Knowledge Co-Creation in Climate and Marine Governance

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Chapter 6

Participation (and Co-creation) in the Marine Renewable Energy Framework

Annamaria Bonomo and Francesco Blasi[1]

Abstract: This chapter explores the role of communities and citizens, as well as the legal instruments at their disposal, in decision-making processes concerning the authorization of renewable energy projects, with a particular focus on offshore wind farms. The development of such installations, despite their location in open waters, often faces opposition from local communities, thereby delaying the permitting procedures. Given the growing importance of renewable energy in addressing the climate emergency, the chapter critically examines the need to rethink, simplify, and rationalize permitting procedures for offshore wind farms. It also emphasizes the importance of strengthening participatory approaches which, through ex-ante engagement, can foster decisions broadly supported by stakeholders, thereby mitigating social and environmental conflicts. The analysis highlights the central role of involving local communities in planning and permitting processes to balance private interests with broader public interests, including seascape protection. From this perspective, the chapter investigates whether traditional participatory mechanisms could be complemented or enhanced by more advanced methodologies, such as co-creation, which involve continuous dialogue with a plurality of institutional and non-institutional actors from the early stages of the project and for its entire duration, to better support the development of offshore renewable energy plants.

I. Renewable energy sources and citizen participation

In recent decades, Renewable Energy Sources (RES) have garnered increasing and significant attention from the scientific community, legal scholars, and, most notably, legislative bodies, as evidenced by a proliferation of regulatory initiatives at both the European and National levels. The focus on promoting and deploying renewable energy stems from its essential role in reducing reliance on fossil fuels and greenhouse gas emissions, serving as a cornerstone for achieving the "binding objective" of climate neutrality by 2050, as set forth in the European Climate Law (Regulation (EU) 2021/1119).

[1] *Acknowledgements: Although the article results from the authors' common reflections, sections I., III. and V. should be attributed to Annamaria Bonomo, while sections II. and IV. should be attributed to Francesco Blasi.*

The energy sector is undoubtedly the area where European legislation has implemented some of its most ambitious measures, with RES serving as an excellent field of observation for evaluating the impact of climate stabilization goals on public decision-making processes. In this context, it is noteworthy that Article 16f of the Renewable Energy Directive 2023/2413/EU (*RED III*),[2] provides that, "until climate neutrality is achieved," Member States must ensure that in the permit-granting procedure, the planning, construction, and operation of renewable energy plants "are presumed as being in the overriding public interest".[3]

As any transformative process part of Europe's path toward climate neutrality, the energy transition cannot be painless, indeed it may produce disruptive consequences in socio-economic systems.[4] The entrance of a new overbearing goal – i. e. climate neutrality – generates an alteration of established equilibria, necessitating a rethinking of relational frameworks which sometimes may create synergies, but more frequently give rise to conflicts due to competing interests in public policy and tensions between public authorities and the diverse needs of the populations they serve.[5] At the same time, as the transition to a net-zero carbon economy accelerates, impacted communities increasingly challenge deficiencies in the shift to RES under the principle of a "just transition", a key goal of the European Green Deal.[6]

The significant role of citizens and communities in advancing the transition toward climate neutrality is recognized in Recital n. 38 of the European Climate Law and further reflected in Article 9, which affirms that "The Commission shall facilitate an inclusive and accessible process at all levels, […] and with social partners, academia, the business community, citizens and civil society, for the exchange of best practice and to identify actions to contribute to the achievement of the objectives of this Regulation".[7]

Similarly, Article 15d of the Red III Directive mandates that Member States "shall promote public acceptance of renewable energy projects through the direct and indirect participation of local communities in such project".

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[2] EC OJ 2023 L 259, 31.

[3] This Directive must be transposed by Member States into their National Legislation by May 21, 2025. See *Lehnert/Traum*, The European Energy and Climate Journal 12,2 (2024), 40 ff.

[4] On the disruptive impact of the public action to fight climate change *Bonomo*, Il potere del clima. Funzioni pubbliche e legalità della transizione ambientale, 2023, 83 ff.

[5] With regard to the numerous environmental interests conflicting with the installation of offshore wind farms such as local opposition, conflict with nature protection legislation; interaction with use of agricultural land, see *Caine*, North East Law Review 2014, 103 ff.; on the co-production in climate governance as a methodological approach within the wide field of participatory research and education in the areas of climate and environmental law *Poto/Lohse/Owino*, in: Lohse/Poto (eds.), Coproduction of Knowledge in Climate Governance, 2023, 13 ff.

[6] The Just Transition Fund (*JTF)* Regulation (EU) (UE) 2021/1056, addresses the negative social, economic, and employment impacts on regions and individuals reliant on fossil fuels. See *Chiti*, CMLR 1 (2022), 19 ff.

[7] On climate change sustainability and participation nexus *Owino*, in: Peters/Lohse (eds.), Sustainability Through Participation?, 2023, 367 ff.

However, this principle is not brand-new. It is worth noting that the participation of private individuals in administrative actions aimed at environmental protection – designed to foster the adoption of more sustainable models – has its origins in the United States legal tradition[8] and has long been implemented at both International[9], European[10], and national[11] levels.

The strong link between public participation and environmental protection is rooted in the principle that the environment is a common good, which cannot be left solely to the discretion of public authorities but requires the active involvement of all interested stakeholders.[12] While the relationship between sustainability and public participation remains a subject of debate and is not universally acknowledged – partly due to the historical prioritization of economic growth over environmental concerns – the absence of meaningful public involvement in environmental decision-making highlights the pressing need for more inclusive and collaborative approaches.

In this perspective, the renewable energy sector presents a compelling field of investigation for assessing the effectiveness of public participation in sustainability-related decision-making while also offering an opportunity to explore and experiment

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[8] In the United States, the National Environmental Policy Act (NEPA), as early as 1969, provided for a preventive analysis of the effects of policies and programs aimed at affecting the ecosystem. In 1970, the Environmental Protection Agency (EPA) was established, a Federal Agency also responsible for allowing a dialogue with anyone interested in obtaining information, in compliance with the Freedom of Information Act (FOIA) In the field of environmental protection. At the level of international agreements, the Rio Declaration adopted in 1992 at the United Nations Conference on environment and development (UNCED) affirms the principle that "environmental issues are best dealt with the participation of all the citizens concerned".

[9] Reference is made to the well-known Aarhus Convention, the leading international agreement establishing binding standards on participation in environmental decision-making. Public participation in environmental matters has been the subject of the Directive 2003/35/EC. For some bibliographical references relating to the convention see *Lohse*, in: Lohse/Poto (eds.), Participatory rights in the environmental decision-making process and the implementation of the Aarhus Convention: a Comparative Perspective, 2015, 93 ff.; *Gattinara/Noll Ehlers*, in: Peters/Lohse (eds.), Sustainability Through Participation? 2023, 139 ff.; *Caranta/Gerbrandy/Muller*, The Making of a New European Culture: the Aarhus Convention: at the crossroad of comparative law and EU Law, 2017, 5 ff.; *Barrit*, The Foundations of the Aarhus Convention. Environmental Democracy, Rights and Stewardship, 2020, 4 ff.

[10] The first European Directive providing for a clear requirement on public participation and for a tight link with environmental protection was Directive 85/337/EEC of 27 June 1985.

[11] In Italian Legal System the so-called Environmental Code (D.lgs. n. 152 of 2006), at Art. 3 *Sexies*, entitled "Right of access to environmental information and participation for collaborative purposes", states that the authority competent to draw up and approve the said plans or programmes shall ensure public participation in the process of preparation, amendment and review of the proposals for those plans or programmes before the decisions are taken. In addition, paragraph 1-sexies states that "the proceeding authority shall adequately take into account the comments of the public submitted within the terms referred to in paragraph 1-quinquies in the adoption of the plan or programme".

[12] *Poto*, Environmental Law and Governance: The Helicoidal Pathway of Participation a study of a nature-based model inspired by the Arctic, the Ocean, and Indigenous Views, 2022, 96 ff.

with more innovative participatory methodologies, such as co-creation processes.[13] The co-creation concept, grounded in the abolition of hierarchies among local government, businesses, universities, citizens, and other stakeholders, involves a multi-directional approach to problem-solving. Indeed, co-creation is a pivotal concept in advancing the green energy transition, as it helps to overcome key barriers such as citizens' reluctance to engage or lack of trust in decision-makers.[14] By actively involving citizens in various capacities – as users, co-designers of policies and legislation, co-producers of solutions and innovations, co-owners of projects, and ultimately co-beneficiaries of the green transformation – co-creation could play a decisive role in expediting the transition toward climate neutrality.[15]

II. The regulation of renewable energy sources in the European and national regulatory framework

The regulatory framework governing authorization procedures for establishing renewable energy production plants is notably unstable and complex. While it is unified by the overarching objective of fostering the widespread development of a sector deemed strategically essential within the context of the Union's decarbonization policies, it is also marked by a persistent tension between the imperative to accelerate permit-granting processes and the need to uphold guarantees of public participation, such as access to documents for a complete information and consultation procedures, since movements opposing renewable energy plants often leverage fake news and misinformation.

Since the adoption of Directive 2001/77/EC, *on the promotion of electricity produced from renewable energy sources in the internal electricity market*, which was issued in response to the 1997 White Paper on renewable non-fossil energy sources, European legislators have sought to establish a harmonized regulatory framework for Member States. This framework is founded on recognizing the underutilization of renewable energy sources and the corresponding need to prioritize their promotion "as they contribute to environmental protection and sustainable development".[16] This intent is further reflected in Directive 2009/28/EC of April 23, 2009 (commonly referred to as the RED I Directive), introduced to implement the *Climate and Energy*

[13] On the co-creation method, based on knowledge integration and co-design that involves stakeholders, decision makers, researcher communities to find effective and suitable solutions, see *Poto*, in: Peters/Lohse (eds.), Sustainability through participation?, 2023, 491 ff.; *Poto/Parola* (eds.), Building Bridges for Effective Environmental Participation: The Path of Law Co-Creation, 2024; *Torfing/Røiseland/Sørensen*, Administration & Society 51 (2019), 795 ff.

[14] The literature studies show that the term "co-creation" is not often used in energy transition projects. See *Ryszawska/Rozwadowska/Ulatowska/et al.*, Energies 14,17 (2021), 5266.

[15] *Lennon/Dunphy/Gaffney/et al.*, JEPP 22,2 (2019), 184 ff.

[16] On the relationship between environmental protection and economic development in energy policies see *Thieffry*, Revue des Affaires Européenes 2009–2010, 783 ff.

Package 20-20-20, which redefined the objectives and methods of the "European approach" to promoting renewable resources, requiring Member States to ensure that transmission system operators "shall give priority to generating installations using renewable energy sources".[17]

After less than ten years, due to the large number of substantial amendments introduced to the text of Directive 2009/28/EC,[18] the European Union considered it appropriate to "reorganize" its provisions within the Directive 2018/2001/EU (also known as the RED II Directive), which significantly reshapes the regulatory framework governing renewable energies, starting with a useful definition of "energy from renewable sources"[19] and establishing binding targets for the Member States, requiring a minimum 32 % share of renewable energy in the Union's gross final energy consumption and at least a 14 % share in the final energy consumption of the transport sector by 2030.[20]

Most recently, the European Union has adopted several legislative and policy initiatives to address the claimed acceleration of the energy transition.[21] Among these are the new Directive 2023/2413/EU (known as RED III), the revision of the TEN-E Regulation (EU) 2022/869, and the implementation of the REPowerEU Plan from 2022. In general, the European Union has raised the targets introduced by previous directives and rationalized and simplified the procedures for granting permits for new renewable energy plants or upgrading existing ones,[22] by setting a maximum limit of one year (from the application submitted by the interested parties) for the completion of authorization procedures, if they are located within the so-called "renewable energy acceleration zones".[23] In the same perspective, the European Commission emanates the Recommendation (EU) 2024/2143 setting out guidelines for interpreting the "energy efficiency first" principle.[24]

Observing the Italian national legal system, the regulation governing the exploitation of renewable energy sources has been at the centre of frequent institutional "tensions", largely due to the difficulty of reconciling the preference shown by suprana-

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[17] *Fawcett/Killip*, Journal of Cleaner Production 210 (2019), 1171 ff.

[18] In this sense, Consideration (1) of Directive 2018/2001/EU.

[19] According to Article 2 (2), Point 2, it is understood as energy from renewable non-fossil sources, namely wind, solar (thermal and photovoltaic) energy, geothermal energy, ambient energy, tidal energy, wave energy, and other forms of marine energy, hydraulic energy, biomass, landfill gas, sewage treatment process gas, and biogas. For a more in-depth examination of Directive 2018/2001/EU, see *Zaccaria*, Rivista di Diritto Agrario 2019, 137 ff.

[20] *Monti/Martinez Romera*, RECIEL 2020, 221 ff.

[21] The Draghi Report, *The Future of European Competitiveness*, Part A – A Competitiveness Strategy for Europe, September 2024, 46 ff., identifies the reduction of permitting delays for all new clean energy projects as a key instrument to attain both decarbonisation and competitiveness in Europe.

[22] Council Regulation (EU) 2022/2577 of 22 December 2022 in EC OJ 2022 L 335, 25 laying down a framework to accelerate the deployment of renewable energy.

[23] About the Directive 2023/2413/EU *Muratori*, Ambiente & Sviluppo 12 (2023), 725 ff.

[24] *Fragale*, Rivista della Regolazione dei Mercati 2 (2023), 426 ff.

tional regulations for these kinds of energy resources with the multitude of other public or private interests affected by such regulation,[25] such as the environment, landscape, health, territorial governance, and economic initiative freedom.[26]

The favour for energy produced from renewable sources has justified the adoption by the Italian legislator of a series of regulations aimed at simplifying and accelerating permit-granting procedures for the construction of new plants. This orientation, in line with the European framework, has led to a weakening of the participatory guarantees granted to the interested parties, perceived as elements of slowing down the procedures.[27]

The administrative permit-granting procedures for renewable energy projects are mainly regulated by the following legislative decrees, implementing European Union directives. The first is Legislative Decree No. 387 of December 29, 2003, implementing Directive 2001/77/EC, introduced a unified authorisation (AU), which constitutes the ordinary regime for plants, notwithstanding simplified regimes.[28] The authorization specifically covers not only the construction and operation of electricity production plants powered by renewable but also the associated works and essential infrastructures for the construction and operation of these plants.

The framework was initially modified by the Decree of the Ministry of Economic Development of September 10, 2010[29], containing the "*Guidelines for the authorization of plants powered by renewable sources*" which, in addition to the authorization regime, provided specific cases where the notice of commencement of works regime would apply. Subsequently, Legislative Decree No. 28 of March 3, 2011, in Article 4, stipulated that the construction and operation of renewable energy production plants should be subject to "simplified, accelerated, proportionate, and appropriate administrative procedures, based on the specific characteristics of each application" introducing, alongside the general regime of the single authorization, the simplified authorization procedure (PAS) and the communication related to activities under free construction.[30]

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[25] *Poto*, Resp. Civ. Prev. 2022, 1057 ff.

[26] On this See *Moliterni*, Federalismi 18 (2017), 2 ff.; *Tonoletti*, in: Bruti Liberati/De Focatiis/Travi (eds.), L'attuazione dell'European Green Deal. I mercati dell'energia e il ruolo delle istituzioni e delle imprese, 2022, 94 ff.

[27] See recently, *Virardi*, in: Chiti/Giorgi (eds.), Ecological Sustainability and the Law: the European Green Deal and the New Frontiers of Sustainability, 2024, 101 ff.

[28] This authorization must be carried out in accordance with the principles of simplification and the modalities established by Law No. 241 of August 7, 1990, and subsequent amendments and integrations. On the authorisation process for renewable energy plants see *Pizzanelli*, Buona amministrazione e regime delle energie rinnovabili, 2023, 73 ff.

[29] On the guidelines, see *Arecco/Armiento/Bitto/et al.*, Autorizzazioni di impianti da fonti rinnovabili 2011, 15 ff.; *Santini*, Urbanistica e appalti 3 (2011), 283 ff.; *Quaranta*, Ambiente & Sviluppo 1 (2011), 47 ff.; *Vivani*, Urbanistica e appalti 7 (2011), 775 ff.

[30] See, e. g. *Benedetti*, Immobili & proprietà 5 (2011), 295 ff.; *Ragazzo*, Urbanistica e appalti 6 (2011), 636 ff.; *Di Dio*, Ambiente & sviluppo 6 (2011), 564 ff.; *La Rosa*, AmbienteDiritto 3 (2023), 257 ff.

More recently, on July 4, 2024, the Ministry of Environment and Energy Security issued the Suitable Areas Decree, establishing rules for identifying ex-lege suitable surfaces and areas for the installation of renewable energy plants, in accordance with the mandate outlined in Article 20 of Legislative Decree No. 199/2021. Consistent with a planning-based approach, the decree establishes clear criteria for identifying appropriate locations for renewable energy installations, aiming to facilitate the development of renewable energy projects while ensuring compliance with environmental and territorial constraints.[31] It provides general guidelines and criteria while delegating to the Regions the task of designating such areas, taking into account potential conflicts with other relevant public interests that renewable energy production activities may encounter.[32] Entrusting the Regions with the responsibility to identify suitable areas could be seen as an effective means of pre-emptively resolving conflicts that might arise during the authorization process.

To rationalize the complex regulatory framework and to end the regulatory fragmentation that has undermined the effectiveness of previous regulations, the Italian legislator has recently issued, on 12 December 2024, Legislative Decree no. 190/2024, known as the Unified Text on Renewable Energy Sources. The new Unified Text, consisting of 15 articles, establishes three main administrative regimes for the construction of renewable plants and related infrastructure which, in the words of the law, "are considered to be of public utility, non-deferrable and urgent". The administrative procedures outlined in the Unified Text must adhere to principles of celerity, territorial uniformity, and non-escalation of burdens, as well as ensure publicity, transparency, and participation of stakeholders. In addition, following Directive RED III, the Unified Text declares in Article 3 that the energy plants are of "overriding public interest" when balancing legal interests in individual cases.[33] While this declaration underscores the primacy of renewable energy development within Italy's legal framework, it also demonstrates the ongoing challenge of harmonizing its implementation with safeguarding other broader public and legal interests.

III. Renewable offshore energy sources and public participation

As previously pointed out, simplification may involve reducing certain preliminary steps in the permit-granting procedure, such as notifications to interested parties or consultation processes, in the name of "speeding up" permitting procedures.[34] This

[31] On this decree see *Bevilacqua*, Rivista giuridica dell'ambiente 57 (2024), 1 ff.

[32] *Bevilacqua* (fn. 31).

[33] Art. 3 entitled "Overriding public interest" represents the formalization in the Italian legal system of the principle of widespread deployment of renewable energy, which has long emerged at European level.

[34] On this theme see *Banet/Donati*, Speeding Up Renewable Energy Permitting in Europe: Overcoming Implementation Challenges, Report Centre on Regulation in Europe (CERRE), October 2024, 23 ff.

reflects the longstanding tension between participation and simplification. An interesting relevant area for observing this dynamic is the regulation of renewable offshore energy production plants.

Offshore renewable energy is defined as energy produced by renewable energy production plants located beyond the mainland, either within territorial waters or beyond, utilizing the sea as an energy source. This energy is produced through technologies that harness seawater as a driving force, exploit its chemical or thermal potential, or via the deployment of offshore wind farms. The first category includes renewable energy facilities that capture the energy of marine wave motion (commonly referred to as tidal energy) or the energy generated by tidal or ocean currents. The second type comprehends offshore wind farms, constructed within marine environments, designed to convert the kinetic energy of wind into electrical power. Offshore wind farms are further categorized into fixed and floating types. Fixed wind farms consist of wind turbines mounted on foundations secured to the seabed and are typically located in marine areas with relatively shallow depths. In contrast, floating offshore wind farms consist of wind turbines installed on floating platforms, usually installed in waters several hundred meters deep and often located far from the coastline, which capitalize on the higher and more consistent wind speeds met in the open sea.[35]

In recent years, offshore installations have increasingly attracted significant interest from governments at both European and national levels. The European Union made substantial investments in this sector, setting ambitious targets for its Member States: offshore wind energy is expected to meet 14 % of the EU's energy demand by 2030, rising to 30 % by 2050, with an installed capacity target of 450 GW.[36]

Despite widespread recognition of their importance in achieving decarbonization objectives, offshore wind farms are frequently opposed due to their scale, visibility, and associated impacts. Offshore wind farms can generate several negative effects on marine species and ecosystems, including habitat alteration, degradation, or loss, noise pollution, collision risks for marine species due to increased shipping traffic, changes to hydrodynamics and sediment dynamics, barrier or aggregation effects, various forms of pollution from contaminants and waste generated during construction and operation and finally light pollution, and obstacles to migration or foraging.[37]

In this perspective, public participation in decision-making processes for offshore renewable energy projects becomes crucial, particularly given the potential social and environmental impacts on local communities. These projects, often contested due to the location of wind turbines in open seas or along coastlines, require early

[35] *WWF Italia*, Lo sviluppo dell'eolico offshore e la protezione dell'ambiente marino nel contesto della pianificazione spaziale marittima (MSP) con approccio ecosistemico, Giudance paper, October 2022, 5 ff.

[36] *Wind Europe*, Our Energy, our Future, 2019.

[37] *Gill*, Journal of Applied Ecology 42 (2005), 605 ff.

integration of stakeholder and resident perspectives during the planning stage to enhance social acceptance. Moreover, offshore projects can involve a wide range of actors, including some geographically distant, whose priorities may vary based on the project's location, the other actors present in the area, and the people or entities who will be affected.[38] While public engagement does not guarantee its support, involving stakeholders before administrative decisions can help address opposition, build trust, and mitigate conflicts.[39] For this reason, offshore renewable energy developers cannot afford to neglect the social acceptance of their projects. Given the lengthy authorization procedures – often exceeding a decade, from site assessment to the beginning of production – early and continuous stakeholder engagement, transparent information sharing, and active feedback integration become essential to reducing delays and costs.

IV. The Authorization Process for Offshore Wind Energy Projects in Italy

According to the Marine Offshore Renewable Energy Lab, the theoretical potential for floating wind energy deployment in Italy represents more than 60 % of the country's total renewable energy potential.[40] Moreover, the Global Wind Energy Council identifies Italy as the third-largest global market for floating offshore wind development, owing to the morphological characteristics and structure of its seabed.

However, despite this promising potential, only one offshore wind project has been completed in Italian waters to date, the Beleolico project in Taranto,[41] while nearly 20 additional projects remain pending approval[42]. This delay can be attributed to two primary factors. The first is the complexity and lengthy nature of permitting procedures which significantly affect the costs associated with constantly evolving technologies. The second is the issue of social acceptability, as offshore installations, particularly wind turbines, often face resistance from local populations.

Observing the regulatory framework, in Italy, offshore wind energy was regulated, until recently, by Legislative Decree No. 387/2003 and by the guidelines approved by

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[38] The stakeholder that might be affected by the construction of an offshore new plant can be: Commercial fishers, Recreational fishers, Consumer and taxpayer advocates, Elected officials, Coastal communities, Promoters of offshore wind turbines, non-government organizations (NGOs), Regulatory bodies and authorities, Owners of submarine cables and offshore infrastructure, Maritime and shipping communities, Media and journalists, Local supply chains).

[39] About the numerous environmental interests conflicting with the installation of offshore wind farms see *Caine*, North East Law Review 2014, 103 ff.

[40] Data from Marine Offshore Renewable Energy Lab of the Polytechnic University of Turin (https://morenergylab.polito.it/).

[41] Beleolico is the first off-shore wind farm built in the entire Mediterranean Sea. It was officially inaugurated on April 21, 2022.

[42] For more detail see *Lolli*, in: Benincasa (ed.), Proceedings of the Seventh International Symposium "Monitoring of Mediterranean coastal areas: problems and measurement techniques", 2018, 485 ff.

the Ministerial Decree of September 10, 2010.[43] The procedure was rather complex. It required the issuing of a single authorisation procedure, known as "Unified Authorization", by the competent Ministry and the prior acquisition of the environmental impact assessment (EIA) adopted by the Minister of the Environment, in agreement with the Minister of Cultural Heritage.[44] The Unified Authorization was granted through a decision-making mechanism known as the "Service Conference", which facilitates the simultaneous participation of all relevant administrative bodies.[45] Moreover, it entailed the prior issuance of a state property concession for the use of maritime public property and, for plants located outside territorial waters, it also required the concession for the use of the continental shelf and the overlying waters.[46] This scheme has remained largely unchanged following the entry into force of the recent Unified Text that confirmed the Unified Authorization regime under state jurisdiction (Art. 9) and for the offshore wind farms projects, requiring the environmental impact assessment (EIA), the new rules confirm the previous consultation mechanism. This mechanism involves the publication of a public notice by the competent authority, allowing interested parties a period of thirty days to submit comments to the authority for consideration in the environmental evaluation process.[47]

Following the consultation, if modifications or additional documentation are required, the competent authority shall notify the proceeding authority. The latter may grant the proposing party a maximum of thirty days to submit the requested documentation electronically. Failure to provide the required documentation within the prescribed timeframe will result in a decision denying the issuance of the Unified Authorization.

It seems though that in the Italian legal system, opportunities for stakeholder consultation within the authorization process for offshore renewable energy installations remain quite weak. Participation is mainly confined to traditional environmental engagement tools, as provided even at the European level – such as access to information and the submission of observations, whether in support of or opposition to the

[43] *Spadaro*, Rivista Giuridica dell'Ambiente 2022, 1041 ff.

[44] On the procedure see *Lolli* (fn. 42), 485.

[45] The decision-making service conference is a procedural tool convened by the proceeding administration when it is necessary to obtain agreements, consents, authorizations, or approvals, however named, from other public administrations for the definition of the administrative procedure. The reasoned determination of the conclusion of the conference, adopted by the proceeding administration at the end of the same, replaces for all purposes all acts of consent within the competence of the administrations and the managers of public goods or services concerned. On this Italian legal institute, see ex multis, *Casetta*, Manuale di Diritto Amministrativo, 2014, 476 ff.; *Pagliari*, in: *Sandulli* (ed.), Codice dell'azione Amministrativa, 2017, 704 ff.; *Pedrabissi*, Amministrare 2018, 489 ff.

[46] This type of plant is regulated by Articles 55–60 of the 1982 Montego Bay Convention on the Law of the Sea, ratified by Italy with Law No. 689/1994.

[47] On the environmental impact assessment (EIA) in the renewable energy source authorization process, see *Pizzanelli* (fn. 28), 128.

project[48] – while overlooking deep cooperation with stakeholders in the decision-making process. This framework fails to facilitate a meaningful dialogue aimed at developing concrete, shared solutions that may be better aligned with the needs of recipient communities and society at large – a defining characteristic of the co-creation approach.

While a detailed discussion is beyond the scope of this context, it is worth noting that the implementation of this approach in the energy transition process could be effectively achieved through the establishment of Energy Communities (ECs) which bring together a wide range of stakeholders in joint investment projects in renewable energy. These entities, formally recognized under European legislation – namely Directive 2018/2001/EU (RED II) and Directive 2019/944/EU (IEM) – as well as national legislation (Legislative Decrees 199/2021 and 210/2021) are grounded on principles of voluntary and open participation and primarily aimed at providing environmental, economic, or social benefits to their members, who assume the dual role of producers and consumers (prosumers). As such, ECs could serve as a tangible example of structured and meaningful stakeholder engagement, closely aligned with the principles of the co-creation model.[49]

V. Conclusions

The analysis highlights the critical importance of stakeholder participation in the context of marine-based renewable energy and suggests the integration of co-creation methodologies into the decision-making processes for renewable energy projects.

Although there is no formal evidence of co-creation in marine renewable energy in the EU and Italian legal systems, the growing attention for participation may suggest its introduction, to make the involvement of all stakeholders effective in all decision-making phases.

Given the transformative impact of the energy transition towards climate neutrality, it is imperative to engage all relevant stakeholders at every stage of the process. This participatory approach is particularly crucial in the context of offshore renewable energy projects, where socio-ecological resilience and public acceptance play a fundamental role. Indeed, the building of offshore installations requires an extensive and complex decision-making process, which is susceptible to delays or failure if local communities withhold their acceptance, potentially resulting in significant opposition.

The European and national regulatory frameworks underscore the necessity of public participation and stakeholder engagement. For instance, the European Cli-

[48] Provided in the Aarhus Convention and in the Directive 2003/35/EC in EC OJ 2003 L 156, 17.
[49] *Ryszawska/Rozwadowska/Ulatowska/et al.* (fn. 14), 5269 ff.

mate Law and the RED III Directive emphasize inclusive processes and the involvement of local communities. These principles are not only foundational to fostering public acceptance but also crucial for mitigating conflicts and ensuring the successful deployment of renewable energy projects.

In the case of offshore renewable energy, the selection of suitable areas by local authorities exemplifies a strategic planning approach that can pre-emptively address potential conflicts. By involving stakeholders early in the planning and permitting processes, it is possible to build trust, enhance social acceptance, and reduce delays and costs associated with lengthy authorisation procedures.

Ultimately, the path to achieving climate neutrality requires a collaborative effort that prioritizes the voices and needs of all stakeholders (scientists, technical officers, civil society). By embedding co-creation into the regulatory and decision-making frameworks, the transition to renewable energy can be rendered both equitable and effective, striking a balance between the imperative of rapid deployment and the fundamental principles of public participation and environmental stewardship.

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