few spaces for dialogue to discuss interests. The stakeholders does not have sufficient ways to provide inputs.	4	2	2	2	1
Few windows of participation and short periods. The stakeholders don't get sufficient or timely information for effective participation.	2	4	2	1	1
LICENSING/PERMITTING STAGE					
Difficulties on the permitting procedures.	2	5	3	1	2
Lack of transparency and information.Decision makers drive interests different from those of the local community.	2	5	2	1	2
Social movement against these projects (environmental and primary sectors).	2	5	3	1	2
DEVELOPMENT STAGE					

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

The use of this renewable technology reduces the implementation of others.	2	1	2	1	2
Economic impacts on the primary sector (agriculture, fisheries, livestock).	3	3	1	2	2
Social movements against these projects.	4	2	2	4	2
DECOMMISSIONING. The land does not remain the same once the lifetime of the installations ends (Degraded landscape).	1	2	2	2	2

INTERVIEW AT REGIONAL LEVEL || GREECE

Table 4. Profile of interviewees at regional level (Greece).

Nº Interviewee	Interviewee profile	Acronym
1	Regional authority	GR-1
2	Technical chamber	GR-2
3	Energy community	GR-3

Part 1. Background Information

1. In general, do you consider that the implementation of wind projects has been carried out with an open, transparent approach and in pursuit of the common benefit of the region? Y/N.
    - *If YES, could you please illustrate with an example?*
    - *If NOT, what do you think has been lacking? How would you improve it?*

GR-1. The implementation of wind energy projects in Greece, including Crete, follows the same procedures as other investments in the country. The investment system lacks an institutional and systemic evaluation of whether the investment serves the common benefit. It is evident that investments primarily prioritize the benefit of the investor, with the common benefit being a secondary consideration. However, in the long term, every wind energy project contributes to the common good by promoting the transition away from fossil fuels and facilitating renewable energy production. Therefore, in this sense, every wind energy exploitation project is pursued for the common benefit.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

GR-2. No. The licensing process for wind energy projects is rather unclear. Although certain areas have been designated for the development of wind farms, there is no official invitation from the energy management body. Furthermore, the positioning of these wind farms lacks clarity as there is no zoning plan in place to precisely determine their locations. The environmental benefits of energy production from renewable energy sources, particularly wind farms, are undeniable. Once the interconnection process of Crete is completed and energy exchange is established, these benefits will multiply. However, the current procedures do not prioritize the common interest nor facilitate access to information for citizens interested in investing in wind energy utilization.

GR-3. I believe that the implementation of wind energy projects is not implemented with open, transparent procedures. I have done a lot of work promoting RES and wind farms and have been particularly embarrassed by the way these processes are carried out. Local communities are not consulted, most of the time they just learn that the next day a wind farm will be installed on a mountain near them. Unfortunately, citizens are not involved at any stage of the process. Many times, the various consultations that take place are only for presence, there is a lot of ignorance and I think that to a large extent fuels the reactions of the local community. In some cases, we have approached the wind industry, to propose a different model that could work but nothing seems to change.

What we would like to change is, first, for there to be some kind of participation of the local community in these projects, like in other countries, and I will mention the example of Denmark, where in similar projects the local community is required to participates at a rate of 20-25%. Even if something like this is not institutionalized, the private investors themselves, when they approach a local society, could extend a public offering and make available a portion of the project's shares to the OTAs and the local community (perhaps to some vulnerable households they could even make them available for free), and/or to help create energy communities, or if they exist to invite them to participate in the project. All this will allow for a positive predisposition of the local society from the beginning. The second thing that could be done is some substantive/meaningful discussions with the local community; they could result in win-win solutions to existing problems for everyone. All this should be part of the process.

2. Do you perceive the political will to stimulate public participation in wind energy projects? Y/N.
    - *If YES, could you please illustrate with an example?*
    - *If NOT, what do you think has been lacking? How would you improve it?*

GR-1. Many a time we have seen the public's objection to wind energy projects. To mitigate these reactions, people should be informed and participate in the projects. So, in the long

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

term, the state wants to have the political will to activate the participation of the public in wind energy utilization projects to achieve their implementation.

GR-2. No. There is no such political will. The recent changes in the regulatory framework are mainly promoting investments made by big corporations- not the ones made by collective initiatives (i.e., Citizen's Projects or Energy Communities). In contrast, the "pledging "of space from big corporations is being prioritized. The political will is far from aiming at Energy Democracy. In the recently voted law, there was a discussion on net metering, but the procedures are not accessible to the public.

GR-3. All of what I mentioned earlier would have somehow been implemented if the political will was there. The government prioritizes large investments, while there should also be focusing on encouraging the participation of the local community in these projects. In short, the answer to this question is similar to the first one, i.e., there should be substantial participation of the local community from the project's initial stages, and it would be good for them to participate as well. We could make an argument for institutionalizing the mandatory participation of the local community in such projects. This move would certainly show political will.

3. Does the administration provide sufficient mechanisms/channels for stakeholders to participate in the stage of A) Planning? B) Permitting? C) Development? Y/N.
    - *If YES, could you please illustrate with an example?*

GR-1. Administrative agencies and the state do not provide adequate mechanisms/channels for the involvement of stakeholders in wind energy projects during the planning phase. The planning is done by the investment entity, and it considers the factors it considers critical. During the licensing process, the administration does indeed provide sufficient mechanisms, through the environmental impact study process and especially through the consultation stage citizens express their opinion. Finally, regarding the development and implementation stage, there is no public participation.

GR-2. No. They do not provide sufficient mechanisms for the participation of interested parties. Wind energy projects have mostly been conducted by big corporations. Thus, smaller-scale projects have all been developed upon the big corporations' projects. Unfortunately, the State does not provide mechanisms promoting the public's participation during the designing stage, the licensing stage, and the development stage.

GR-3. My answer is no if stakeholders refer to self-government bodies and citizens' collectives. My experience shows that the administrative agencies and the state do not provide adequate mechanisms for the participation of the interested parties in wind energy projects in any of

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

the 3 stages, which is the primary reason why there are so many reactions to wind energy projects.

4. Is there a legal regulatory procedure that establishes the requirements for public participation in this type of project? Y/N.
    - *If YES, is it transparent and approachable? Is it functional and effective? Is there evidence that is working well?*

GR-1. There is no different treatment for wind energy projects. There the same legislation applies for all types of investments.

GR-2. Yes. There is a regulatory framework that defines the public's participation in wind energy projects. But it is not accessible. The procedures are not transparent and there is no such thing as a 'Zoning plan'. The only way for the public to participate in wind energy projects is via Energy Communities. Up to now, these communities have taken part in various RES projects. Nevertheless, only a few of these projects have been connected to the national grid, to conduct the net metering for its members. The 'Public Power Corporation' (Δ.Ε.Η.) still lacks the appropriate software to support net metering, and that creates problems.

GR-3. There is no legal regulatory process that defines the requirements for public participation in wind energy projects. I can't say that with absolute certainty; in practice I haven't seen it. It might exist and not function adequately. There are some small private initiatives but without them being governed by any specific legal process.

5. Do you perceive interest from the stakeholder involved in public participation related to wind energy projects? Y/N.
    - *If NOT, what do you think has been lacking? Do you perceive a lack of knowledge about the procedure for public participation and little confidence that it is a productive and reflective process? How would you improve it?*

GR-1. Yes, I believe that there is interest from social and solidarity economy actors in the development of wind energy utilization projects.

G2-2. Yes. Despite the incomplete public information, it is evident that interested parties are willing to undertake wind energy projects. However, the necessary conditions for the growth of Energy Communities and the subsequent benefits for their members are lacking.

GR-3. There are two aspects to consider when answering this question. In my opinion, there was interest in wind energy projects 10 years ago. However, the prevailing negativity towards wind farms has significantly overshadowed this interest and potentially discouraged several social and solidarity economy actors. Nonetheless, I believe that this notion is not entirely

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

accurate, as there are progressive voices that can provide a more balanced perspective on the matter.

The obstacles that arise are primarily associated with the challenges posed by large-scale investments. Social and solidarity economy operators, being relatively small players, face difficulties in participating in projects of such magnitude. Moreover, a second barrier that has emerged in recent years pertains to the capacity of the electrical grid.

Part 2. During the planning stage of the wind projects

6. Do you consider that wind energy projects are properly submitted to public participation in your region? Y/N.
    - *If NOT, how would you improve it?*

GR-1. No, I consider it incomplete, even though the responsibility does not solely rest with the Region. The legal framework does not provide the possibility for wider and more substantial public involvement in the planning phase of a new wind farm.

GR-2. No. The active participation of the public is not sufficiently promoted during the design stage. There is some fragmentary information. I propose the establishment of an 'Informative Body'- functioning under the guidance of 1st and 2nd-degree Local Government Organizations. There could also be training seminars regarding the design and function of wind farms. The 'Technical Chamber' and other bodies could contribute to the organization of such seminars.

GR-3. In my Regional District, which is the Regional District of Attica, no wind farm is promoted/planned. So, hypothetically speaking, I believe that no, active participation of the public in my regional unit during the planning phase of wind farms is not sufficiently promoted. At one point there was an attempt to install 3 wind turbines for educational purposes, but this too was cancelled. If there was an intention to install a wind farm (in Attica Regional District), society would see it positively and public participation could potentially have an impact, that's my feeling. Communities and the subsequent benefits for their members are lacking.

7. Do you perceive an open and transparent collaborative planning process in which interests and views are considered?

GR-1. What applies throughout Greece, also applies to our area. The procedures are public but pertain to the investment bodies. In other words, the legislation does not differentiate between the procedures for wind farm projects and those for other types of investments, such as industrial or tourist projects. However, I believe that public opinion is taken into

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

consideration. To illustrate this, I can mention the example of the setting of wind farms in the Sitia region, which is connected to the project of the pumping station in the Amari region.

The Environment Committee of the Region gave a negative opinion because of the many reactions from Sitia's residents because several wind farms are already installed in this area. The specific point of view is under review, but the environmental committee - the advisory body that is - adopted the point of view of the local community and gave an opinion to the ministry**.**

GR-2. No. The citizens' concerns have not been considered. The State has not been adequately informed about the existing public interest in such projects.

GR-3. As there are no wind farms in my Regional District the question is not relevant, so this has not been addressed.

8. Do you perceive stakeholders' interest in participating in the process? Y/N.
    - *If NOT, what do you think is the main reason?*

GR-1. No. The reason for this is that people believe that this process will not have a weighty opinion and consequently their opinion.

GR-2. Yes. There is interest on behalf of the 'Region of Eastern Crete' which cooperates with the 'Region of Crete' and some local Municipalities. The Region of Crete is attempting to lead the way. There are steps to be made so that all the 1st-degree Local Government Organizations could actively promote the designing of wind farms, in cooperation with the 'Region'.

GR-3. Hypothetically yes, the local community stakeholders in the Attica Region would show interest in participating in the process of designing new wind farms. To the extent that I can answer for the rest of Greece, probably yes, there is interest, if you exclude a ubiquitous sterile reaction. I will give an example of the island of Skyros. There was a portion of the public that reacted, but there was also a larger section of the public that approached us at Greenpeace and informed us that:" We are not negative about wind farms, but we want to participate and have our say in the project". The siting of the specific wind farm was in an area that the local community considered to be a wrong choice and they wanted to counter-propose another area. Therefore, for that specific project, there was a given positive attitude toward participation. In summary, I think in general there is a sterile reaction which is not more than 10% of the public, there is an indifferent public and there is also a large part of the public around 30-40% who initially see a wind farm installation positively. To put it simply, what happens is that the information is not disseminated correctly, and in the end, the 10% with the negative stance increases by absorbing a portion of the moderate public; this creates a large reactive core in the local society. The biggest share of responsibility in all this belongs to

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

private individuals and the state because they have not opened channels of communication and participation of the local community in these projects.

GR-1. No. The reason for this is that people believe that this process will not have a weighty opinion and consequently their opinion.

GR-2. Yes. There is interest on behalf of the 'Region of Eastern Crete' which cooperates with the 'Region of Crete' and some local Municipalities. The Region of Crete is attempting to lead the way. There are steps to be made so that all the 1st-degree Local Government Organizations could actively promote the designing of wind farms, in cooperation with the 'Region'.

GR-3. Hypothetically yes, the local community stakeholders in the Attica Region would show interest in participating in the process of designing new wind farms. To the extent that I can answer for the rest of Greece, probably yes, there is interest, if you exclude a ubiquitous sterile reaction. I will give an example of the island of Skyros. There was a portion of the public that reacted, but there was also a larger section of the public that approached us at Greenpeace and informed us that:" we are not negative about wind farms, but we want to participate and have our say in the project". The setting of the specific wind farm was in an area that the local community considered to be a wrong choice and they wanted to counter-propose another area. Therefore, for that specific project, there was a given positive attitude toward participation. In summary, I think in general there is a sterile reaction which is not more than 10% of the public, there is an indifferent public and there is also a large part of the public around 30-40% who initially see a wind farm installation positively. To put it simply, what happens is that the information is not disseminated correctly, and in the end, the 10% with the negative stance increases by absorbing a portion of the moderate public; this creates a large reactive core in the local society. The biggest share of responsibility in all this belongs to private individuals and the state because they have not opened channels of communication and participation of the local community in these projects.

9. Is there any reward scheme for participants in the public participation process? Y/N.
    - *If YES, could you say a little bit more about how it works?*

GR-1. No, there is no public reward system for participating in the design process of new wind farms. If there was, it would be a major incentive.

GR-2. No. There is not.

GR-3. No there is no public reward system for participating in the design process of new wind farms.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

10. Do you think it is worth establishing a reward scheme to stimulate public participation during this stage? Y/N.
    - *If YES, do you consider it a good mechanism to stimulate participation in this type of process? Why?*

GR-1. Yes, of course, it is worth establishing a reward system for mobilizing public participation because that way it would connect the project with the life of every citizen.

GR-2. Yes. There should be a reward scheme for the active participation of the public. The motive deriving from it would mobilize more people to take part in the designing process of wind energy projects.

Considering the motivation provided by the reward scheme and the acquisition of essential qualities such as transparency and accessibility.

GR-3. Yes, a reward system should be introduced to encourage public participation in the design process of new wind farms. This reward system should be combined with a more practical motivation in the follow-up stages that are concerned with the implementation and operation. That is, let's see what benefits will be returned to society. For example, these can take the form of participation as we said before, or even compensatory benefits.

11. Would you like to add anything else about Public Participation in the Planning Stages of wind energy projects?

GR-1. The participation of the public could be essential if the region, the Municipality, or the Region had done preparatory work, i.e., have a plan to manage the situation about renewable energy sources. So, if we had an investment plan and any investor came to the area, they could follow that plan or an investment guide. In continuation of the above, the phase of public dialogue with the local community would also play an important role.

GR-2. Given the condition that the State will clarify the legal framework of licensing, designing, and development, mobilize the 1st and 2nd-degree Local Government Organizations, and grant the motives deriving from reward schemes, the Energy Communities will finally be able to claim their share of the energy market. We do not denounce the big corporations, but to overthrow Energy Poverty and face the energy crisis we have to create more Energy Communities with both energy-wise and financial benefits.

GR-3. No, I think we covered everything.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Part 3. During the permitting stage of the wind projects

12. Do you consider that wind energy projects are properly submitted to public participation in your region? Y/N.
    - *If NOT, how would you improve it?*

GR-1. The public's participation in the permitting process for new wind farms is significant when expressed through objections, while it tends to be silent and moderate when in agreement. This is a logical response, as disagreements tend to make their presence more noticeable. When we agree, we may assume that the desired outcome can be achieved without much effort.

GR-2. No. In the borough of Crete, there is currently no informative body functioning either in person or online. However, it is necessary to establish such a body to provide essential information to the public. This can be achieved through an updated application that includes details of all ongoing wind energy projects within the borough of Crete. The application should also provide information on suitable regions for future wind energy projects, including environmental limitations and land usage information. All this information is crucial for the public to effectively submit their objections or propositions.

GR-3. No. In the regional district of Attica, the public does not have sufficient and satisfactory participation in the licensing process for new wind farms, mainly because there are no wind farms currently present in that area. As for other regional districts, to the best of my knowledge, the situation remains the same, with limited public involvement in the licensing process. As I am not an expert on the specifics of the licensing process, I am unable to provide suggestions for its improvement currently.

13. Do you perceive an open and transparent collaborative planning process in which interests and views are considered?

GR-1. Yes, there is a consultation process during the environmental impact study phase. The project is made available for public consultation either through the electronic registry of environmental studies or through the procedures implemented by the Region or the Municipality. This allows every citizen to express their opinion and participate in the decision-making process at various levels.

GR-2. No, at present, there is no established open and transparent procedure for public participation in the licensing process. However, it is essential to establish such a procedure to ensure the active involvement of the public in decision-making regarding wind farm projects.

GR-3. No, there is not.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

14. Do you perceive stakeholders' interest in participating in the process? Y/N.
    - *If NOT, what do you think is the main reason?*

GR-1. There is interest, but as we said before, mainly to demonstrate the reason for their objection. When there is an agreement with the purpose of the investment, the rule of silent consent applies, and people do not bother to declare it.

GR-2. Yes. There is a participation interest on behalf of the stakeholders but not to a great extent. The main reason for this is that the stakeholders have not been guided by the State. If the optimizations proposed above actually take place, then the stakeholders' interest will multiply.

GR-3. I think there is a great interest and motivation for them to participate and shape the fate of their local area.

15. Is there any reward scheme for participants in the public participation process? Y/N.
    - *If YES, could you say a little bit more about how it works?*

GR-1. No, there is no reward system here either.

GR-2. No. Although there should be.

GR-3. As far as I know, no, there is no public reward system for participating in the licensing/permitting process for new wind farms.

16. Do you think it is worth establishing a reward scheme to stimulate public participation during this stage? Y/N.
    - *If YES, do you consider it a good mechanism to stimulate participation in this type of process? Why?*

GR-1. Yes, it is worth establishing one.

GR-2. Yes. This way, more people would take part, and the number of Energy Communities would go up. The benefits would be multiple.

GR-3. Yes, establishing a reward system can be beneficial and serve as an incentive to encourage public participation in the planning process. Additionally, extending the reward incentive to the operation of the wind farm can further enhance participation. For instance, offering a share in the wind farm as a reward for participating in the licensing process can create an incentive for local bodies and the public to engage more rationally. This approach helps balance the potential costs and concerns associated with the operation of the wind park with the anticipated benefits. Ultimately, such a system can foster a more balanced and logically driven discussion among stakeholders.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

17. Would you like to add anything else about Public Participation in the Planning Stages of wind energy projects?

GR-1. I would like to propose the implementation of a consultation process that involves a third-party entity responsible for conducting the process. This entity should be independent and impartial, not associated with either the investor or the public. In Europe, there are already examples of such third-party bodies, such as private companies led by young scientists, communication companies with the involvement of expert scientists, or even energy communities.

I believe that engaging a third-party entity has several positive aspects, as it brings objectivity to the entire process. By having an independent body facilitate the consultation, it can ensure fairness, transparency, and unbiased decision-making. This approach helps build trust among all stakeholders involved and creates an environment conducive to productive and inclusive discussions.

GR-2. In conclusion, I reiterate the importance of mobilizing the 1st and 2nd degree Local Government Organizations, as well as the Technical Chamber, to activate citizens and encourage their participation in Energy Communities. These communities have the potential to address and alleviate Energy Poverty.

GR-3. Incentive schemes that ensure the participation of local communities and agencies, or guarantee contributory benefits in the future, will help to make planning and licensing more transparent and participatory. But I would like to add here that I do not think that this should be a prerequisite. It would help but is not necessary.

Part 4. During the development stage of the wind projects

18. Do you consider that wind energy projects are properly submitted to public participation in your region? Y/N.
    - *If NOT, how would you improve it?*

GR-1. No, the public does not have sufficient and satisfactory participation in the development process of new wind farms. In the past, there have been instances of protest movements by local communities regarding the installation of wind farms in the mountains of Crete. These protests sometimes escalated to extreme measures, such as road closures aimed at blocking construction sites.

GR-2. No. Although that could be a prerequisite for the licensing so that people's participation in the development of wind parks would be mandatory for the wind farm to be constructed.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

GR-3. In my Regional District, as previously mentioned, there are currently no wind farms. However, even when considering Greece as a whole, the answer remains no. Once a wind farm project reaches the development stage, there is limited room for significant changes. It is crucial to ensure public participation during the earlier stages of project planning and development.

19. Do you perceive an open and transparent collaborative planning process in which interests and views are considered?

GR-1. No there is not an open and transparent public participation process in the development of new wind farms, in which different views are considered.

GR-2. No.

GR-3. I have nothing to add here. As I already mentioned during the development process of a wind farm not much can change. In my opinion, the public should be involved during the planning and licensing stage. During the development phase, there should be only supervisory control (from local stakeholders).

20. Do you perceive stakeholders' interest in participating in the process? Y/N.
    - *If NOT, what do you think is the main reason?*

GR-1. Yes of course there is interest because when we reach the development phase, people can see the project being done in practice. During the planning and licensing phases, the agencies see plans, mock-ups, studies, etc. But when we move to the development stage where the project is built, the foundations are dug to put the wind turbines in place; it is more interesting for everyone there because they see the project being implemented.

GR-2. Yes, there is some level of public participation, but it is not as extensive as we would like. However, this situation could change if the Technical Chamber takes the initiative to provide relevant education through seminars, as previously mentioned. By increasing awareness and knowledge among stakeholders, their interest and involvement in the process could be significantly enhanced.

GR-3. There is interest from stakeholders to participate in the process of developing new wind farms. There should also be supervisory control as I mentioned in my previous answer.

21. Is there any reward scheme for participants in the public participation process? Y/N.
    - *If YES, could you say a little bit more about how it works?*

GR-1. No there is no reward system for the public participating in the development process of new wind farms.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

GR-2. No. But there should be.

GR-3. No there is not.

22. Do you think it is worth establishing a reward scheme to stimulate public participation during this stage? Y/N.
    - *If YES, do you consider it a good mechanism to stimulate participation in this type of process? Why?*

GR-1. Yes, of course, it is worth it. When we talk about wind energy projects, implementing a reward system, such as a remunerative fee, for public participation is beneficial. The local community often possesses valuable ideas and suggestions for improving the project that the investor or project designers may not have considered, as they lack intimate knowledge of the area that the permanent residents have.

Offering a reward system, it incentivizes active participation from the community and ensures that their perspectives and suggestions are considered during the project development process. This can lead to more comprehensive and successful wind energy projects that align with the specific needs and preferences of the residents.

GR-2. It is worth it. If the citizens knew that the wind farm produces energy to be consumed by the citizens themselves, and at the same time sets them free from fossil fuel emissions, then wind farms would be to a greater degree accepted by the public. In a different case, the public views the project as a "pharaonic" scheme that will permanently alternate the landscape.

GR-3. I believe not. The development stage of a wind farm is no longer the public's "job description".

23. Would you like to add anything else about the Public Participation in the Planning Stages of wind energy projects?

GR-1. The remunerative fees I proposed before are the incentive for public participation in the development phase of a new wind farm. I have nothing else to add.

G2-2. The local population must understand that wind farms are specifically designed to benefit the citizens themselves and the environment, rather than serving the interests of third parties.

GR-3. No, I have nothing more to add.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Part 5. Drivers/Supporting Factors

24. Is there any public consultancy agency for the implementation of these projects?

GR-1. No, there is no public advisory body for the implementation of these projects. I come back to my proposal to establish a private body that could strengthen the process.

G2-2. No.

GR-3. I think that there is no public advisory body for the implementation of wind farms in Greece.

25. In your opinion, what would you say are the drivers for good involvement in the different phases of the implementation of a wind farm?
    - *Planning.*
    - *Permitting.*
    - *Development.*

GR-1. The most suitable drivers for participation in the implementation phases of a wind farm are during the design phase the compatibility of the investment plan with the local development plan of the area. During the licensing phase the compatibility with the national and European framework and during the construction phase the treatment of the impacts.

G2-2. During the designing process, the main drivers are the proper regulatory framework and the mobilization of the State. During the licensing stage there should be activation of advisory bodies so that the new projects are properly evaluated. As for the construction phase, the public must be notified, together with people working in relevant disciplines (mainly engineers) so that they can essentially be involved.

GR-3. Public participation should be actively practiced and present during the operational stage of the wind farm. In short, the local community should not feel left out. Local stakeholders or even ordinary citizens should feel that they are involved in the project that's being done locally; and that this work will benefit them. So, drivers could include participation in the form of project shares during the wind farm's operational stage and some contributory benefits to society. Examples of contributory benefits would be energy upgrading of buildings, the provision of free energy to vulnerable social groups, projects related to the protection of the environment, anti-flooding projects, or the opening of new paths in the mountains.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

26. Could you add a little more about the drivers of public participation in such projects? Could you please illustrate it with an example?

GR-1. Informing the public early - during the design phase – on behalf of expert scientists with knowledge of the subject -is the key driver of amplification. As an example, I will mention, as I said before, the project in Amari. It is a large pump-saving project combined with wind farms which will contribute to the quality and safety of energy throughout Crete. Despite its size and importance, the local community is not aware of this project.

Many times, people even wonder why the wind turbines have to go into the mountains. So, if the public does not participate in the design phase where it is understood what the purpose of the project is and why it was placed in that specific area, then problems are created afterward. If the public is informed from the beginning at the planning stage about the long-term benefit that an island, a Municipality, or a region, in general, will have from the project, there would be an incentive for people to advocate or even make suggestions for improvement.

G2-2. Regarding the drivers- I once again bring up the cooperation of the 1st and 2nd degree Local Government Organizations with the Energy Communities. Such collaboration would convince the public of the beneficiary character of wind farms. An example of this is the collaboration of the 'Minoan Energy Community' with the 'Region of Crete' as well as with 4 Municipalities of Crete.

GR-3. A wind farm development project could work beneficially for the Energy Communities that will be given the right to actively participate. If we assume that an Energy Community has income from such a project, it could use this money to create new investments, which will benefit the local community, and all this could evolve exponentially. Therefore, an additional driving force for strengthening public participation in wind farm projects could be the Energy Communities' involvement in them.

27. Do you have any suggestions for strengthening these drivers?

GR-1. These proposals have to do with informing the public, through reliable dialogue and with the help of reliable mediators in this dialogue. The investor is not always respected in the dialogue as he is not considered objective, independent third parties need to be involved and mediate.

G2-2. These organizations must be mobilized to support future projects. Motives should also prevail: an example of this is the "Virtual Net Metering" motive.

GR-3. A wind farm development project could work beneficially for the Energy Communities that will be given the right to actively participate. If we assume that an Energy Community has

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

income from such a project, it could use this money to create new investments, which will benefit the local community, and all this could evolve exponentially. Therefore, an additional driving force for strengthening public participation in wind farm projects could be the Energy Communities' involvement in them.

28. Indicate your agreement with the following statements using a scale from 1 to 5,

[1=Strongly disagree; 2=Disagree; 3=Neither agree nor disagree; 4=Agree; 5=Strongly agree].

Table 5. Answers to question number 28 at regional level (Greece).

	GR-1	GR-2	GR-3
Cultural Background. There is a long tradition of public participation processes in the region. Organizations with experience that facilitate the implementation.	5	5	3
There are information agencies for the citizens to encourage their participation in participatory processes.	4	5	4
There is an active presence of sectoral associations representing the interests of the region.	3	5	4
Existence of Pilot National Projects in community involvement models that could be a reference for the rest of the country.	4	5	5
The policy-driven, through targets and incentives. There are specific regulations, targets, and incentives for public participation.	5	5	5
Well-designed and implemented public participation strategy. The administration emphasizes the importance of providing comments/opinions during the planning-permitting-development process.	4	5	4
Well-designed and implemented public participation strategy. Multiple timelines are provided with sufficient time frames to analyze and discuss consultations.	4	5	4
Social and environmental awareness. Having promotion of activities increasing the environmental awareness of society is worthy to involve citizens in public participation and collaborative planning.	3	5	5
Social and environmental awareness. Energy independence, Mitigation of energy poverty, Model of sustainable region, etc.	4	5	5

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Financial benefits and improvement of the environment quality for the citizen´s participation. There are Intrinsic or extrinsic rewards for participants in the consultation process.	5	N/A	5
DEVELOPMENT STAGE. Technological and Market Conditions. Huge range of machines and devices available on the market and each time more efficient.	3	5	4
Business Conditions. Favourable requirements and exploitation condition.	3	5	4
Employment and prosperity. Acquire jobs by the local community through a renewable energy model.	4	5	5
DECOMMISSIONING. The land remains the same once the lifetime of the installations ends (Restored landscape).	4	5	5

Part 6. Barriers/Hindering Factors

29. In your opinion, what would you say are the main barriers that hinder public involvement in the different phases of the implementation of a wind farm?
    - *Planning.*
    - *Permitting.*
    - *Development.*

GR-1. I think that the main inhibiting factor that makes it difficult for the public to participate in the various phases of the implementation of a wind farm is the frustration that people often have. They do not believe that their opinion can play an important role.

G2-2. The main inhibiting factor is unclear legislation. If there had been clear legislation and correct notification of the public -since the stage of the planning- any prohibitions on the installation would have been foreseen. A correct 'zoning plan' would ensure that any necessary evaluation from the Archaeological or environmental services would be done before the beginning of construction. Furthermore, the lack of adequate information often leads to citizen movements that react to such investments.

Another inhibiting factor is the cost of building such a project which often varies depending on the area chosen for installation. For example, difficult access to the installation site, the requirement of many earthworks, the skyrocketing construction costs, make it all more difficult.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

GR-3. I will address the inhibiting factors during the design phase of a wind farm. We could mention the lack of information and lack of public activation. When an investor decides to install a wind farm, he must initiate an information campaign to activate public participation. There is also a lack of the appropriate legislative framework that will enforce the procedures. Finally, the public lacks some targeted awareness, i.e., the public should have an in-depth understanding of what a renewable energy project means in their area. While there is an awareness about the environment, I would say that the public is not that aware of the importance and value of Renewable Energy Sources (RES).

30. Could you add a little more about the barriers to public participation in such projects? Could you please illustrate it with an example?

GR-1. As I mentioned before, the general obsolescence of the decision-making system and procedures is a key inhibiting factor for broad, social participation in wind farm development projects. People don't bother to discuss it as they discredit the proceedings. As far as wind farm projects go, we have many times encountered a minority that strongly disagrees. So, shouldn't these projects be done? That would not be fair to the majority. In any case, it is not possible to have a referendum on whether an area is suitable to host a wind farm. The lack of stable, long-term development planning discourages people from participating in any discussion.

GR-2. The main factor inhibiting broad social participation in new projects is public distrust. Unfortunately, we also find this within the Energy Communities, where there are often doubts among the members themselves. The reason for this is that the road to construction and operation is often difficult. First, we find an area to install, and then the project gets stuck in the licensing phase. The result is the whole effort leading to a dead end.

GR-3. In the previous question, I developed my opinion about the factors that inhibit public participation (in wind farm projects). As an example, I will mention the case on the island of Skyros where most residents were positive about the installation of a wind farm on their island but disagreed for very specific reasons regarding the location and wanted their opinion to be heard. This example shows us that there is interest from the local community, but their opinion is not considered.

31. Do you have any suggestions for removing these barriers?

GR-1. The solution to address all the above would be the existence of a development plan that includes, among other things, the utilization of renewable energy sources. If the investment plan of each investor is included in this development plan it would be welcomed, if not there would be a problem. So, if we had such plans, they would facilitate the investors, would guide them. Also, what is missing is an updated zoning plan that would help in every direction.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

GR-2. My suggestions for dealing with the inhibiting parameters are clear legislation, greater transparency and simplification of procedures and finally informing local communities.

GR-3. I believe a good proposal would be for the state to enact some legislative regulation that requires the mandatory participation (of the order of 20%) of the local community in the wind farm with shares. It would be even better for this participation to take place through the establishment of Energy Communities. Another proposal is the mandatory participation of local bodies in the planning phase. Perhaps a platform could be created where the public can submit proposals and a local body process them to discuss them together with the Ministry and the private company (a substantive and meaningful discussion/consultation process). The last thing I can recommend is to give compensatory benefits which have an increased positive social and environmental sign in the region. Part of the profits generated by this project should be returned to the society and upgrade the local area.

32. Indicate your agreement with the following statements using a scale from 1 to 5.

[1=Strongly disagree; 2=Disagree; 3=Neither agree nor disagree; 4=Agree; 5=Strongly agree].

The main factors that constitute a barrier to public participation in wind farm projects are:

Table 6. Answers to question number 32 at regional level (Greece).

	GR-1	GR-2	GR-3
Social Barriers. Lack of confidence, dialogue, information, transparency, and privacy.	4	5	4
Political Barriers. Lack of confidence, legal framework. mass media.	4	5	5
Logistic Barriers. Few spaces and time for dialogue lack of tools or methods.	5	5	4
PLANNING STAGE			
Nonhomogeneous national and regional governments policy, lack of regulatory framework.	5	5	5
Lack of knowledge of the relationship between local community acceptance of specific wind energy projects.	4	5	5
Negative social perception regarding wind structures.	5	5	2
Few spaces for dialogue to discuss interests. The stakeholders do not have sufficient ways to provide input.	4	5	2

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Few windows of participation and short periods. The stakeholders don't get sufficient or timely information for effective participation.	3	5	4
LICENSING/PERMITTING STAGE			
Difficulties on the permitting procedures.	3	5	5
Lack of transparency and information. Decision makers drive interests different from those of the local community.	2	5	5
Social movement against these projects (environmental and primary sectors).	4	5	4
DEVELOPMENT STAGE			
The use of this renewable technology reduces the implementation of others.	5	4	1
Economic impacts on the primary sector.	5	3	2
Social movements against these projects.	5	5	3
Decommissioning. The land does not remain the same once the lifetime of the installations ends (Degraded landscape).	4	4	3

INTERVIEW AT REGIONAL LEVEL || ITALY

Table 7. Profile of interviewees at regional level (Italy).

Nº Interviewee	Interviewee profile	Acronym
1	Expert on renewable energy in a Governmental entity	IT-1
2	Expert on environmental impact mitigation in a renewable energy producer/developer	IT-2
3	Researcher on environmental engineering from academia	IT-3

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Part 1. Background Information

1. In general, do you consider that the implementation of wind projects has been carried out with an open, transparent approach and in pursuit of the common benefit of the region? Y/N.
    - *If YES, could you please illustrate with an example?*
    - *If NOT, what do you think has been lacking? How would you improve it?*

IT-1. To some extent, yes Individuals can comment in the frame of the licensing phase and, in the frame of an EIA.

IT-2. The public can participate by submitting their comments to a project in the permitting stage. In particular, the first step of permitting is the Environmental Impact Assessment (EIA). According to DL 152/2006, the EIA is carried at National level for wind projects over 30MW and Photovoltaic (PV) projects over 10 MW. Under these thresholds, EIA is carried out regional level.

For national projects, all the documentation is fully accessible on the portal of the Ministry of Environment and Energy Security. EIA is carried out by the NRRP-NECP Technical Committee. The consultation period starts at the time of the publication on the portal. Public has 30 days available to send comments after the publication on the website. In case the project needs some integration or substantial adjustments, new documents will be published, and the public has then 15 days more to comment on the project.

IT-3. I think that in Italy the implementation of a new plant is done in a transparent way following all the steps required by law. In recent times there is more attention in involving, even from the initial stages, the citizens who compared to the past must be properly informed with the aim of disseminating knowledge and increasing awareness.

2. Do you perceive the political will to stimulate public participation in wind energy projects? Y/N.
    - *If YES, could you please illustrate with an example?*
    - *If NOT, what do you think has been lacking? How would you improve it?*

IT-1. Not really since a regulatory framework for public participation in all aspects and phases of wind farms are absent.

IT-2. No. There aren't public places for discussion. There aren't specific activities/initiatives addressed to the citizen.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

IT-3. Not much. In the past years, policies did not stimulate citizens' participation, and this participation is not even regulated. Only recently in Italy, a regulatory framework was created for the development of renewable energy communities (REC's).

3. Does the administration provide sufficient mechanisms/channels for stakeholders to participate in the stage of A) Planning? B) Permitting? C) Development? Y/N.
    - *If YES, could you please illustrate with and example?*

IT-1. Yes, but only in the permitting stage.

IT-2. Public participation is only allowed during the permitting stage.

IT-3. In Italy, private participation in the investment for a wind farm (with "participatory" investment/ financing) is not regulated. There is a gap in Italian legislation on this aspect. Often, municipalities ask the wind park developer to let citizens participate, by enjoying energy bill discounts, and by participating with shares. However, there are no relevant regulations at the moment.

4. Is there a legal regulatory procedure that establishes the requirements for public participation in this type of project? Y/N.
    - *If YES, is it transparent and approachable? Is it functional and effective? Is there evidence that is working well?*

IT-1. Yes, but only for the permitting stage and for the energy communities.

IT-2. Yes. The Legislative Decree 152/2006 establishes how the public could participate in the permitting stage. The comments and suggestions of the public and local authorities are considered during the EIA, the first step of permitting.

IT-3. No. To the best of my knowledge, not yet.

5. Do you perceive interest from the stakeholder involved in public participation related to wind energy projects? Y/N.
    - *If NOT, what do you think has been lacking? Do you perceive a lack of knowledge about the procedure for public participation and little confidence that it is a productive and reflective process? How would you improve it?*

IT-1. N/A, **IT-2.** N/A.

IT-3. In Italy, there are no formal obstacles to citizen participation in wind power projects. Typically, the initiative for a new wind farm is private. Therefore, if the private initiative is taken by a company, there is nothing to prevent the same company from being made up of multiple investors who are natural persons, citizens or not, and who have the appropriate

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

characteristics for this type of investment. Every entrepreneurial initiative is characterized by a margin of risk, and therefore, even in this case, it is necessary to analyse the risk propensity of the individual citizen-investor, who, as in any financial initiative, must be properly informed.

Part 2. During the planning stage of the wind projects

6. Do you consider that wind energy projects are properly submitted to public participation in your region? Y/N.
    - *If NOT, how would you improve it?*

IT-1. No, more opportunities for public participation should be provided.

IT-2. No. The participation depends on a case by case. It is related to the initiatives of the proponent of the project.

IT-3. No. Citizens' participation should be regulated at a national level and should be encouraged.

7. Do you perceive an open and transparent collaborative planning process in which interests and views are taken into account?

IT-1. Not really, only on voluntary basis from the side of the developers.

IT-2. No.

IT-3. Lately, developers are trying to take into account all stakeholders' perspectives in the various phases of a project.

8. Do you perceive stakeholders' interest in participating in the process? Y/N.
    - *If NOT, what do you think is the main reason?*

IT-1. Yes, **IT-2.** Yes.

IT-3. Interest has been growing lately. More and more information is needed.

9. Is there any rewarding scheme for participants in the public participation process? Y/N.
    - *If YES, could you say a little bit more about how it works?*

IT-1. No, **IT-2.** No.

IT-3. Currently, there is no existing regulation for this in Italy.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

10. Do you think it is worth establishing a reward scheme to stimulate public participation during this stage? Y/N.
    - *If YES, do you consider it a good mechanism to stimulate participation in this type of process? Why?*

IT-1. Most probably not.

IT-2. No. One thing that could be improved is the public participation before the presentation of the project, for example by organizing "discussion spaces" with the collaboration of the local authorities.

IT-3. To stimulate public participation, I think it is important to run information campaigns and instil confidence in citizens about the economic and environmental benefits of the project.

11. Would you like to add anything else about the Public Participation in the Planning Stages of wind energy projects?

IT-1. N/A**, IT-2.** N/A.

IT-3. Some private developers in Italy are currently launching financing initiatives for new renewable projects open to all citizens.

Part 3. During the permitting stage of the wind projects

12. Do you consider that wind energy projects are properly submitted to public participation in your region? Y/N.
    - *If NOT, how would you improve it?*

IT-1. Yes, but only for the Environmental Impact Assessment (EIA) phase.

IT-2. Yes.

IT-3. Not so much so far, but now the situation is getting improved, and there is a tendency to involve citizens at an early stage of the project.

13. Do you perceive an open and transparent collaborative planning process in which interests and views are considered?

IT-1. Progress is still possible.

IT-2. Yes.

IT-3. I have perceived a recent improvement in this aspect.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

14. Do you perceive stakeholders' interest in participating in the process? Y/N.
    - *If NOT, what do you think is the main reason?*

IT-1. Yes**, IT-2.** Yes, **IT-3.** Yes.

15. Is there any reward scheme for participants in the public participation process? Y/N.
    - *If YES, could you say a little bit more about how it works?*

IT-1. Yes, but it is related to the implementation, and to the mitigation of the impact that farms may produce.

IT-2. Yes. The Ministerial Decree 10.09.2010 "Guidelines for the authorization of RES plants" establishes that no monetary consideration is due to the Municipalities to produce electricity from renewable sources. The authorization of a project may provide for the identification of compensatory measures, of a non-financial nature, in favor of the Municipalities themselves, and to be oriented towards environmental improvement interventions related to the mitigation of the impacts attributable to the project, to energy efficiency interventions, the diffusion of installations of renewable source plants and to raise public awareness.

IT-3. No, it does not exist at the moment.

16. Do you think it is worth establishing a reward scheme to stimulate public participation during this stage? Y/N.
    - *If YES, do you consider it a good mechanism to stimulate participation in this type of process? Why?*

IT-1. No monetary reward for this stage.

IT-2. N/A.

IT-3. In the authorisation phase, citizens should be better informed.

17. Would you like to add anything else about the Public Participation in Planning Stages of wind energy projects?

IT-1. N/A**, IT-2,** N/A, **IT-3,** N/A.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Part 4. During the development stage of the wind projects

18. Do you consider that wind energy projects are properly submitted to public participation in your region? Y/N.
    - *If NOT, how would you improve it?*

IT-1. No, **IT-2.** No.

IT-3. Not so far. Financial participation should be promoted to all citizens and information campaigns should be carried out.

19. Do you perceive an open and transparent collaborative planning process in which interests and views are taken into account?

IT-1. Same as the above stages.

IT-2. N/A.

IT-3. Yes, in recent years more and more.

20. Do you perceive stakeholders' interest in participating in the process? Y/N.
    - *If NOT, what do you think is the main reason?*

IT-1. Yes**, IT-2.** Yes, **IT-3.** Yes.

21. Is there any reward scheme for participants in the public participation process? Y/N.
    - *If YES, could you say a little bit more about how it works?*

IT-1. Same as the above stages.

IT-2. No.

IT-3. Not yet.

22. Do you think it is worth establishing a reward scheme to stimulate public participation during this stage? Y/N.
    - *If YES, do you consider it a good mechanism to stimulate participation in this type of process? Why?*

IT-1. N/A, **IT-2.** N/A.

IT-3. For those who participate financially in the project, discounts in the electricity bill could be considered.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

23. Would you like to add anything else about the Public Participation in the Planning Stages of wind energy projects?

IT-1. N/A**, IT-2.** N/A, **IT-3**. N/A**.**

Part 5. Drivers/Supporting Factors

24. Is there any public consultancy agency for the implementation of these projects?

IT-1. No**, IT-2.** No, **IT-3.** No.

25. In your opinion, what would you say are the drivers for a good involvement in the different phases of the implementation of a wind farm?
    - *Planning (A)*
    - *Permitting (B)*
    - *Development (C)*

IT-1. Information, real engagement, participation in various stages.

IT-2. Planning.

IT-3. (A) Information and launching of financing initiatives are open to all. (B) Information, dialogue, and transparency. (C) Information and dialogue.

26. Could you add a little more about the drivers of public participation in such projects? Could you please illustrate it with an example?

IT-1: N/A, **IT-2:** N/A, **IT-3:** N/A**.**

27. Do you have any suggestions for strengthening these drivers?

IT-1. Financial participation.

IT-2. N/A.

IT-3. From the very beginning of the project to involve citizens by running some information activities and by allowing them to participate financially in the project, even with small shares to get discounts on their bills.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

28. Indicate your agreement with the following statements using a scale from 1 to 5.
[1=Strongly disagree; 2=Disagree; 3=Neither agree nor disagree; 4=Agree; 5=Strongly agree].

Table 8. Answers to question number 28 at regional level (Italy).

	IT-1	IT-2	IT-3
Cultural Background. There is a long tradition of public participation processes in the region. Organizations with experience that facilitate the implementation.	2	2	2
There are information agencies for the citizens to encourage their participation in participatory processes.	2	2	3
There is an active presence of sectoral associations representing the interests of the region.	4	4	4
Existence of Pilot National Projects in community involvement models that could be a reference for the rest of the country.	3	2	4
The policy-driven, through targets and incentives. There are specific regulations, and incentives for public participation.	1	1	2
Well-designed and implemented public participation strategy. The administration emphasizes the importance of providing comments/opinions during the planning-permitting-development process.	3	3	3
Well-designed and implemented public participation strategy. Multiple timelines are provided with sufficient time frames to analyze and discuss consultations.	3	3	2
Social and environmental awareness. Having promotion of activities increasing the environmental awareness of society is worthy to involve citizens in public participation and collaborative planning.	3	2	4
Social and environmental awareness. Energy independence, Mitigation of energy poverty, Model of sustainable region, etc.	3	3	4
Financial benefits and improvement of the environment quality for the citizen´s participation. There are Intrinsic or extrinsic rewards for participants in the consultation process.	3	2	4
DEVELOPMENT STAGE. Technological and Market Conditions. Huge range of machines and devices available on the market and each time more efficient.	4	4	4
Business Conditions. Favourable requirements and exploitation condition.	3	3	3

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Employment and prosperity. Acquire jobs by the local community through a renewable energy model.	3	3	4
DECOMMISSIONING. The land remains the same once the lifetime of the installations ends (Restored landscape).	3	3	4

Part 6. Barriers/Hindering Factors

29. In your opinion, what would you say are the main barriers that hinder public involvement in the different phases of the implementation of a wind farm?
    - *Planning.*
    - *Permitting.*
    - *Development.*

IT-1. Fear from the side of developers. There is a lack of trust among communities regarding the procedures.

IT-2. Planning.

IT-3. (A) Inconsistent national and regional policy. (B) Difficult authorisation procedures. (C) Social movements against these projects.

30. Could you add a little more about the barriers to public participation in such projects? Could you please illustrate it with an example?

IT-1. N/A.

IT-2. There is no established place for participation in the planning stage.

IT-3. N/A.

31. Do you have any suggestions for removing these barriers?

IT-1. Address the barriers through an open and honest dialogue.

IT-2. N/A, **IT-3.** N/A.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

32. Indicate your agreement with the following statements using a scale from 1 to 5.

[1=Strongly disagree; 2=Disagree; 3=Neither agree nor disagree; 4=Agree; 5=Strongly agree].

The main factors that constitute a barrier to public participation in wind farm projects are:

Table 9. Answers to question number 32 at regional level (Italy).

	IT-1	IT-2	IT-3
Social Barriers. Lack of confidence, dialogue, information, transparency and privacy.	1	5	5
Political Barriers. Lack of confidence, legal framework. mass media.	5	4	5
Logistic Barriers. Few spaces and time for dialogue lack of tools or methods.	4	5	4
PLANNING STAGE			
Non homogeneous national and regional governments policy, lack of regulatory framework.	4	5	5
Lack of knowledge of the relationship between local community acceptance of specific wind energy projects.	5	4	4
Negative social perception regarding wind structures.	4	5	3
Few spaces for dialogue to discuss interests. The stakeholders does not have sufficient ways to provide inputs.	4	4	4
Few windows of participation and short periods. The stakeholders don't get sufficient or timely information for effective participation.	4	4	3
LICENSING/PERMITTING STAGE			
Difficulties on the permitting procedures.	4	5	5
Lack of transparency and information.Decision makers drive interests different from those of the local community.	5	3	4
Social movement against these projects (environmental and primary sectors).	3	3	3
DEVELOPMENT STAGE			
The use of this renewable technology reduces the implementation of others.	3	3	2

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Economic impacts on the primary sector (agriculture, fisheries, livestock).	3	3	2
Social movements against these projects.	3	3	4
DECOMMISSIONING. The land does not remain the same once the lifetime of the installations ends (Degraded landscape).	4	4	2

INTERVIEW AT REGIONAL LEVEL || NORWAY

Table 10. Profile of interviewees at the regional level (Norway).

Nº Interviewee	Interviewee profile	Acronym
1	Project manager in offshore wind projects	NO-1
2	Industry manager business development	NO-2
3	EU advisor on wind projects	NO-3

Part 1. Background Information

1. In general, do you consider that the implementation of wind projects has been carried out with an open, transparent approach and in pursuit of the common benefit of the region? Y/N.
    - *If YES, could you please illustrate with and example?*
    - *If NOT, what do you think has been lacking? How would you improve it?*

NO-1. Yes, in Norway all official documents are open for anyone to see, so most information is publicly available.

NO- 2. In general, I would say yes, both onshore and offshore.

NO-3. Yes, I think the plans for wind projects have been developed in Norway for a few years, so most parties have had the opportunity to participate in the process. The only challenge or one of the challenges I see is that the public consultation round on the new regulation was quite short. It took place on 6 December and the deadline was 6 January, and you know it was Christmas and there was a lot to do, so the window of opportunity was quite small. At the same time, I think the process was very clear up to that point and most people had the opportunity to get involved, but that's rather general and there may be some areas that the public did not get involved as much as they wanted to. The wind farm developers and the

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

organisation I represent were quite closely involved in the process but, for example, the municipalities where a lot of the activities will take place were not as involved as they should have been.

2. Do you perceive the political will to stimulate public participation in wind energy projects? Y/N.
    - *If YES, could you please illustrate with an example?*
    - *If NOT, what do you think has been lacking? How would you improve it?*

NO-1. The political consensus in this area in Norway is quite positive for the offshore wind projects we are working with; there is a positive climate in politics, municipalities, and local politics. Both the government is very positive about the development of offshore wind and our projects, as well as the local municipalities. However, the local municipalities are more biased; they have more points of view than the government, which is more positive.

NO- 2. In Norway, yes for sure.

NO-3. Yes, I think that brings us back to one of my main points: if you look at the Norwegian regulations, the objectives are quite clear, what the Norwegian government calls "ripple effects". This means that the wind farm should have a positive development for society and no negative effects, and this is very clear in the planning and permitting phases. But it is not very clear how this should be implemented in the development phase and in the operation and maintenance phase. So, if you are very strict with the developers in Norway, they might say that they will do a lot for that, but if you look at it on FID and afterward, they do not necessarily have to do that.

3. Does the administration provide sufficient mechanisms/channels for stakeholders to participate in the stage of A) Planning? B) Permitting? C) Development? Y/N.
    - *If YES, could you please illustrate with and example?*

NO-1. Yes, if you are a stakeholder in the wind farm value chain, you can participate.

NO- 2. Yes. I am not sure if it's time efficient because public consultation is a very lengthy process, but there are opportunities to participate.

NO-3. Everything is laid down in planning and permitting phase, but there is a lack of framework/mechanisms in the development and operation phase. It is not very clear how the Norwegian government wants to implement this, and it boils down to the developers not doing what they have to do, or not saying what they would do if they do not. For example, one of the municipalities or one of the developers wants to set up a viewing point for tourists in one of the municipalities dealing with offshore wind. But what happens if they do not do that? Are there any consequences, are they fined or sued? But I do not have an overview of

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

that. But it does not seem like the government has very good measures or mechanisms of what they will do if the developer does not want to do what they said they were going to do.

4. Is there a legal regulatory procedure that establishes the requirements for public participation in this type of project? Y/N.
    - *If YES, is it transparent and approachable? Is it functional and effective? Is there evidence that is working well?*

NO-1. Yes, there is. There are several hearings during the concession process where everybody can have a say and there is also a local meeting on the project, a physical meeting, and a hearing session where you can submit your opinions if you want to have a say, like for a local fishing company, but in the end the energy authority decides who is heard or not, but most people have the opportunity to have their say.

NO- 2. Yes, I think there is a difference whether it is onshore or offshore. In the case of offshore in Norway, there is first identification of the area to be announced which is open for public consultation, and perhaps those who have a strong opinion should speak up better and be politically wiser. Then, when the area is announced and allocated, there is also a public consultation on the concession. However, because we have this process where the area is first identified, there must be input in that first step because then you have done a lot of work to allocate the area and it is expected that there will be no objections in the consultation. It is different with onshore wind farms. Here it is up to the developers to find the sites and the appropriate owner and then apply for the concession to be approved, which then has to be supported by the municipality. This has changed. Before, only the central government was responsible for onshore wind and there was a lot of resistance, so onshore wind development was stopped for a while. Now the development is open again, but the change is that the municipalities have taken the development into their own hands.

NO-3. Yes, there is in the starting phases of a project, and I think what we have seen in Norway before, and this is related to the culture in Norway, we have a culture of cooperation where the government wants to do something, they have to talk to the people, they have to talk to the municipalities, they have to talk to the organisations, and the processes often take a long time, and that is good in a way because then you also take responsibility for the project. So, I think the Norwegian culture in general is very good for stakeholder participation. It is important to mention that no offshore wind projects have been developed yet. We have, of course, this floating Hywind Tampen, where there have not been many challenges with the public. But I think with onshore wind farms, there have been several cases where the public has opposed onshore wind farms in Norway. One case was about a new organisation that spoke out against wind farms. There are also many discussions about the grids in Norway, which the public calls 'monster masts', and the most recent of these discussions was of course in northern Norway. A wind farm was developed there, and the Supreme Court in Norway

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

declared it illegal because of the deer and the way deer co-exist in the area. So, I am not sure what the project developer will do with it. One measure would of course be to dismantle the wind farm, which costs a lot of money. So, we are trying to change what is already established in Norway, what has happened in recent years with onshore wind, and try to get it right with offshore wind. I think that is crucial. If we want to develop wind energy as a viable market or industry, then we need to learn from the experience with onshore wind and not go down the same path with offshore wind.

5. Do you perceive interest from the stakeholder involved in public participation related to wind energy projects? Y/N.
    - *If NOT, what do you think has been lacking? Do you perceive lack of knowledge about the procedure for public participation and little confidence that it is a productive and reflective process? How would you improve it?*

NO-1. As far as I know, some people are very involved as private individuals, but also as organisations, for example, fishing organisations, fishermen, nature tourism, nature conservation communities, who are very involved, people who strongly believe that wind power, in general, is harmful and who are very strongly against wind farms in general and who have their organisations in Norway, especially the opponents who actively protest and actively follow what is happening in the concession, but that is a minority, most people do not mind that much. The people who are most strongly against it are a minority, at least in our projects. I cannot see that the groups that are positive toward wind projects are particularly engaged. They are not visible, at least not in the local community. I would say most people are not against wind power projects, they like them. I guess they have heard about these projects from newspapers and articles and do not think negatively about them. Most people have heard about offshore wind and know that it is wind energy and they do not have a problem.

NO-2. Yes, the public is interested in participating, but they have to comment specifically on the conflicts of onshore wind power. That is a problem. So, there are procedures where the public should be heard and consulted. However, many opponents of wind power feel that they are not heard and that the procedure in Norway is that the government announces a public consultation but, in the end, decides whether the project is built or approved. This is why we have this new regulation that gives municipalities a stronger say in onshore wind farms. Recently, the Supreme Court ruled that the needs of the Sami people were not sufficiently considered in the development of onshore wind farms, and although there are procedures to be consulted, there are conflicts in this area.

NO-3. Yes, there is a lot of interest from stakeholders to get involved in Norway, but at the same time, the plans and goals are so far at a very high conceptual level. If you look at the public or the administrative staff in the municipalities, they do not understand the challenges

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

until you get very concrete. They need to know if it is going to be 100 turbines or 250 turbines and how big those turbines are going to be. If you say we are going to develop a wind farm with a capacity of 1.5 GW, 90% of the Norwegian population does not know what that means. So that is one of the challenges: How can you get specific at an early stage of the process to engage the public and get them interested?

Part 2. During the planning stage of the wind projects

6. Do you consider that wind energy projects are properly submitted to public participation in your region? Y/N.
    - *If NOT, how would you improve it?*

NO-1. I usually work with offshore wind farms. In the region where some of our projects are located, there is also an onshore wind farm where the process did not go very well because the residents of the farm were concerned. They were not adequately involved or felt excluded from the process, particularly during the planning stage, since the concession was granted a long time ago. Subsequently, there were several years of waiting as the project did not commence immediately. When it was started, the capacity was increased, and the project was much bigger than originally agreed. I was not directly involved in this case and do not know exactly how fast or slow things went, but there was and still is a lot of negative public sentiment against this wind farm. However, if you look at the process of developing our offshore wind turbines, I think it has gone well so far. We have strongly involved and informed the different stakeholders along the way, there have been many information events.

NO- 2. Yes, I think that is being considered. But I am sure that if you ask some people in Norway, they might say something different and feel that they have not been listened to.

NO-3. Yes, I mean, in Norway planning and permitting are closely linked. So, in order to get a permit, you have to have a plan for the technical aspect, you have to have plans for the commercial aspects, and you also have to involve the local communities and the local stakeholders, for example, the fisheries organisations, and for all that you have to do a lot of environmental studies.

So, planning and permitting in Norway are seen as one and not as separate procedures, depending on what you want to permit. If you look at the Norwegian system, maybe I can show you how it works in Norway (the interviewee shares the screen).

So, you know there is what we call here leasing of areas. This is sort of the first phase in Norway where you have to apply for the area that you want to lease. Then, when you get the lease, you make a plan on how you want to implement the project, and then you apply again for CFD or the support allocation, it's kind of two processes: Firstly, you need to apply for the leasing

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

so that you get permission to lease the sea area, and secondly, you need to get permission to implement your project. In this second process, you have to specify how many wind turbines you want to put up, what the grid connection will be, and all these things. In this first process, you have to analyse how you are going to involve the local communities, especially on an industrial level. How much local labor are you going to use, how much is going to be manufactured locally. So, there are a lot of plans for that, and you also want to give something back to the local community. As I mentioned earlier, one of the municipalities wanted to set up a center that tourists could visit. So, what happens if the developer does not invest? Is the project stopped or is there some kind of fine? So, in a way, it is difficult to understand how what the developer says will be implemented. And if the developer does not do what he promises, he has to "sweeten the pill". Also, they suggest a lot of things that they will do, so it is more likely that they will get the leasing.

7. Do you perceive an open and transparent collaborative planning process in which interests and views are taken into account?

NO-1. Yes, in our cases. I think there are many voices in favor of our projects. Many voices were heard during the process. At the beginning of the planning process, different configurations were presented to the parties, and the shipping parties had a say, as did the fishermen. We adjusted the configuration of the park to meet the needs of the fishing organisations and to cause less conflict with fishing areas. There were also some concerns about various environmental aspects related to birds, bats, and other species that were included in the concession conditions. These included that we research migratory birds and carry out a few environmental impact assessments, which I think was also since several parties, mainly nature conservation authorities, had a say. As much as possible was considered, but of course we wanted to build our wind farm and we also asked the government to allow us to build this wind farm. Many parties disagree or want to have a say and they are heard while also their complaints and points of view are considered, but in the end, it is the authorities who make the assessment in a holistic view, which is the most important thing to consider, as they have the final say.

NO- 2. Yes, I think that is being considered. But I am sure that if you ask some people in Norway, they might say something different and feel that they have not been listened to.

NO-3. Yes, I think the system is very good and very flexible, i.e., developers can use it in a way that is best for them. At the same time, I have not seen an example of how it should be done because if you look at the municipalities, they have different needs. Some municipalities probably need to develop local industry, others need more tourists, and these are very small municipalities far away from the big cities. So, some of them have very big fishing communities, others not so big fishing communities. So, the needs of these municipalities are

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

very different. How have you set up a good process for these different needs? You have to talk to them; you have to have meetings and the developers have to be in each municipality to discuss what they need.

8. Do you perceive stakeholders' interest in participating in the process? Y/N.
    - *If NOT, what do you think is the main reason?*

NO-1. Today we have a concession for a small park that is already in operation, and we are planning to expand it. We have different phases at the same time, we now have an operational phase of wind turbines, some are in the planning phase, and some are in the permitting phase. No, in the planning phase we do it ourselves for the most part, without much participation, but it is up to us to involve other parties in the planning, because public participation in the planning is not mandatory, it is not official until we have our permitting documents.

NO- 2. N/A.

NO-3. Yes, some of the municipalities are very interested to participate in the planning, but as I mentioned earlier, for example, there is an area in Norway where there is going to be a 1.5 GW wind farm, and most of the administrative staff of the municipality do not know what the impact of a 1.5 GW wind farm is going to be on the fishermen and the local community. So, I assume the municipalities and the people working there might want to get in later. If you look at how municipalities work in Norway, for example, when you draw up a plan for new roads, people have no say in what the road should look like, but as soon as it turns black and then you want to put yellow or grey or white stripes, people say we understand that we do not want or want the change.

9. Is there any reward scheme for participants in the public participation process? Y/N.
    - *If YES, could you say a little bit more about how it works?*

NO-1. No, there is not any reward scheme.

NO- 2. No, there is no financial reward per se, but you can make your voice heard and steer the project in your direction. Of course, there are also interest groups that do this kind of work. These are professionals who are paid by their members.

NO-3. Yes, about 15 to 20% of developers' permitting plans are what we call "ripple effects". For example, some municipalities probably need a swimming pool or a new football stadium or something like that, and that might be part of the development phase, so the developers say, okay, if we can build an offshore wind farm in your area, we will finance a football stadium with 15% of the permitting plan. That also means you have to talk to the local communities. 15 to 20% of permit applications are made for this purpose, so developers have a strong incentive to involve local stakeholders. Often local communities and the public find out about

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

this financing too late as they see that they can develop a whole infrastructure in their area. But there are no direct rewards for local stakeholders.

10. Do you think it is worth establishing a reward scheme to stimulate public participation during this stage? Y/N.
    - *If YES, do you consider it a good mechanism to stimulate participation in this type of process? Why?*

NO-1. No, because many people could only participate because of the money. For those who we consider to be actual stakeholders that are either privately or professionally connected to the area, we approach them directly and ask if they want to receive more information and be heard, and they can then decide whether they want to have a say or not. I do not think it would be an appropriate incentive if they received money or a reward. I do not think that would work.

NO- 2. I think it is more important to have proper dialogue and ensure that stakeholders are listened to and engaged than a financial reward. That is something they are looking for to steer development in the direction they want.

NO-3. Yes, it could be, but I think the biggest challenge is communication, i.e., you have to get the local communities to understand the technical aspects of a wind farm and for example, what a 1.5 GW wind farm is. Because if they do not understand what it's about, it's hard to get them on board, and you do want them to be active. Of course, they can get some funding, but I do not think that's the main problem. One possible aspect of this hypothetical financial participation should be that it is set by the government, because if every developer sets a financial mechanism for participation, it could lead to corruption.

11. Would you like to add anything else about the Public Participation in the Planning Stages of wind energy projects?

NO-1. These procedures are 3 or 4 processes with hearings and take a long time, in some of our cases between a few months and 2.5 half years. From the first contact until now the recourse has taken 9 months, so we are waiting for the recourse to be processed.

NO- 2. I think the regulatory framework is there, but you have to follow it intelligently.

NO-3. N/A.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Part 3. During the permitting stage of the wind projects

12. Do you consider that wind energy projects are properly submitted to public participation in your region? Y/N.
    - *If NOT, how would you improve it?*

NO-1. In the permitting phase where there are official procedures for public participation, the public is involved.

NO- 2. Same reply as planning.

NO-3. N/A.

13. Do you perceive an open and transparent collaborative planning process in which interests and views are taken into account?

NO-1. Some replay as Planning Stage.

NO-2. N/A, **NO-3.** N/A.

14. Do you perceive stakeholders' interest in participating in the process? Y/N.
    - *If NOT, what do you think is the main reason?*

NO-1, NO-2, NO-3. Same replay as Planning Stage.

15. Is there any rewarding scheme for participants in the public participation process? Y/N.
    - *If YES, could you say a little bit more about how it works?*

NO-1, NO-2, NO-3. Same replay as Planning Stage.

16. Do you think it is worth establishing a reward scheme to stimulate public participation during this stage? Y/N.
    - *If YES, do you consider it a good mechanism to stimulate participation in this type of process? Why?*

NO-1, NO-2, NO-3. Same replay as Planning Stage.

17. Would you like to add anything else about the Public Participation in the Planning Stages of wind energy projects?

NO-1. I think that the concession process takes a lot of time. Ten years ago, the Norwegian regulators thought that wind energy was not a problem because it was green energy. So, they had a very simple procedure to give concessions and they did not involve the local

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

communities at all. Now, if the municipality is against a wind farm extension or a new wind farm project, the national authorities will not give the concession.

NO- 2. N/A.

NO-3. The previous government in Norway set up this stakeholder forum between developers, the Ministry of Energy, and regional authorities, which has not been followed up by the current government. This is something that has not gone as well as expected. In recent months, the activities of this forum have increased, but it has been quiet for a while.

Part 4. During the development stage of the wind projects

18. Do you consider that wind energy projects are properly submitted to public participation in your region? Y/N.
    - *If NOT, how would you improve it?*

NO-1. I do not know when the construction and cabling phase starts, but I guess there is some participation. With this wind farm that we have today, we have to notify the relevant authorities when something needs to be done. For example, when we had to do some installations work two weeks ago, we had to announce in the newspaper that installation work was coming up, and we had to notify the various coastal administrations who can inform everybody about the work.

NO- 2. Same reply as Planning Stage.

NO-3. Yes, I mean, there are two aspects to this: If you want to identify areas for offshore wind turbines, of course, you have to get permission and involve the local stakeholders, but how much can you change? I mean, the earlier you involve, for example, fisheries or bird conservation organizations, the more you can adapt in the development of the wind farm. I mean, in the development phase there are much fewer opportunities than during the permitting process.

However, it is observed that the smaller the time window, the more active people become. I have not experienced this in Norway, but I have heard of areas in Denmark where developers wanted to build wind farms on the land, and there are many farmers there who were very much against wind farms. But then the developers proposed that the farmers get a share of the revenue if they build wind turbines on their land. In Norway, for example, there is a municipality called Utsira, a very small municipality that is very close to the area where a wind farm is going to be built. Let us say, for example, 0.1%, a very small part of the revenue would go into a fund set up for the community, which could use it to make the necessary

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

investments, for example. I think that could be a very good solution, but then you need some kind of government or someone else to decide that.

I think one of the issues that are at the top of the agenda is how many jobs offshore wind will create in the local communities. In Norway, we do not have this in mind at the moment, because we have a very high oil price, which means that there is a lot of investment in oil activities, and the oil activities in Norway are offshore, so most municipalities in Norway do not have significant unemployment at the moment. I think if Norway, for example, had an unemployment rate of 10%, then job creation through offshore wind would be much higher on the agenda. I think the municipalities would be much more active. Of course, investment in oil starts going down and unemployment is expected to start in 2026 - 2027, then some of the shipyards and ships will be underutilized and we expect offshore wind activities to increase. At the same time, municipalities should be on board now because there will be a lot of unemployment shortly.

19. Do you perceive an open and transparent collaborative planning process in which interests and views are taken into account?

NO-1, NO-2, NO-3. Same reply as Planning Stage.

20. Do you perceive stakeholders' interest in participating in the process? Y/N.
    - *If NOT, what do you think is the main reason?*

NO-1, NO-2, NO-3. Same reply as Planning Stage.

21. Is there any rewarding scheme for participants in the public participation process? Y/N.
    - *If YES, could you say a little bit more about how it works?*

NO-1, NO-2, NO-3. Same reply as Planning Stage.

22. Do you think it is worth establishing a reward scheme to stimulate public participation during this stage? Y/N.
    - *If YES, do you consider it a good mechanism to stimulate participation in this type of process? Why?*

NO-1, NO-2, NO-3. Same reply as Planning Stage.

23. Would you like to add anything else about the Public Participation in the Planning Stages of wind energy projects?

NO-1, NO-2, NO-3. Same reply as Planning Stage.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Part 5. Drivers/Supporting Factors

24. Is there any public consultancy agency for the implementation of these projects?

NO-1. No, I do not think there are other agencies or anything like that. The same authority that grants concessions is also involved in the collection of the various public opinions.

NO- 2. Yes, I mean when it comes to concession work in general, which falls under the Norwegian Water and Electricity Directorate. So, it is a directorate that comes under the Ministry of Petroleum and Energy. They are the ones who are constantly looking for new development areas and making recommendations for areas to be developed, doing public consultations, and holding hearings, and for concessions, the Ministry is responsible for offshore wind, but the Directorate of Water and Electricity is responsible for onshore wind. And at least for land use, it is the municipality that also organises public consultations and usually holds citizens' meetings to discuss these kinds of projects.

NO-3. In Norway, there is no public consultancy agency. Of course, there are some private consultancy agencies, which, as you can imagine, cost a lot of money. I do not know how much someone can pay for their services, but some of the bigger companies, for example the project developers; probably use these consultancy agencies to get a positive story about offshore wind.

There is a public organization called NVE, which is responsible for the administrative permits, and there is an international grid company called Statnett, which is also responsible for the grids. So, there are these kinds of agencies, but I do not know if "consultancy agency" is the right term to describe them.

25. In your opinion, what would you say are the drivers for a good involvement in the different phases of the implementation of a wind farm?
    - *Planning.*
    - *Permitting.*
    - *Development.*

NO-1. I think a driver for the good involvement of the public can be done with direct contacts in some form so that local communities are more involved in the projects. I think we have missed the local communities to be more involved in the project and to be more of a service provider, to facilitate more information meetings, to sell the project to the community as something that will make the region more prosperous, a pioneer of the offshore wind industry.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

NO-2. I think it would be important for the people that participate experience being listened to, of being heard, and I would support that kind of face-to-face hometown meeting. There are a lot of people who feed their input into databases of some kind, but we do not have face-to-face conversations. We need direct dialogue between local communities and key stakeholders.

NO-3. We need to communicate with all stakeholders involved. Try to be as concrete as possible. I think there are more opportunities than challenges in this area. Then, when these stakeholders are informed, they want to be involved as early as possible. Because I think especially when it comes to the fishermen and the environmental aspects, you should involve them as early as possible, because then you could change the location of the turbines, for example. In short: good and uncomplicated communication. And another aspect: as I mentioned before, in Norway it is important that communication is based on real facts. Communicating the right kind of facts on social media is a real challenge.

26. Could you add a little more about the drivers of public participation in such projects? Could you please illustrate it with an example?

NO-1. No, **NO-2.** No, **NO-3.** No.

27. Do you have any suggestions for strengthening these drivers?

NO-1. No, **NO-2.** No.

NO-3. Clear communication from the beginning and straightforward facts.

28. Indicate your agreement with the following statements using a scale from 1 to 5

[1=Strongly disagree; 2=Disagree; 3=Neither agree nor disagree; 4=Agree; 5=Strongly agree].

Table 11. Answers to question number 28 at regional level (Norway).

	NO-1	NO-2	NO-3
Cultural Background. There is a long tradition of public participation processes in the region. Organizations with experience that facilitate the implementation.	4	5	4
There are information agencies for the citizens to encourage their participation in participatory processes.	2	5	2
There is an active presence of sectoral associations representing the interests of the region.	3	5	3

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Existence of Pilot National Projects in community involvement models that could be reference for the rest of the country (countries).	2	3	4
The policy-driven, through targets and incentives. There are specific regulations, targets, and incentives for public participation.	2	2	3
Well-designed and implemented public participation strategy. The administration emphasizes the importance of providing comments/opinions during the planning-permitting-development process.	4	5	3
Well-designed and implemented public participation strategy. Multiple timelines are provided with sufficient time frames to analyze and discuss consultations.	4	5	3
Social and environmental awareness. Having promotion of activities increasing the environmental awareness of society is worthy to involve citizens in public participation and collaborative planning.	2	5	3
Social and environmental awareness. Energy independence, Mitigation of energy poverty, Model of sustainable region, etc.	3	2	3
Financial benefits and improvement of the environment quality for the citizen´s participation. There are Intrinsic or extrinsic rewards for participants in the consultation process.	3	2	2
DEVELOPMENT STAGE. Technological and Market Conditions. Huge range of machines and devices available on the market and each time more efficient.	N/A	2	4
Business Conditions. Favourable requirements and exploitation condition.	4	2	4
Employment and prosperity. Acquire jobs by the local community through a renewable energy model.	4	5	3
DECOMMISSIONING. The land remains the same once the lifetime of the installations ends (Restored landscape).	4	4	3

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Part 6. Barriers/Hindering Factors

29. In your opinion, what would you say are the main barriers that hinder the public involvement in the different phases of the implementation of a wind farm?
    - *Planning.*
    - *Permitting.*
    - *Development.*

NO-1. I think those who want to be involved can do so and have a say. Those who do not may have an information problem if they have not been involved. But in our case, we sent out letters and held a public hearing, there were many information campaigns. So I think that the people who do not get involved because they do not have the information need to be asked to get involved, that your voice needs to be heard, that they want you to be more involved in the process.

NO-2. I think that some people believe that they cannot be listened to in any way. There are also several challenges, such as whether we have the same opinion on global warming, on the energy needs of the future, and on the environmental impact of offshore installations. I think it's similar to the COVID-19 vaccine debate and it becomes a bit of a problem because we have to try to break through these echo chambers somehow. And that's a challenge that we have to overcome. There is a local view, most people do not want wind turbines near their homes or cottages, and at the same time there is a local view that says more renewable energy is needed and more power at the country level to drive green transition.

NO-3. I think I have already mentioned that you must be competent and concrete. The public must understand why they should be involved in the planning, permitting, and development of the project.

30. Could you add a little more about the barriers to public participation in such projects? Could you please illustrate it with an example?

NO-1. I work with offshore wind, and I think that is very different from working with onshore wind. 10 to 15 years ago, when wind energy was introduced in Norway, there was no public participation in onshore wind. The concessions were granted without any public participation, and this caused a lot of noise, people were unhappy, communities felt that the government was not listening to them, there were a lot of protests, wind energy had a bad reputation all over the country and this caused the authorities to change the concession procedures. In the last ten years, the public has become more and more engaged, but it is a bit sad that the negativity around wind farms has now taken hold. But with offshore wind energy, that has changed.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

NO-2. I think the regulatory framework is good, but we face the challenge of getting into these two camps - pro and con - that we have not really resolved yet. I think it's about dialogue, but it's not easy.

NO-3. N/A.

31. Do you have any suggestions for removing these barriers?

NO-1. N/A.

NO-2. People do not have trust in the government. That is a key barrier meaning that they feel that they will be listened to.

NO-3. N/A.

32. Indicate your agreement with the following statements using a scale from 1 to 5.

[1=Strongly disagree; 2=Disagree; 3=Neither agree nor disagree; 4=Agree; 5=Strongly agree].

The main factors that constitute a barrier to public participation in wind farm projects are:

Table 12. Answers to question number 32 at regional level (Norway).

	NO-1	NO-2	NO-3
Social Barriers. Lack of confidence, dialogue, information, transparency, and privacy	4	5	3
Political Barriers. Lack of confidence, legal framework. mass media.	2	2	2
Logistic Barriers. Few spaces and time for dialogue lack of tools or methods.	3	4	4
PLANNING STAGE			
Nonhomogeneous national and regional governments policy, lack of regulatory framework.	2	2	2
Lack of knowledge of the relationship between local community acceptance of specific wind energy projects.	4	2	4
Negative social perception regarding wind structures.	4	4	3
Few spaces for dialogue to discuss interests. The stakeholders does not have sufficient ways to provide inputs.	3	3	3
Few windows of participation and short periods. The stakeholders don't get sufficient or timely information for effective participation.	2	2	2

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

LICENSING/PERMITTING STAGE			
Difficulties on the permitting procedures.	3	3	5
Lack of transparency and information.Decision makers drive interests different from those of the local community.	3	2	2
Social movement against these projects (environmental and primary sectors).	4	4	2
DEVELOPMENT STAGE			
The use of this renewable technology reduces the implementation of others.	2	2	3
Economic impacts on the primary sector (agriculture, fisheries, livestock).	2	3	4
Social movements against these projects.	4	4	3
DECOMMISSIONING. The land does not remain the same once the lifetime of the installations ends (Degraded landscape).	3	3	3

INTERVIEW AT REGIONAL LEVEL || SPAIN

Table 13.Profile of interviewees at the regional level (Spain).

Nº Interviewee	Interviewee profile	Acronym
1	General director on environmental and development of wind energy	ES-1
2	Director-Social impact evaluation and measurement	ES-2
3	Site engineer-Renewable energy	ES-3

Part 1. Background Information

1. In general, do you consider that the implementation of wind projects has been carried out with an open, transparent approach and in pursuit of the common benefit of the region? Y/N.
    - *If YES, could you please illustrate with an example?*
    - *If NOT, what do you think has been lacking? How would you improve it?*

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

ES-1. It was not considered until two major changes occurred: social mobilization and the proposal to include in the electricity sector regulations the sharing of the benefits of the park in the local community.

ES-2. Not in general. That is the big problem with the promotion of wind projects in Spain. What happens is that there are no open, transparent, and consensual processes with the local communities. When that contact for community participation arrives, the project is already advanced. The positions are established so there is little range to adapt the project.

It is also happening within the same companies is not on the same line in terms of project implementation processes. Large developers have environmental and social teams that want to value participation and change the dynamics of outreach to local communities.

On the other hand, the development and engineering departments have another approach of less interest in establishing consensual contact in which what matters most to them is only to comply with the laws. Participatory processes are generally carried out after the environmental impact study and the public consultation process.

ES-3. Yes, wind projects always look for the common good. Not only in terms of energy, but it also generates more work and for me, the landscape is much more beautiful personally. The latter depends more on opinions.

2. Do you perceive the political will to stimulate public participation in wind energy projects? Y/N.
    - *If YES, could you please illustrate with and example?*
    - *If NOT, what do you think has been lacking? How would you improve it?*

ES-1. Yes, mainly due to the regulatory changes that have taken place since 2020. The regulation of capacity tenders and all the development of the electricity sector from the public authorities have tried to promote and legislate the part of social benefit sharing and social acceptance.

ES-2. It depends on the territory. For example, in Catalonia, yes, in some way it is required that the projects have participation through an analysis of social acceptance to ensure that within the community itself, there is some kind of settlement regarding the development of the project. At the central government, level is required as well (evaluation of social acceptance of projects >50MW).

In other communities it depends on project development because in some cases there is no interest in participatory processes. The Aragon region is not an exemplary community. It does not usually promote public participation. It is not the community where this is most promoted. It has quite a few negative points. Especially in the southern part of Teruel, Matarraña, and

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Maestrazgo, the implementation of projects is consolidating quite a strong position. Not enough has been done here by the public administrations.

ES-3. There are two approaches. On the one hand, I believe that local companies are directly stimulated by contracting their services in some phases of the project, but not during its entire useful life. On the other hand, they are encouraged to participate in order to avoid future problems with these projects, bearing in mind that without them they would not be carried out. It is much better to see a project with greater public participation than others that do not.

3. Does the administration provide sufficient mechanisms/channels for stakeholders to participate in the stage of A) Planning? B) Permitting? C) Development? Y/N.
    - *If YES, could you please illustrate with an example?*

ES-1. Yes, because the administration must also carry out a guaranteed administrative process regulated by administrative law in which there is regulated public information, which is planned.

ES-2. Not in its current form. The process is highly mechanized and lacks mandatory consideration of social issues. The periods of public information are extremely brief, making it challenging for people to become aware of ongoing information and consultation processes. Publicity efforts are insufficient, and participation is not facilitated to the extent it could be.

ES-3. It depends on the type of phase. In the planning and permitting phases there are more mechanisms. There are not enough, but there are. It has not touched me directly, but I have seen how city councils in this case make information available to the owners, as well as to the community through bulletins on this type of matter. In addition, meetings are called among the interested parties to discuss the project. In the case of the development stage, no, since it is a more technical stage, there will be no mechanisms.

4. Is there a legal regulatory procedure that establishes the requirements for public participation in this type of project? Y/N.
    - *If YES, is it transparent and approachable? Is it functional and effective? Is there evidence that is working well?*

ES-1. Yes, at least in the planning part. Administrative law governs all aspects, including public information and dialogue with local communities. Currently, capacity contests are being introduced in Spain to incorporate social and economic criteria. The regulatory framework provides sufficient means for public participation.

ES-2. At the level of Catalonia, there is a regulation that requires more processes of analysis of social acceptance and participation. At the national level, large-scale projects are required to be carried out. However, this does not mean that the project may or may not be required

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

to take a measure of the situation in the community at the project level. The best example is Catalonia and in my opinion that is where we must go in terms of social evaluation. The challenge lies in ensuring the existence of participatory processes, analysis, and social acceptance. However, the absence of state-level regulations poses a problem. Without laws or regulations mandating social studies in specific areas, projects tend to migrate to those regions.

ES-3. N/A.

5. Do you perceive interest from the stakeholder involved in public participation related to wind energy projects? Y/N.
    - *If NOT, what do you think has been lacking? Do you perceive lack of knowledge about the procedure for public participation and little confidence that it is a productive and reflective process? How would you improve it?*

ES-1. Yes, some are out of commitment and others out of necessity. Some associations are making initiatives from the social perspective to increase this. Efforts are being made to disseminate the participation processes. There is undoubtedly willingness.

ES-2. Yes. I perceive interest for the local community in a public participation process.

In the case of development companies, some are more advanced and contemplate this process. There are others who distinguish themselves by not even wanting to address this issue. They focus on compliance with the law and nothing else. This second group makes the whole process more difficult for the sector since the most talked about are the bad practices in the sector.

ES-3. Yes, in the end there are always interests, whether economic, social, or political.

Part 2. During the planning stage of the wind projects

6. Do you consider that wind energy projects are properly submitted to public participation in your region? Y/N.
    - *If NOT, how would you improve it?*

ES-1. Yes. It is subject to public participation in various formats and under various procedures.

ES-2. No, participation processes are not being carried out in general. They have been involved and consider that the project planning process is late. Sometimes it is considered that these processes are false to somehow comply with a check list. There is no real process in Aragon. I believe that it should be mandatory to carry out social impact studies to ensure that it is a real process. Local communities demand more participation.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

ES-3. A small part of it is. In the cases in which I have worked, I have seen citizen participation in these projects.

7. Do you perceive an open and transparent collaborative planning process in which interests and views are taken into account?

ES-1. Yes, there is transparency, but it should be improved with more plans and more programs. Planning is the responsibility of the public authorities and should be governed by government procedures, regulations, etc.

ES-2. This process is not happening, and I think there are good examples to focus on. For example, there are several sources of opposition to projects on the one hand that have to do with the technical characteristics of the project (size of wind turbines, location, proximity to settlements, evacuation lines) but in other cases the sources of opposition are the perception that it could hurt the local economy where they believe it could affect rural tourism. Portugal is a great case study of social benefits and implementation.

ES-3. Yes, at this point is where I think the public opinion is considered and consideration. Therefore, this stage is the most transparent.

8. Do you perceive stakeholders' interest in participating in the process? Y/N.
    - *If NOT, what do you think is the main reason?*

ES-1. It all depends on the approach. In this case, stakeholders have an interest and are participating. For example, associations are moving using allegations to the regulations and some groups with a particular interest have increased their participation.

ES-2. Yes, and very much so. There is interest and desire to participate in real processes and stop participating in checklist processes.

ES-3. Undoubtedly, I believe that this is the stage where we see the greatest participation and movement on the part of the local population/communities.

9. Is there any rewarding scheme for participants in the public participation process? Y/N.
    - *If YES, could you say a little bit more about how it works?*

ES-1. Public participation should not be rewarded in any case. It is the right of a citizen and should be voluntary (right and obligation).

ES-2. The reward is to have a say in e.g., the location and size of the farm. In some cases, some of the benefits of the park will revert to the local community (although I think this point would go more to the start-up and operation phase).

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

ES-3. I am not aware of any reward system as such. I believe that participation at this stage should be voluntary.

10. Do you think it is worth establishing a reward scheme to stimulate public participation during this stage? Y/N.
    - *If YES, do you consider it a good mechanism to stimulate participation in this type of process? Why?*

ES-1. No, the answer is in line with the previous question.

ES-2. Under no circumstances should you enter a reward model for participation.

ES-3. I think it could be a good engine for participation. I don't think it should be in a direct way but collaborating with other projects in the area and supporting the population.

11. Would you like to add anything else about the Public Participation in Planning Stages of wind energy projects?

ES-1. From experience, his idea is that usually, those who have a selfish interest participate. It should be defined in which part of the planning public consultation and participation should take place.

ES-2. Yes. I would like to highlight the need of having a real and mandatory mechanism for participation. When it comes to analysing factors, there is an attempt to oversimplify. It is necessary to try to understand the different factors and work to promote acceptance and reduce rejection. At the community level, there should be National and Regional planning for project development and since there is not.

ES-3. No.

Part 3. During the permitting stage of the wind projects

12. Do you consider that wind energy projects are properly submitted to public participation in your region? Y/N.
    - *If NOT, how would you improve it?*

ES-1. Yes, the regulations of the electricity sector and the environmental regulations establish sufficient guaranteeing processes.

ES-2. No, it is poor and insufficient. It is at this stage that greater participation is demanded. There is no real contact between the collectives and the promoters. More forums for direct contacts are needed.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

ES-3. Yes.

13. Do you perceive an open and transparent collaborative planning process in which interests and views are taken into account?

ES-1. Not in this process. In the previous phase (planning) the interests and opinions should have already been considered.

ES-2. There are some examples of good practices where this has been done in a more consensual manner. We have just published a report on good practices in the development of wind projects. You can find it on our website.

ES-3. For my part, I do perceive an open and transparent process that considers the opinions of the actors involved. There is a dialogue, even if it is more of a legal scope. There is transparency between the promoters and the associations.

14. Do you perceive stakeholders' interest in participating in the process? Y/N.
    - *If NOT, what do you think is the main reason?*

ES-1. Yes. There is great participation and interest.

ES-2. Yes, and it is the phase where they are supposed to accept the design of the project. There have been some examples of changes throughout the municipality (access roads, evacuation routes, where to place the mills, entrances and exits).

ES-3. Yes, of course.

15. Is there any reward scheme for participants in the public participation process? Y/N.
    - *If YES, could you say a little bit more about how it works?*

ES-1. No, as in the Planning section, there is not.

ES-2. I think so. They have achieved significant changes in the project changes. Compensation to the municipality to help in other projects in the area to help in other projects (housing, public works, etc.). There are cases of projects that benefit the community for example improvement of access roads.

ES-3. Yes, in the end the more involved you are, the more interest you have in making it happen. The reward is interest. Maybe in this phase there is not as much reward as in other phases. This phase is limited to the technical knowledge you may have.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

16. Do you think it is worth establishing a reward scheme to stimulate public participation during this stage? Y/N.
    - *If YES, do you consider it a good mechanism to stimulate participation in this type of process? Why?*

ES-1. In no case should there be a reward for exercising the right as a citizen to participate in this stage?

ES-2. It should not be addressed through compensation mechanisms. In some communities they make some kind of profit, but I don't like that approach on a personal level, I see more positive to create a partnership model to benefit the local community as it would be a long-term benefit (case of Portugal).

ES-3. Yes. I don't know what kind of reward can be proposed, but in the end, public opinion is much better about the project so participation should be encouraged by helping people in the community in a general way by supporting other projects of the associations.

17. Would you like to add anything else about the Public Participation in the Planning Stages of wind energy projects?

ES-1. There are sufficient windows of participation and here there is a GAP between reality and the perception of society. There is part of society that claims that this process is being carried out in offices without considering their opinion.

ES-2. I insist on the need to establish more mechanisms.

ES-3. No.

Part 4. During the development stage of the wind projects

18. Do you consider that wind energy projects are properly submitted to public participation in your region? Y/N.
    - *If NOT, how would you improve it?*

ES-1. Public participation does not make sense at this stage. It should have already been subject to public participation in the previous phases. What there should be is information to society on how everything is progressing.

ES-2. Some cases are exemplary, but in general, they are not. There is a lack of participation mechanisms and channels. The communities do not feel that they have a real say in the projects. They do not feel entitled to participate.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

ES-3. No, since in my opinion, it is a very technical process in which I do not see coherent public participation. In other stages, it is a little simpler how to improve it since the participation is clearer. There are other types of participation. By this I mean the more collaborative part between local (businesses), city councils, and companies. Regarding maintenance, contracts to local companies or people from the area.

19. Do you perceive an open and transparent collaborative planning process in which interests and views are taken into account?

ES-1. I think not, for the same reason as above. The developer could forget about the local community, but it is always recommended to have continued public activity in the local community.

ES-2. No, in the operation phases it is seen that in the case of good practices, a percentage of the benefits are allocated to community investment projects. There are opinion and public participation processes. It is not always seen so this would be in a case of good practices as I explained at the beginning.

ES-3. Once we are at this stage, there can't be as much public collaboration. What I do see is the interaction between the developers and the local community. They take care of the community in terms of its day-to-day acceptance. This of course, in an ideal case, I wish this would happen in all cases in Spain.

20. Do you perceive stakeholders' interest in participating in the process? Y/N.
    - *If NOT, what do you think is the main reason?*

ES-1. No, because there is nothing to decide since the asset is in operation.

ES-2. Yes, I insist that is missing the opinion and position of the local communities and are not being taken into account. It is important that there are more real mechanisms and that they feel that their opinion is considered.

ES-3. Yes.

21. Is there any reward scheme for participants in the public participation process? Y/N.
    - *If YES, could you say a little bit more about how it works?*

ES-1. No, there is not and there should not be.

ES-2. Yes, here there is a reward mechanism using a compensation reversion in the community. Therefore, there is a public interest.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

ES-3. I believe that a reward in an indirect way is the benefit of being known as a region. In addition, the economic benefit comes from being known as a town/county. We should also mention the contracts to local people. Socially we move as human beings for rewards, and I believe that they should be promoted, although at this stage it would have to be very well planned.

22. Do you think it is worth establishing a reward scheme to stimulate public participation during this stage? Y/N.
    - *If YES, do you consider it a good mechanism to stimulate participation in this type of process? Why?*

ES-1. No.

ES-2. I would not name it as a reward, but yes, I think that mechanisms should be established that part of the benefits goes to the community. On the part of the community, I would be interested in having part ownership of the facility.

ES-3. It's worth generating a social benefit to get people on board. There are not as many reward systems as the communities would like. Developers, on the other hand, benefit from subsidies and financial assistance. A form of reward that can be mentioned is the long-term lease or rental agreement offered to landowners where these parks are installed. However, this practice should be considered standard rather than exceptional.

23. Would you like to add anything else about Public Participation in the Planning Stages of wind energy projects?

ES-1. There is a need for more awareness on the part of the promoters. The project has a life in the local community, so we need more commitment, and more attachment, which implies actions such as supporting other projects in the community environment.

ES-2. Nothing more than more mechanisms are needed.

ES-3. Public participation can be encouraged, not so much in the process, but as a benefit of these parks. Routes could be created in these parks so that people become familiar with them, visit them, and become familiar with them. Take it as something normal and do not be afraid to go through there.

Part 5. Drivers/Supporting Factors

24. Is there any public consultancy agency for the implementation of these projects?

ES-1. There is not and should not be. The administration acts as a judge and cannot participate in this point. It can guide the developer, but it does not have to do consulting work.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

ES-2. I do not know of any. When a consultation process is carried out, it is either done through an entity or a consulting firm. It would be interesting if it was done by a public/quasi-public body to generate confidence in the citizenry. There should be an amount of public funds for the payment of these consultations since when the payment comes from the promoters (the normal thing) there are doubts about the independence of this type of process.

ES-3. The municipalities I think should have a technician who knows the project implementation plan. I think they should have a fund from a public body so that there is more confidence in the processes.

25. In your opinion, what would you say are the drivers for good involvement in the different phases of the implementation of a wind farm?
    - *Planning.*
    - *Permitting.*
    - *Development.*

ES-1. In all phases is the same, the commitment of the promoter to develop the project in a specific area. That is to say, the project will coexist with the people of the environment, business activities, economic activities, tourism, etc.

ES-2. Make consultation mechanisms mandatory for all stages without distinction. It will be more relevant in the planning phase. If there is participation at the beginning, they will have participated in the rest of the stages. Consider the impacts of economic, social, and environmental studies.

ES-3. Planning is the phase where there should be the most communication. In this phase, the developer is in contact with local agencies and the public. In the licensing phase communication is also the most important factor.

In the development phase, it would be to avoid rural movement as it could happen here and to avoid it to have good communication in the planning and permitting phases. At this stage is where there can be more social benefits.

26. Could you add a little more about the drivers of public participation in such projects? Could you please illustrate it with an example?

ES-1. Encourage participation through partnerships. Identify the partnerships that are aligned on this issue as there are partnerships that involve others without being within the vision of the project.

ES-2. There is a lack of mere formalities. There should be more bilateral contact between the developers and the communities.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

ES-3. The benefits and if they are economic will be more in favor of participating in these projects. To get people used to living in the environment.

27. Do you have any suggestions for strengthening these drivers?

ES-1. The administration should start requesting sustainability reports as an element of the principle of a company's true and fair view, not only the accounting framework. Start regulating clearly what is meant by sustainability. Establish KPIs that are easily comparable to determine whether a project is good or bad.

ES-2. A more substantial process should be implemented; one that goes beyond simply sending comments and includes the obligation to hold genuine meetings between the communities and the project developer.

ES-3. No.

28. Indicate your agreement with the following statements using a scale from 1 to 5.

[1=Strongly disagree; 2=Disagree; 3=Neither agree nor disagree; 4=Agree; 5=Strongly agree].

Table 14. Answers to question number 28 at regional level (Spain).

	ES-1	ES-2	ES-3
Cultural Background. There is a long tradition of public participation processes in the region. Organizations with experience that facilitate the implementation.	4	4	4
There are information agencies for the citizens to encourage their participation in participatory processes.	5	2	4
There is an active presence of sectoral associations representing the interests of the region.	5	4	5
Existence of Pilot National Projects in community involvement models that could be reference for the rest of the country (countries).	4	2	3
The policy-driven, through targets and incentives. There are specific regulations, targets, and incentives for public participation.	4	2	4
Well-designed and implemented public participation strategy. The administration emphasizes the importance of providing comments/opinions during the planning-permitting-development process.	4	1	3

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Well-designed and implemented public participation strategy. Multiple timelines are provided with sufficient time frames to analyze and discuss consultations.	3	1	4
Social and environmental awareness. Having promotion of activities increasing the environmental awareness of society is worthy to involve citizens in public participation and collaborative planning.	5	5	5
Social and environmental awareness.Energy independence, Mitigation of energy poverty, Model of sustainable region, etc.	5	5	4
Financial benefits and improvement of the environmental quality for the citizen´s participation. There are Intrinsic or extrinsic rewards for participants in the consultation process.	4	4	4
DEVELOPMENT STAGE. Technological and Market Conditions. Huge range of machines and devices available on the market and each time more efficient.	5	2	5
Business Conditions. Favourable requirements and exploitation condition.	3	5	3
Employment and prosperity. Acquire jobs by the local community through a renewable energy model.	5	1	5
DECOMMISSIONING. The land remains the same once the lifetime of the installations ends (Restored landscape).	5	5	3

Part 6. Barriers/Hindering Factors

29. In your opinion, what would you say are the main barriers that hinder the public involvement in the different phases of the implementation of a wind farm?
    - *Planning.*
    - *Permitting.*
    - *Development.*

ES-1. From the perspective of administrative public participation, that is, public information, it is the lack of involvement of the public. If someone reads the press or official gazettes of their autonomous community, they would be perfectly aware of participation. In short, the lack of knowledge of administrative law and how it works.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Another barrier is the digitalization of the administration. It is essential to have dedicated offices for individuals facing difficulties with digital media. Moreover, comprehensive changes are needed to facilitate a more digital approach across all administrative processes.

Lastly, one of the barriers is the resistance of the population to embrace change.

From the private perspective, a clear barrier is the conviction of the promoter; some promoters do not believe in public participation. They do not believe that the area in which the project is developed should be taken into consideration. Additionally, there is a barrier related to information dissemination, training, and awareness among the promoters. It is crucial for them to understand that supporting public participation is not merely a whim of the government or certain associations, but rather a necessity that can significantly enhance the project.

These two perspectives are for the cases of planning and permitting, since in the case of the development part I do not think that public participation should be considered within the project itself, but indirectly as a synergy with the community.

ES-2. There is not much willingness and interest from the developers to have a real participatory process because it makes the process more complicated for them at every stage of the project.

ES-3. In the permitting and planning phase, you cannot decide where to place the devices. Many times, the public wants to have a say in the position of the installations, but these depend on more technical parameters. Public participation in the development phase is non-existent.

30. Could you add a little more about the barriers to public participation in such projects? Could you please illustrate it with an example?

ES-1. Establish a good framework, communicate well, disseminate well, and explain well.

ES-2. Examples in the case of Galicia and Aragon where contact attempts arrive late because they think it is a mere formality. You find yourself with a process by obligation rather than by right to help meet some requirements and your opinion is not rather than to get ahead with the project.

ES-3. Local people are not considered in the previous phases but are asked once the project/wind farm has been defined. Their opinion is always considered, but there is more involvement once the licenses have been granted.

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

31. Do you have any suggestions for removing these barriers?

ES-1. Training, information, and, above all, that the public administration, as the responsible party, promotes, disseminates, and allows people who are left behind to overcome these barriers. From the private perspective, it must make better efforts so that its project has the public participation it should have.

ES-2. No.

ES-3. Courses or training grants could be provided to break down these barriers.

32. Indicate your agreement with the following statements using a scale from 1 to 5.

[1=Strongly disagree; 2=Disagree; 3=Neither agree nor disagree; 4=Agree; 5=Strongly agree].

The main factors that constitute a barrier to public participation in wind farm projects are:

Table 15. Answers to question number 32 at regional level (Spain).

	ES-1	ES-2	ES-3
Social Barriers. Lack of confidence, dialogue, information, transparency, and privacy	3	5	3
Political Barriers. Lack of confidence, legal framework. mass media.	4	4	4
Logistic Barriers. Few spaces and time for dialogue lack of tools.	1	5	2
PLANNING STAGE			
Non homogeneous national and regional governments policy, lack of regulatory framework.	2	4	2
Lack of knowledge of the relationship between local community acceptance of specific wind energy projects.	4	2	3
Negative social perception regarding wind structures.	3	2	2
Few spaces for dialogue to discuss interests. The stakeholders do not have sufficient ways to provide input.	3	4	4
Few windows of participation and short periods. The stakeholders don't get sufficient or timely information for effective participation.	1	5	2
LICENSING/PERMITTING STAGE			
Difficulties on the permitting procedures.	5	2	2

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Lack of transparency and information. Decision makers drive interests different from those of the local community.	2	4	2
Social movement against these projects.	4	5	3
DEVELOPMENT STAGE			
The use of this renewable technology reduces the implementation of others.	5	1	2
Economic impacts on the primary sector.	1	1	3
Social movements against these projects.	2	4	N/A
Decommissioning. The land does not remain the same once the lifetime of the installations ends (Degraded landscape).	2	1	3

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Annex III

Exploitation strategy – IPR

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

	Dimensions	Analysis
1	Exploitation potential	**The main actors** that stand to benefit from the results or findings are the: wind energy farm developers and operators; regulatory authorities and/or government agencies responsible for energy and environmental policies and procedures; NGOs related to issues such as environment, local development, cultural heritage; local authorities/governments and local communities; consultants, law firms specialized in wind farms' planning & licensing. The **added value** of the results or findings for WENDY, its partners, or external stakeholders is based on the following aspects: a comprehensive overview of regulatory conditions and consenting procedures in selected EU countries; structured identification of supporting and hindering factors in relation to the planning, licensing, and implementation phase of a wind energy project; emergence of interesting practices or areas for improvement. **Unique features** of the deliverable's results that may be attractive: focusing on specific European countries with varying regulatory conditions and consenting procedures; resulting from a combination of desk and field research; addressing aspects of sustainability, transparency, and fairness.
2	IP protection	IP protection could be based on the following measures: applying data protection measures that ensure confidentiality and security of any personal data collected; use of Creative Commons to disseminate and use the results and findings.
3	Potential exploitation pathways	Exploitation actions could include, among others, the following: knowledge transfer activities such as workshops, training webinars, publications, to disseminate the findings; development of a new service related to implementation of public engagement activities or the consultation of involved stakeholders, leveraging the focus of the companies on social and environmental issues and sustainability priorities; further development of research through other funding opportunities.
4	Partners' plans	Partners can inform their business plans and policy strategies considering the results and findings as a key information resource on the topic. Partners' plans could include knowledge transfer activities; development of a new service; seeking new opportunities for relevant research.
5	Other	The exploration of potential collaborations and synergies with key actors and stakeholders could enhance the exploitation potential of the results.