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Published in:
Journal For European Environmental & Planning Law

DOI:
[10.1163/18760104-21030006](https://doi.org/10.1163/18760104-21030006)

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version
Publisher's PDF, also known as Version of record

Publication date:
2024

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Forns Gómez, A., & Rehage, R. (2024). Is Public Participation in Hydrogen Matters (Un)just? Evaluating the Ex-/inclusion of the Vulnerable and Marginalised Individuals in the Hydrogen Decision-Chains of the EU, Spain and Germany. *Journal For European Environmental & Planning Law*, 21(3-4), 318-342. <https://doi.org/10.1163/18760104-21030006>

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PLANNING LAW 21 (2024) 318–342

JOURNAL
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Is Public Participation in Hydrogen Matters (Un)just? Evaluating the Ex-/inclusion of the Vulnerable and Marginalised Individuals in the Hydrogen Decision-Chains of the EU, Spain and Germany

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Received 15 July 2024 | Accepted 29 September 2024 |

Published online 9 December 2024

Abstract

The right to public participation was born as a right to participate in the decision making of policies, plans and projects potentially affecting the environmental protection. The latest European Union advancements on climate mitigation through the deployment of a green hydrogen transition can have effects on the environment and thus public participation shall have a role in tailoring the next hydrogen economy. Within the new currents of policy and scholarship, energy transitions should be just and include the vulnerable and/or marginalised individuals of society. Equitable and inclusive participatory processes ensure not only that environmental effects of a hydrogen economy are prevented but also that these unprivileged societal groups are part of the hydrogen transition. This article analyses to what extent disadvantaged groups of society are effectively included and can individually participate in the EU, Spain and Germany's hydrogen decision-making chains. Instead of providing tailored

Published with license by Koninklijke Brill BV | DOI:10.1163/18760104-21030006

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measures for vulnerable individuals, the three jurisdictions apply a one-size-fits-all approach, i.e. treating everyone the same way, and thus, perpetrating (in)equality of opportunities in a hydrogen economy.

Keywords

public participation – energy justice – vulnerable and/or marginalised groups – inclusiveness – hydrogen economy – positive action – equity – Aarhus Convention – European Union – Spain – Germany

1 Introduction

The EU ambitions over the past legislature have declared hydrogen to be a potential energy carrier aimed at phasing-out fossil fuels.¹ The 2019–2024 EU priorities envisions that establishing a hydrogen economy within the EU internal market needs to be aligned with two overarching goals of the European Green Deal: a green and just transition.² By and large this means that people, especially those individuals belonging to the vulnerable and/or marginalised groups of society, such as people with low literacy and/or income levels as further discussed in Section 2, are enabled to be part of the hydrogen economy and are given the means to equitably access and participate in its decision-making process.³ The alignment of participatory democracy theory⁴ with the energy justice discourse⁵ provides individual public participation as a governance tool aimed at shaping an inclusive hydrogen economy that considers everyone's needs and protects the environment.

The energy justice discourse analyses the level of inclusiveness in the decision-making of a new energy technology from two different perspectives.

1 *European Commission* 'A hydrogen strategy for a climate-neutral Europe' (Communication) COM(2020) 301 final; *European Commission* 'REPower EU Plan' (Communication) COM(2022) 230 final.

2 *European Commission* 'The European Green Deal' (Communication) COM(2019) 640 final.

3 *J. Jendroška, M. Reese, & L. Squintani* Towards a new legal framework for sustainability under the European Green Deal. OSAP 2021 (19(2)) p. 87, 106 et seq.

4 *L. Bherer, P. Dufour, & F. Montambeault*, The participatory democracy turn: an introduction, JCS 2016 (12(3)) p. 225, 230.

5 *D. McCauley, R. Heffron, H. Stephan & K Jenkins* Advancing energy justice: the triumvirate of tenets IELR (32(3)) 2013 107; *K. Jenkins, D. McCauley, R. Heffron, H. Stephan & R. Rehner* Energy Justice: A conceptual review ERSS 2016 (11) p. 174; *G. Pellegrini-Masini, A. Pirni & S. Maran* Energy justice revisited: A critical review on the philosophical and political origins of equality ERSS 2020 (59) 101310.

First, the recognition of vulnerable and/or marginalised groups as legitimate actors in the decision-making chain of the hydrogen economy. Second, the procedural means, if any (e.g. time-frames, notifications, ways of commenting), that are put at the disposal of these underprivileged groups to facilitate their equitable participation in the process. These inclusiveness perspectives relate to two of the tenets conforming energy justice theory: recognitional and procedural justice.⁶

The law can serve as the instrument ensuring that this two-way inclusiveness perspective is present in the decision-making of a new energy technology like green hydrogen. Within the EU context, the law foresees that the empowerment of society in energy governance happens directly or indirectly. This study will be focused on direct energy governance or, in other words, individual participation of the vulnerable and/or marginalised in the decision-making of a hydrogen economy. Direct energy governance through individual public participation is regulated under the Aarhus Convention⁷ and the Aarhus Directive.⁸ Direct energy governance can contribute to the active participation of the citizenry in transitioning towards new energy technologies like green hydrogen. Yet, as the development of a hydrogen economy is to date at an infancy stage, it is still to be determined whether direct forms of energy governance will bring inclusiveness in the hydrogen decisions. Hydrogen is expected to be subject of public controversies. Despite the potentialities of green hydrogen to phase-out fossil fuels and accelerate the achievement of EU's climate-neutrality goals, hydrogen policies, plans, and projects may face public resistance if no inclusiveness measures are contemplated.⁹

The Aarhus Convention and Directive are norms that, when adopted, provided minimum harmonisation measures for environmental protection.¹⁰ In other words, the EU Member States had at the moment of transposing the Aarhus norms into their internal legal orders, leeway to further develop the

6 Id.

7 U.N. GAOR, 'Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters' (Aarhus, Denmark, 25 June 1998, UN Treaty Series 2161), 447.

8 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 programmes relating to the environment and amending with regard to public participation and access to justice Council Directives 85/337/EEC and 96/61/EC, OJ 2003 L 156/17.

9 L. Liu, T. Bouman, G. Perlaviciute, L. Steg Public Participation in Decision Making, Perceived Procedural Fairness and Acceptability of Renewable Energy Projects ECC 2020 (1) 100013.

10 L. Squintani & G. Perlaviciute Access to Public Participation: Unveiling the Mismatch between what Law Prescribes and what the Public Wants, in M. Peeters, & M. Eliantonio (eds.) Research Handbook on EU Environmental Law 2020 pp. 133–147.

public participation measures adopted in the Directives in line with the specific needs of their own territories.¹¹ Particularly in the field of hydrogen, Spain and Germany are interesting EU Member States to examine. Spain can provide insights about the opportunities and challenges of (un)regulating hydrogen and public participation in a southern EU country and as the leader of the production and exportation of green hydrogen along the EU.¹² Lastly, for the geographical and social particularities of this EU Member State, it is expected that public opposition towards the deployment of this energy technology will arise. Especially the region of Catalonia is suffering from severe droughts, thus, part of its population could fear making use of water to produce green hydrogen. On the other hand, Germany shows its central European approach of integrating the hydrogen regulatory framework within the Energy Act. Germany will account as one of the EU's largest hydrogen importers given the scarcity of renewable energy resources within their borders.¹³ Both countries are to be well-linked to one another in the hydrogen economy as they will be connected through the H₂Med Corridor¹⁴ and both are part of the EU's Hydrogen Backbone.¹⁵

Considering these influent legal, political, and factual variables and that so far studies on public participation in the hydrogen economy only focused on decision-making power, without focusing however on the inclusiveness of such procedures,¹⁶ this article provides the first account of the level of recognition and procedural justice in public participation in the hydrogen economy. Specifically, this article maps the opportunities and challenges in Spain and Germany as EU Member States concerning whether and how the current regulatory frameworks for public participation equitably include

11 *L. Squintani* Beyond Minimum Harmonisation, in *L. Squintani* (ed) *Beyond Minimum Harmonisation: Gold-Plating and Green-Plating of European Environmental Law*, 2019.

12 *J. Pinto* The Key Tenets of a Hydrogen Strategy: An Analysis and Comparison of the Hydrogen Strategies of the EU, Germany and Spain *GELS* 2023 (4), p. 72–95; *World Energy Council, PWC and EPRI* Working Paper Hydrogen on the Horizon: National Hydrogen Strategies *WEC* 2021.

13 *A. Núñez-Jiménez and N. de Blasio* Competitive and secure renewable hydrogen markets: Three strategic scenarios for the European Union *IJHE* 2022 (47(84)), p. 35553–35570.

14 *H₂ Med Project* The H₂ Med project: Supplying Europe with affordable carbon-free energy < <https://h2medproject.com/the-h2med-project/>>

15 *European Hydrogen Backbone* The European Hydrogen Backbone (EHB) Initiative < <https://ehb.eu>>

16 *L. Squintani, S. Schouten* Public Participation in the Hydrogen Economy: Lessons Learned from the Northern Netherland Hydrogen Valley 2024 (book chapter to be published); *R. Rehage & A. Forns Gomez* Accelerating Authorisations vs. Public Participation in the Decision-chain of Renewable Hydrogen in Germany and Spain: A Dilemma *JEEPL* 2024 (to be published).

the vulnerable and/or marginalised in the decision-making process of the hydrogen economy.

The study firstly contextualises the theoretical framework that acknowledges the need to align participatory democracy with the recognitional and procedural tenets of energy justice in the context of energy governance in a hydrogen economy (Section 2). An International and European legal perspective towards inclusiveness in environmental public participation then follows and sets the scene (Section 3) prior to the analysis of Spain (Section 4) and Germany (Section 5). In Section 6, the analysis maps the legal hurdles regarding whether vulnerable and/or marginalised individuals are equitably recognised and equitably participate in the decision-making of hydrogen policies (strategies) and projects (EIA s) in Spain and Germany.

2 Energy Justice and Participatory Democracy in a Hydrogen Economy: Inclusion of the Vulnerable and/or Marginalised in the Decision-Making Process

EU policy documents such as the EU Green Deal advocate for a transition that also adds justice into the formula. While EU policy-makers initially vaguely phrased just transition as the mechanism to ‘not leave anyone behind’,¹⁷ scholarship has historically developed the concept of justice more extensively.

Rawls’ modern theory of justice is *per se* understood as to ensure that all individuals irrespective of their privileged or unprivileged position by origin are part of the same society and enjoy of equality of opportunities.¹⁸ Frequently, justice theory and reality are not well aligned: Western societies are still highly based on meritocratic trends that determine by a matter of fortune who is worth having more and better opportunities than others.¹⁹ Meritocracy leads to inequities, which explains that individuals by means of belonging to certain groups of society do not have the same access to opportunities than others.²⁰ Justice extrapolates to any dimensions and spheres of the modern way of living. This was the reason for environmental, and successively climate and energy justice to arise in the late 20th century.²¹

17 European Commission, *supra* note 2, p4.

18 J. Rawls A Theory of Justice: Original Edition, 1971.

19 V. Tašner & S. Gaber Is it time for a new meritocracy? TRE 2022 (20(2)), p.182–192.

20 J. Jendroška, M. Reese, & L. Squintani, *supra* note 3, p. 107.

21 D. Schlosberg & L.B. Collins From Environmental to Climate Justice: Climate Change and the Discourse of Environmental Justice, WIRes Clim. Change, 2014 (5(3)) 360.

When ‘essential features of modern human living’ like energy use are instead perceived as a ‘tradeable commodity’,²² those individuals holding a disadvantageous position will have to make greater efforts to enjoy such essential feature. Introducing a new energy carrier like green hydrogen that at its launch stage is costly from a sustainability point of view, might at first only advantage the privileged groups of society if a hydrogen economy is built without having a justice perspective in mind. It is for that matter that energy justice advocates specifically for the identification of vulnerable and/or marginalised groups of society as actors of the energy transition, to later on ensure their fair participation in the energy decisions and will then mark how the costs and benefits of a transition towards cleaner energy resources like hydrogen will be equitably distributed.²³

The existence of vulnerable and/or marginalised groups within the environmental, climate and energy decisions is recognised by the Maastricht Recommendations from 2015 which indicated an open list of societal groups having a higher chance of being marginalised during participatory processes, namely: children, the elderly, women, migrants, people with disabilities, those with low-education or income levels, ethnic or religious minorities, and those who do not have access to media.²⁴

The energy justice discourse acknowledges that achieving energy justice within the participatory democracies particularly requires inclusive decision-making processes where the recognised vulnerable and/or marginalised have a say. Public participation is the core expression of participatory democracies, serving as the mechanism granting all individuals access to and power within the decision-making of an energy transition that may bear environmental and social impacts.²⁵ Meritocracy and inequities are, in principle, backlashed in participatory democracies, where all voices are recognised.

Article 3(9) of the Aarhus Convention, enshrines the principle of non-discrimination as a mechanism preventing the exclusion of individuals from the participatory processes only on the basis of citizenship, nationality or domicile. However, non-discrimination cannot combat the non-inclusiveness

22 G. Jiglaui, M. Hesselman, A. Dobbins, K. Grossman, R. Guyet, S. Tirado Herrero, A. Varo Energy and the social contract: From “energy consumers” to “people with a right to energy”, *Sustainable Development*, 2024 (32(1)), 1322.

23 D. McCauley, R. Heffron, H. Stephan & K. Jenkins, *supra* note 5.

24 UN ECE Maastricht Recommendations on Promoting Effective Public Participation in Decision-Making in Environmental Matters, prepared under the Aarhus Convention (2015).

25 R. Fleming, K. Huhta & L. Reins What is Sustainable Energy Democracy in Law? in R. Fleming, K. Huhta & L. Reins (eds.) *Sustainable Energy Democracy and the Law*, 2021 p. 3, 10.

of these individuals without the support of positive action.²⁶ While non-discrimination prevents any negative differentiation between individuals by reason of pertaining to a vulnerable and/or marginalised group,²⁷ positive action embraces this difference to earnestly tackle power imbalances by giving greater share of opportunities to these vulnerable and/or marginalised.²⁸ In words of the judicial powers, positive action acknowledges that different individuals shall be treated differently.²⁹ Positive action escapes using a one-size-fits-all approach where all individuals have the same opportunities disregarding their (un)privileged positions by origin, and calls instead for tailored measures for the vulnerable and/or marginalised to counteract the opportunity imbalances favouring the privileged individuals only.³⁰

The following sections study the particular hydrogen governance cases of the EU, Spain and Germany and determine whether positive action is present in their public participation regulatory frameworks as a means of including the vulnerable and/or marginalised groups in the decision-making of a hydrogen economy.

3 Building Common Grounds: Direct Hydrogen Governance in the EU

Launching energy initiatives like green hydrogen large-scale programmes or local projects often entail environmental implications and thus fuel public concern.³¹ The international law maker acknowledged the important role that individual citizens can have on protecting the environment and³² firstly established in 1998 the Aarhus Convention as the norm reconciling this citizen's role as an individual right and duty.³³ Public participation was and

26 *R Deskoska* The Right of Non-Discrimination and Affirmative Action, 1 *Iustinianus Primus* L Rev 1 (2010); *G. Perlaviciute, L. Squintani & L. Liu* Contested climate policies and public participation: An equal-opportunities-and values-based approach (EVA), in B. Gatersleben, & N. Murtagh (eds.) *Handbook on Pro-Environmental Behaviour Change* 2023, p. 335, 340.

27 Case C-157/15 *ACHBITA* [2015] ECJ EUCLI:EU:C:2017:203 para 24.

28 *O. Dokubo, M.A. Radulescu & L. Squintani* What Law Does not Understand About Public Participation, *Heliyon* 2024 (10) p.1, 9.

29 Case C-344/04 *IATA and ELFAA* [2006] ECJ EUCLI:EU:C:2006:10 para 95.

30 *L. Squintani & H. Schoukens* Towards equal opportunities in public participation in environmental matters in the European Union, in L. Squintani, J. Darpö, L. Lavrysen, & P.-T. Stoll (eds.), *Managing Facts and Feelings in Environmental Governance* 2019 pp. 22–52.

31 *G. Perlaviciute, L. Squintani & L. Liu* *supra* note 26, p. 5.

32 *U.N. GAOR* *supra* note 7, Recital 13 of the Aarhus Convention.

33 *U.N. GAOR* *supra* note 7, Recitals 6 and 7 and Article 1 of the Aarhus Convention.

is read as the right of people to take action against past, present and future environmental adverse effects caused by humankind developments in the era of the Anthropocene.

The next sub-sections analyse whether and how the texts of the Aarhus Convention and the Aarhus Directive have introduced inclusiveness provisions both in theory (Section 3.1) and in practice (Section 3.2.), with the latter linked to the EU hydrogen economy framework.

3.1 *The Law in Books: Inclusiveness under the Aarhus Convention*

Despite that the EU transposed the Convention through the Aarhus Directive,³⁴ the Convention continues to apply as the EU itself and its Member States are party to the Convention.³⁵ This section will analyse inclusiveness from two energy justices lenses within direct EU energy governance taking the text of the Convention as a basis.³⁶ First, recognitional justice is studied concerning the question how norms define who is considered to be the public and the public concerned under energy decisions when looking at the level of recognition of vulnerable and/or marginalised people. Second, procedural justice concerns the question whether provisions on the decision-making chain set specific positive action measures for the vulnerable and/or marginalised to have ways of participating adapted to their procedural needs, such as adapted time-frames for their participation.

The Aarhus Convention identifies two groups of people that can take part in the decision-making process of initiatives affecting the environment: 'the public' and the 'public concerned'. This differentiation is based on the level at which decisions are being taken. If macro-level decisions are taken, that is usually what occurs when setting policies, plans, and programmes, Article 7 of the Convention calls for 'the public' to participate. These macro-level decisions influence the room of manoeuvre of micro-decisions (i.e. specific decisions such as permits for the building of wind farms).³⁷ It is precisely at the micro-level where people are more inclined towards participating and where they mostly perceive the effects of public decisions.³⁸ In this case, Article 6

34 Council Directive 2003/35/EC providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment and amending with regard to public participation and access to justice Council Directives 85/337/EEC and 96/61/EC [2003] OJ L156/17.

35 *L. Squintani & G. Perlaviciute supra* note 10.

36 *Id.*

37 *G. Perlaviciute & L. Squintani* Time to Talk about Values Time to Say No: What Drives Public Participation in Decision-Making on Abstract versus Concrete Energy Projects? *PLOS Climate* 2023 (2(8)), p.3.

38 *G. Perlaviciute & L. Squintani & L. Liu, supra* note 26 p. 342.

of the Convention calls both for 'the public' and the 'public concerned' to participate. Even though in the context of inclusiveness it could be stated that differentiation serves as a positive action mechanism where the affected have greater rights, there is no evidence that this differentiation brings indeed greater opportunities specifically for the vulnerable and/or marginalised as they are not given any special mention in the wording of Article 6.

Article 2 of the Convention provides particular definitions of both terms. Paragraph 4 offers full openness of the participatory process to all individuals as 'the public' encompasses all natural and legal persons together with their associations, organisations or groups. Paragraph 5 countervails such openness and reduces public participation only to those individuals whose interests might be affected. Providing these definitions does not evidently guarantee that Article 3(9) on the non-discrimination principle is applied in view of preventing the vulnerable and/or marginalised to be excluded from participatory processes. Article 2 paragraphs 4 and 5 of the Convention take an equalitarian 'one-size-fits-all' approach where privileged and vulnerable and/or marginalised individuals are treated equally despite being different, and are offered the same procedure to participate disregarding the inequities, and thus different needs for participating, that separate them.

It is only on the basis of citizenship, nationality or domicile that Article 3(9) equates non-nationals or non-inhabitants to nationals and inhabitants of the territory where the decision-making is taking place, instead of using the 'one-size-fits-all' approach. Yet, many other vulnerabilities and marginalities are unconsidered in the text of the Convention. Nearly 20 years after the adoption of the Aarhus Convention, the Maastricht Recommendations suggested in 2015 that public authorities should pay special attention to the vulnerable and/or marginalised individuals when identifying the public concerned for projects.³⁹ Given that recommendations are of non-binding nature, it is unclear whether the Convention signatories have ever since enforced these equitable positive action-based recommendations at the national level.⁴⁰

The direct energy governance regulatory framework at the EU level shows that public participation's position towards including the vulnerable and/or marginalised individuals within 'the public' or the 'public concerned' is weak. Identifying 'the public' and the 'public concerned' is crucial in terms of these disadvantaged groups, who tend to be unable to participate.⁴¹ Despite the Aarhus

39 UN ECE, *supra* note 24 at p. 1.

40 L. Squintani & H. Schoukens, *supra* note 30, p. 34; O. Dokubo, M.A. Radulescu & L. Squintani *supra* note 28, p. 9.

41 R. Fleming, K. Huhta & L. Reins, *supra* note 25 at p. 16.

Convention advocates for non-discriminatory participation, taking a one-size-fits-all perspective is not equivalent to positively involving unprivileged individuals in the process. It remains to be seen whether the EU's executive arm has taken an equitable rather than equalitarian vision in the decision-making of the Hydrogen strategy as a means of involving the vulnerable and/or marginalised.

3.2 *The Law in Practice: Inclusiveness in the EU Hydrogen Strategy*

In 2020, the EU's hydrogen strategy⁴² was, among others,⁴³ one of the first macro-level decisions adopted at the EU level to set the scene of the different pathways that currently rule the “under-construction” EU's hydrogen economy. Despite the European Commission's document does not make any reference neither to the just transition, nor the participation of the public as part of the key-actions of the hydrogen strategy, the document was nonetheless subject to public consultation from the 26th May 2020 until the 8th of June 2020.⁴⁴

Concerning recognitional justice, the Commission's Roadmap for the hydrogen strategy addressed the public consultation to ‘the public at large’ while simultaneously further delimited who was included in it: ‘NGOs, academic or research institutions and citizens.’⁴⁵ The Maastricht Recommendations had no influence in the decision-making process of the EU Hydrogen strategy: the call for consultations did not contemplate giving special attention to the vulnerable and/or marginalised citizens.

Regarding procedural justice, the public consultation was open for the short period of ten business days. Article 6(3)⁴⁶ of the Convention, applicable according to Article 7 to policies plans and programmes, conveys that the time-frames ‘should be reasonable [...] for allowing sufficient time [...] for the public to prepare and participate effectively’. When decisions are taken at higher policy levels, ten business days seem insufficient for the public to react, and even less so for the vulnerable and/or marginalised who might need more time to elaborate their opinions.⁴⁷ The procedural means did not align

42 *European Commission, supra note 1.*

43 *European Commission, supra note 2.*

44 *European Commission* Clean Energy – an EU hydrogen strategy at Call for consultation at Have your Say 2020 <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12407-Clean-energy-an-EU-hydrogen-strategy_en>.

45 *European Commission* Clean Energy – an EU hydrogen strategy; the Roadmap Ref. Ares(2020)2722353.

46 The ‘reasonable time-frames’ provision under Article 6(3) of the Aarhus Convention is also applicable to the policies, plans and programmes envisaged in Article 7 of the same norm.

47 *O. Dokubo, M.A. Radulescu, L. Squintani supra note 28, p. 9.*

either with inclusiveness nor with the Convention itself, further evincing the inconsideration of vulnerable and/or marginalised individuals in the hydrogen decision chain at the EU level.

Among the 279 participants, 35 comments came from ‘citizens’.⁴⁸ The absence of demographic data, prevents any statements concerning which societal group or citizen profile ended having the chance to participate in the public consultation. Notwithstanding the latter, sociological studies have revealed in the past that it is the highly-educated groups that end up participating in participatory processes.⁴⁹ Considering these studies and the wording and time-frames of the Hydrogen Strategy’s call for participation, it is likely that the few public who made it to the hydrogen strategy participatory process were somehow related to hydrogen due to their technical knowledge, an evident expression of holding a privileged position according to the Maastricht Recommendations.

This Section showed that the Aarhus Convention and Directive require more explicit protective and encouraging provisions for the vulnerable and/or marginalised to be included individually in the decision-making of energy initiatives. The public consultation for the EU Hydrogen Strategy has evidenced that neither the call for consultation nor the data gathered from the participants take an inclusive approach. The former, did not make positive mention to the participation of disadvantaged groups in the hydrogen decision chain and did not offer the reasonable procedural means for actors to participate. The latter, provided insufficient information to determine whether among those who participated in this new hydrogen governance paradigm, were vulnerable and/or marginalised individuals. Despite public authorities enjoy of discretionary powers to further define who the public is in a specific call for consultation and by what procedural means can they participate (e.g. timeframes), did not positively concretise the vulnerable and/or marginalised as actors to involve in the decision-making of the Hydrogen Strategy.

Both the Aarhus Convention and Directive set minimum standards as per what are the general principles and provisions enshrining public participation. Spain and Germany as Aarhus Convention signatories and EU Member States have thus the chance to go beyond and propose more acute provisions to better protect the vulnerable and/or marginalised individuals in public participation

48 *European Commission* Clean Energy – an EU hydrogen strategy; Consultation statistics at Have your Say 2020 <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12407-Clean-energy-an-EU-hydrogen-strategy/feedback_en?p_id=7919473>.

49 *L. Squintani* The Aarhus Paradox: Time to Speak about Equal Opportunities in Environmental Governance *JEEPL* 2017 (14(1)), p. 3–5; *A. van den Broek, A. Steenbekkers, P. van Houwelingen & K. Puffers* Niet buiten de burger rekenen! *SCP* 2016.

processes. The following sections study both jurisdictions to analyse if they have considered incorporating positive action measures to that matter.

4 Spain: Views from a H₂ Exporter on Inclusive Public Participation

The Kingdom of Spain will have a key role in boosting the hydrogen economy along the EU. For the geographical and industrial peculiarities of this EU Member State, the production of green hydrogen will be at the fore-front of Spain's energy priorities in the next years.⁵⁰ Investing considerable efforts in deploying a new energy technology like green hydrogen with the aim of being the EU's production leader will have significant implications not only economically, but also geographically, socially and environmentally. Irrespective of the sense of these impacts and the urgency of implementing a hydrogen economy,⁵¹ this new energy technology cannot escape meeting the public participation mechanism as a means of safeguarding the just transition from its procedural stance.

The following sections evaluate whether the state of the art of Spain's public participation regulatory framework guarantees for vulnerable and/or marginalised the right to individually participate at the macro (policies and plans) and micro-levels (projects) of the hydrogen decision-making chain.

4.1 *Spain's Public Participation Legal Framework: Missing the Micro-Level Decisions*

The Spanish legislator adopted Law 27/2006,⁵² the Spanish Public Participation Law in order to transpose the Aarhus Directive. According to this article's line of argumentation, the two perspectives to inclusiveness need to be looked at within the Spanish Public Participation Law (SPPL). Relevant to mention is that the SPPL only develops the regulatory framework for policies, plans and programmes.⁵³ Recital (6) of the SPPL's preamble states that for public participation of projects, the corresponding sectoral laws apply.⁵⁴ This entails a fragmentation of public participation's regulatory framework at the project

50 *Ministerio para la Transición Ecológica y el Reto Demográfico (MITECO), Gobierno de España* Hoja de Ruta del Hidrógeno 2022.

51 R. Rehage & A. Fornes Gomez supra note 16.

52 Ley 27/2006, de 18 de julio, por la que se regulan los derechos de acceso a la información, de participación pública y de acceso a la justicia en materia de medio ambiente (incorpora las Directivas 2003/4/CE y 2003/35/CE). Boletín Oficial del Estado (BOE) n. 171.

53 *Supra* note 52, Articles 16 and 17 of the SPPL.

54 Go to section 4.3. for further explanation.

level, thus causing a barrier to holistically ensuring harmonised inclusiveness of the vulnerable and/or marginalised at all participation levels.

From a recognitional lens, policies, plans, and programmes within Spain will be subject to participation not only of 'the public' but also of the 'public concerned'. Unlike the Aarhus Convention that only envisages the figure of 'public concerned' for projects, the SPPL considers that this category of addressees are also present at the macro-level decisions. The concept of 'the public' is implemented in the SPPL using same terms used under the Aarhus Convention.

When it comes to the 'public concerned', on the one hand, it defines the individuals concerned: whichever natural or legal person that under Article 4 of the Spanish Administrative Procedure Act (SAPA)⁵⁵ is deemed to be an 'interested party'. Article 4 of the SAPA understands 'interested party' as: those individuals who have legitimate individual or collective rights or interests, those who – without having started the Administrative Procedure themselves – their rights will be affected based on the decision that will be taken in the procedure and, those whose legitimate individual or collective interests could be affected by the decision and make themselves known in the procedure before the decision becomes definite. Going back to SPPL, Article 16(2) states that it is the competent bodies who determine who is regarded as 'public concerned' in addition to what is prescribed by SAPA. Following the EU's example, Spanish law does not contemplate positive mention to the vulnerable and/or marginalised individuals to ensure that they enjoy of equality of opportunities to participate in the decision-making of energy initiatives.

Similarly to the EU level, the Spanish regulatory framework does not specifically account for vulnerable and/or marginalised groups. They do not receive a special treatment as to ensure that they access and take action in the decision-making of policies, plans, and programmes and thus, no adapted procedural means are in place either. In fact, not even the non-discrimination principle is present in the SPPL. This can be no excuse to decide against that principle for two reasons. Firstly, Article 14 of the Spanish Constitution (Magna Carta) also establishes non-discrimination as the overriding principle protecting fundamental rights.⁵⁶ Secondly, Spain is constituted as a monist state,⁵⁷ meaning that international treaties like the Aarhus Convention are of

55 Ley 39/2015, de 1 de octubre, del Procedimiento Administrativo Común de las Administraciones Públicas. BOE n. 236.

56 Constitución Española 1978, BOE 311.

57 *Id.* Article 96.

direct applicability and thus, non-discrimination should be guaranteed in the decision-making of hydrogen matters.

That said, public participation provisions in Spain do not go beyond the Aarhus Convention and/or Aarhus Directive minimum standards as regards the inclusiveness of vulnerable and/or marginalised. While the nature of EU Directives allow for Member States to further develop measures at the national level, Spain falls short in further tailoring a just decision-making process for the vulnerable and/or marginalised to participate in it.

4.2 *The Intervention of Public Participation in Spain's Hydrogen Economy*

Spain's Hydrogen Roadmap can be considered the main source of macro-level decisions as regards setting the hydrogen economy within the country, and it is aimed at meeting the EU's 2050 climate neutrality targets.⁵⁸ From hydrogen production, transport and distribution, to storage, the entire hydrogen value-chain is discussed in this strategy document. Regardless of its non-binding nature, national strategies offer a preview of the directions that a state will take towards an energy technology.⁵⁹

The Hydrogen Roadmap was subject to consultation twice. A prior public consultation was open from the 8th of April 2018 until the 19th of June 2019.⁶⁰ The call for participants was open to everyone but with the specification that those willing to participate had a link with hydrogen.⁶¹ This first public consultation gathered 92 participants out of which 9 were 'citizens' who, according to the public authority, mostly had technical and professional knowledge on hydrogen.⁶²

Once the Spanish Hydrogen Roadmap was drafted according to the feedback collected from 'the public', the proposed text was subject to a second public consultation process from the 29th of July 2020 until the 11th of September

⁵⁸ *MITECO*, *supra* note 50.

⁵⁹ *J. Pinto*, *supra* note 12 and *J. Woodyatt, J. Pettit & J. Prest* Comparing the Hydrogen Strategies of the EU, Germany, and Australia: Legal and Policy Issues *OGEL* 2021 (19) p. 59.

⁶⁰ *MITECO* Consulta Pública Previa para la elaboración de la Hoja de Ruta del Hidrógeno Renovable 2020 <<https://www.miteco.gob.es/es/energia/participacion/2023-y-antiores/detalle-participacion-publica-k-311.html>>

⁶¹ *MITECO* Call for consultations for the Consulta Pública Previa para la Hoja de Ruta del Hidrógeno Renovable <https://www.miteco.gob.es/content/dam/miteco/es/energia/files-1/_layouts/15/Texto%20de%20la%20consulta%20pública%20previa-15753.pdf>;

⁶² *MITECO* 'Hoja de Ruta del Hidrógeno: una apuesta por el hidrógeno renovable' First draft of Spain's H₂ Roadmap in accordance with the results obtained during the prior public consultation <https://www.miteco.gob.es/content/dam/miteco/es/energia/files-1/_layouts/15/Texto%20de%20la%20Audiencia%20Pública-16826.pdf>.

2020.⁶³ This second call for participation narrowed down the subjects allowed to participate to ‘citizens and entities who directly or through representative organisations are involved in hydrogen’. Up to 78 participants shared their views on the draft, 11 of which were individual citizens.⁶⁴ None of the calls for participation brought in positive distinction for the vulnerable and/or marginalised to individually be regarded as participants in the decision-making for Spain’s hydrogen strategy that deserve a special treatment due to their disadvantageous positions.

Procedurally, even though both public consultations provided ‘the public’ with more time to reply the consultations compared to those given in the EU’s hydrogen strategy, no differentiations were made on the time-frames for the vulnerable and/or marginalised groups to effectively participate. The people deemed to be considered participants were in both cases people who had a potential involvement in the hydrogen value chain.⁶⁵ This shows that the competent Ministry, made use of its discretionary powers to accept or reject the participation of certain people on the basis of a subjective factor: people’s involvement in the hydrogen economy. Taking an ‘involvement-based’ approach could have excluded and discouraged many people from taking part in the decision-making and most significantly, no section was dedicated to the inclusion of the vulnerable and/or marginalised individuals in the process through adapted procedural means (e.g. longer time-frames).

The finally published Spanish Hydrogen Roadmap makes no mention whatsoever to the role that the public will have in the deployment of the hydrogen economy within its territory. Therefore, no positive mention towards the role of vulnerable and/or marginalised individuals was considered either. Yet, at the planning and project-level where hydrogen initiatives are to be more detailed and are to impact more directly the territories and societies where they will be developed, another environmental-protective mechanism is in place to regulate local energy governance and public participation: the Environmental Impact Assessment (EIA).⁶⁶

63 MITECO Consulta Pública sobre el Borrador de la ‘Hoja de Ruta del Hidrógeno: una apuesta por el hidrógeno renovable’ 2020 <<https://www.miteco.gob.es/es/energia/participacion/2023-y-anteriores/detalle-participacion-publica-k-337.html>>

64 MITECO *Supra* note 62, Annex III.

65 MITECO, *supra* notes 60–63.

66 J.F. Alenza García El procedimiento de evaluación de impacto Ambiental, in A. Ruiz de Apodaca Espinosa (ed.) Régimen jurídico de la evaluación ambiental 2014, p. 299.

4.3 *Localising the Decisions: the Environmental Impact Assessment in the Spanish Hydrogen Value-Chain*

High-level decisions require specific actions at the local level to reach common goals.⁶⁷ The Spanish Hydrogen Roadmap is enacted by means of concrete actions at the project level. Energy projects are subject to long authorisation processes. The approval procedure of hydrogen projects in Spain is highly fragmented due to a lack of a consolidated hydrogen regulatory framework at the national level.⁶⁸ Considering the particular characteristics of green hydrogen, an energy source stemming from solar or wind energy but produced in a gaseous state,⁶⁹ electricity⁷⁰ and hydrocarbons regulatory frameworks⁷¹ apply in the authorisation procedures of hydrogen projects. The hydrogen value-chain has four phases: production, transport, storage and consumption. Only the first three are subject to approval processes. Different from each other and encompassed in different regulatory frameworks, they have one procedural stage in common: the Environmental Impact Assessment (EIA).

The EIA is a preliminary administrative procedure introduced by the EU legislator⁷² for those projects that, under their planification, construction or execution processes can have a potential impact to the environment. Spain provides the EIA's regulatory framework under Law 21/2013 (Spanish EIA Act).⁷³ The EIA procedure includes public participation as one of its essential elements.⁷⁴ Within the Spanish EIA Act, the concepts of 'the public' or the 'public concerned' are identically defined as under the SAPA, thus no mention whatsoever is made to vulnerable and/or marginalised individuals.

67 *E. Swyngedouw* Globalisation or 'glocalisation'? Networks, territories and rescaling. *CRIA* 2004 (17(1)), p. 25–48.

68 *C.M. Ávila Rodríguez*. Capítulo V. Régimen jurídico de las nuevas fuentes de energía como el hidrógeno verde in I. González Ríos & A.L. Faya Barrios (eds.) *Desafíos jurídicos administrativos del cambio climático, la transición energética y la digitalización* 2023, p. 145–183.

69 *A. Chugh & E. Taibi* What is green hydrogen and why do we need it? An expert explains in *World Economic Forum* 2021, <<https://www.weforum.org/agenda/2021/12/what-is-green-hydrogen-expert-explains-benefits/>>; *A. Velazquez Abad, & P.E. Dodds* Green hydrogen characterisation initiatives: Definitions, standards, guarantees of origin, and challenges; *Energy Policy* 2020 (138) 11300.

70 Real Decreto 1955/2000, de 1 de diciembre, por el que se regulan las actividades de transporte, distribución, comercialización, suministro y procedimientos de autorización de instalaciones de energía eléctrica.

71 Ley 34/1998, de 7 de octubre, del sector de hidrocarburos. BOE 241.

72 Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment, OJ 2012 L. 26/1.

73 Ley 21/2013, de 9 de diciembre, de evaluación ambiental. BOE 296.

74 Spanish Supreme Court Ruling STS 5708/2023 – ECLI:ES:TS:2023:5708, legal foundation 8.

Different situations call for different measures. The scope of the EIAs in Spain is based on the Annexes of the EIA Act. Certain stages of the hydrogen value-chain are considered to have a lesser adverse environmental effect and therefore, are subject to a simplified EIA process.⁷⁵ Whether an EIA undergoes an ordinary or simplified procedure, has in turn an effect on public participation.

4.3.1 Ordinary EIA: a (1+)2 Step Approach in Public Participation for Hydrogen Pipelines

Annex I of Spain's EIA Act lists pipelines as projects that will be subject to an ordinary EIA. Generally, they fall under the definition of Group 3 letter f): 'pipelines with a diameter of more than 800mm and length of at least 40km'. If they are to be placed close to a natural protected area, Group 9 of the same Annex I broadens the scope to pipelines with a length superior to 10km. Therefore, all those pipelines that do not fulfil such conditions are not subject to EIA and no public participation will be regarded in their authorisation procedure. The 36,7% of Spanish terrestrial terrain and 12,3% of marine terrain are protected under EU and national law.⁷⁶ Therefore it is likely that in any case several pipelines will be subject to an ordinary EIA in one way or another.

The ordinary EIA procedure is divided in five stages⁷⁷ plus an additional one that happens before the commencement of the procedure. Two of these five-plus-one stages are dedicated to public participation.

The first step of the public participation approach is the facultative prior 'consultation' with the 'public concerned' and the affected Public Administrations. According to Article 34 of Spain's EIA Act, the project promotor can request the environmental body to draft a scoping document for the environmental impact study. 'Public concerned' *stricto sensu* and affected Public Administrations will be consulted during the drafting of the scoping document for 20 business days.

The second step regards the 'public information'. The project promotor's environmental impact study as well as the project report are made public for 30 business days⁷⁸ and the entire public is welcome to present allegations or observations. Simultaneously, a consultation of the 'public concerned' and affected Public Administrations is conducted.⁷⁹ This niche of interested

75 *Supra* note 73, Article 45 Spanish EIA Act.

76 *Perfil Ambiental de España 2022*, Ministerio para la Transición Ecológica y el Reto Demográfico. 1–159.

77 *J.F Alenza García*, *supra* note 66 at p. 356 & *supra* note 73, Article 33 Spanish EIA Act.

78 *Id.* at p. 357 et seq. & *supra* note 73 Article 36 Spanish EIA Act.

79 *Id.* at p. 359 et seq. & *supra* note 73 Article 37 Spanish EIA Act.

participants are requested to notify within 30 business days any environmental effects of the project that could have escaped the environmental body's glance. If the project promotor amends according to these allegations the proposed project, a second round of public information and consultation is expected.⁸⁰

Not even at the local level where the individuals are more willing to participate⁸¹ the legislators have established to date any provisions that guarantee that the vulnerable and/or marginalised are identified to positively integrate them individually in the decision-making process. Neither broader time-frames for their participation are contemplated, thus leading to the conclusion that the regulatory framework for local energy decisions such as projects of hydrogen pipelines, does not contemplate an inclusiveness approach towards vulnerable and/or marginalised individuals.

4.3.2 Escaping the Ordinary: Simplified EIA for Electrolysers and Hydrogen Storage

Recently amended by Royal Decree 445/2023,⁸² Annex II of the Spanish EIA Act lists the two remaining phases of the hydrogen value-chain subject to environmental authorisation: hydrogen electrolysers (production)⁸³ and stand-alone batteries (storage).⁸⁴ These simplified procedures affect public participation. From a (1+)2-step public participation approach where even the entire public can be included in the decision-making in an ordinary EIA, public participation is reduced to only one step under the simplified EIA procedure. Only the consultation step is in place. Electrolysers and stand-alone batteries will only be contested by the 'public concerned' in the shortened time of 20 business days.⁸⁵ In either case, no specific attention is given to the vulnerable and/or marginalised in simplified EIA procedures.

Overall it can be stated that at the project level, more are the options for the public to participate in the decision-making of a hydrogen project when the stage of the value-chain that we look at regards the distribution and/or transmission of hydrogen through pipelines. Hydrogen production and storage projects reduce the opportunities of the general public to participate.

80 *Id.* at. p. 362 & *supra* note 73 Article 38 Spanish EIA Act.

81 *G. Perlaviciute, L. Squintani & L. Liu supra* note 26, p. 342.

82 Real Decreto 445/2023, de 13 de junio, por el que se modifican los anexos I, II y III de la Ley 21/2013, de 9 de diciembre, de evaluación ambiental. BOE 141, 2023.

83 *Supra* note 73, Annex II Group 6.i).

84 *L. Castro, B. Montero, M. Sancho* Modificación del alcance de proyectos sometidos a evaluación de impacto ambiental, incluyéndose por primera vez las instalaciones de almacenamiento y los electrolizadores, in Osborne Clarke 2023 and; *Supra* note 86 Annex I Group 3.1).

85 *Supra* note 73, Article 46 of the Spanish EIA Act.

Spain's public participation regulatory framework as is known today lacks inclusiveness on the recognition and the participation of the vulnerable and/or marginalised in the decision-making. No positive action is considered in order to involve the vulnerable and/or marginalised groups of society nor attribute them with the adaptable means to participate in the transition towards the hydrogen economy.

5 Germany: Views from a H₂ Importer on Inclusive Public Participation

To achieve the German 2045 climate-neutrality goals,⁸⁶ establishing a hydrogen market is a key building block to accelerate the clean energy transition. Moreover, Germany is seen to endeavour high potential to become a “lead market” for hydrogen.⁸⁷

In the next sub-sections, it is contested whether Germany indeed enshrines in its regulatory framework and in the hydrogen decision-making chain, equitable public participation mechanisms for the vulnerable and/or marginalised to become active actors within the hydrogen economy.

5.1 *Germany's Public Participation Framework: a Multiplicity of Transpositions*

Germany translated the requirements of the Aarhus Convention, and of the Aarhus Directive respectively, into federal law through the German Public Participation Act (GPPA) in 2006.⁸⁸ The GPPA itself does not lay down any procedures for public participation, it merely amended the German Environmental Impact Assessment (EIA) Act and other specialised legislation with the aim of extending public participation.⁸⁹

86 Article 3(2) Federal Climate Protection Act – Bundes-Klimaschutzgesetz vom 12. Dezember 2019 (BGBl. I S. 2513), das durch Artikel 1 des Gesetzes vom 18. August 2021 (BGBl. I S. 3905).

87 Federal Ministry for Economic Affairs and Climate Action, ‘Bundesregierung stellt rechtliche Weichen für den beschleunigten Ausbau der Infrastruktur für Erzeugung, für Speicherung und Import von Wasserstoff – zweiter Teil des Industriepakets’, <<https://www.bmwk.de/Redaktion/DE/Pressemitteilungen/2024/05/20240529-bundesregierung-stellt-weichen-fuer-den-beschleunigten-ausbau-von-wasserstoffprojekten.html>>.

88 Gesetz über die Öffentlichkeitsbeteiligung in Umweltangelegenheiten nach der EG-Richtlinie 2003/35/EG (Öffentlichkeitsbeteiligungsgesetz), BGBl. 2006, Teil I, Nr. 58.

89 B. Stüer, Planungsvorgaben des Europäischen Umweltrechts, in: B. Stüer (ed.), Handbuch des Bau- und Fachplanungsrechts, 2015, Rn. 3239.

Unlike Spain's regulatory framework for public participation, the German legislator decided to adapt the sectoral laws dedicated to approving any macro or micro-level decision affecting the environment in line with the Aarhus Convention and Directive. To date, Germany uses over 35 legislative acts to transpose the Aarhus Convention.⁹⁰ Participatory democracy tradition in Germany pre-existed to the Aarhus Convention. For example in 1990 the German EIA of Mining Projects Act already integrated public participation within the EIA procedure.

Article 1 of the GPPA provided for an adaptation of Article 9 of the German EIA Act, which lays down the procedure for public participation in the course of an EIA. Also, the use of language was adapted to the requirements of the Aarhus Directive. For example, in section Article 2(1), sentence 3 of the German EIA Act, the term 'involvement' ought to be substituted with the term 'participation'.

However, the GPPA itself does not provide for any definitions of the terms 'the public' or 'the public concerned'. Both formulations are used verbatim in the law,⁹¹ and should be interpreted as intended to implement the equivalent terms from the Aarhus Convention into the German legal framework.⁹² A lack of further development of the terms 'the public' and the 'public concerned' in turn shows proof that no provisions in relation to positively involving the vulnerable and/or marginalised individuals have been introduced in the German public participation acquis.

Given the multiplicity of transpositions that characterise Germany's public participation regulatory framework, it is necessary to check the sectoral regulatory framework to determine whether that framework offers inclusive mechanisms for the vulnerable and/or marginalised individuals to partake in the decision-making of a hydrogen economy. It is for that reason that what follows is the analysis of macrolevel (strategies) and microlevel (projects) decisions concerning hydrogen in Germany.

90 *European Commission – EURLEX* National transposition measures communicated by the Member States concerning the Aarhus Directive < <https://eur-lex.europa.eu/legal-content/EN/NIM/?uri=CELEX:32003L0035&qid=1720631206883>>.

91 *Bundestag, supra* note 88, p. 2820.

92 See the explanatory memorandum to the Public Participation Act: Entwurf eines Gesetzes über die Öffentlichkeitsbeteiligung in Umweltangelegenheiten nach der EG-Richtlinie 2003/35/EG (Öffentlichkeitsbeteiligungsgesetz), Deutscher Bundestag, Drucksache 16/2494, p. 1.

5.2 *The German Hydrogen Strategy: Where Was the Public?*

In 2020, the German federal government agreed on a hydrogen strategy,⁹³ which was updated and supplemented in 2023.⁹⁴ The National Hydrogen Strategy defines targets for the use of hydrogen in Germany for 2030 and sets government guidelines for the production, transport and use of hydrogen and its derivatives in various economic areas.⁹⁵ The strategy has the legal character of a resolution from which no direct legal obligation arises.⁹⁶ Both in the original and amended versions of the strategy, several federal ministries were involved in its drafting, but there was no process for public participation.

In the strategy itself, ‘the public’ appears once under the point “Shaping and accompanying transformation processes”, where the federal government announces that wants to work together with “the general public to look at how hydrogen can make a contribution to the energy transition.”⁹⁷ However, it is not further defined who ‘the public’ is supposed to be and how the process of working together was supposed to look like. In retrospect, it is also not clear whether there was ever a process of public participation or, as the National Hydrogen Strategy frames it, “working together”.

This macro-level example evidently shows that Germany does not have to date a positive-action framework aimed at empowering vulnerable and/or marginalised people when drafting its macro-level framework for the hydrogen economy. The lack of involvement of the public, let alone the vulnerable and or/marginalised, in the preparation of policies, like the analysed Hydrogen Strategy, could be thus contravening Article 7 of the Aarhus Convention on the signatories’ duty to bring in public participation in the preparation of policies. It is now time to determine whether at the local level the pattern of dismissing public participation is repeated or if, in the contrary, the public and especially the vulnerable and/or marginalised groups are involved in the decision-making of hydrogen projects.

5.3 *Diving into the German H₂ Value-Chain: Deconstructing Public Participation in EIA*

Unlike Spain, some aspects of the legal framework for hydrogen have already been temporarily integrated into the German Energy Act, and await for the transposition of the recently entered into force Recast of the Gas

93 *Bundesregierung* Die Nationale Wasserstoffstrategie – Energie aus klimafreundlichem Gas.

94 *Bundesregierung* Fortschreibung der Nationalen Wasserstoffstrategie 2023.

95 *Bundesregierung*, *supra* note 93.

96 *V Busse*, ‘Geschäftsordnung Bundesregierung’, 3. Article 20(1).

97 *Bundesregierung*, *supra* note 93 at p. 7.

Directive.⁹⁸ However, the participatory acquis of hydrogen falls under the sectoral laws for specific approval processes. In the German hydrogen decision-chain, in one way or the other public participation should play a role at all levels in line with the Aarhus Convention: policy, plan, and project level. Disregarding the former Section has showed that in practice, this has not been the case at the policy level, the tables can turn at the micro-level.

At the project level, depending on the stage of the hydrogen value-chain (hydrogen pipelines, electrolyzers and storage) that we look at different approval processes apply and are established in different laws. Yet, like it happens in Spain, Germany as an EU Member State transposed the EIA Directive thanks to which all stages of the hydrogen value-chain are subject to the EIA as the early-stage procedure common the approval process of all those energy projects that may have an effect on the environment. Conducting EIAs at an early-stage guarantees that the public intervene in the decision-making of hydrogen projects when all options are still open.⁹⁹ This structure is regulated under the German Environmental Impact Assessment Act.¹⁰⁰

As Wulfhorst summarizes the EIA, it involves a procedural triad: determine – describe – evaluate.¹⁰¹ It is at the determination level, that the public participation procedure is set out as an integral part of the EIA. Contrarily to Spain, the German EIA Act only contemplates one step of public participation, where both ‘the public’ and ‘the public concerned’ are considered to be part of it. The norm defines both terms separately and, as seen at the international and EU level, the distinction between ‘the public’ – Article 2(8) – and the ‘public concerned’ – Article 2(9) – is the interest affected.

Article 18 of the German EIA Act establishes that the competent authority has a duty to involve ‘the public’ on the environmental impacts of the project. Seemingly, also the ‘public concerned’ is part of this participatory procedure. In fact, according to the wording of Article 18, it is only the ‘public concerned’ who has the right to be consulted during one month.¹⁰² This two-form of

98 Directive (EU) 2024/1788 of the European Parliament and of the Council of 13 June 2024 on common rules for the internal markets for renewable gas, natural gas and hydrogen, amending Directive (EU) 2023/1791 and repealing Directive 2009/73/EC (recast) OJ 2024 L 1788.

99 *O. Dokubo, M.A. Radulescu & L. Squintani supra* note 28, p.3.

100 Gesetz über die Umweltverträglichkeitsprüfung in der Fassung der Bekanntmachung vom 18. März 2021 (BGBl. I S. 540), das zuletzt durch Artikel 13 des Gesetzes vom 8. Mai 2024 (BGBl. 2024 I Nr. 151).

101 *R. Wulfhorst, ‘Begründete Bewertung der Umweltauswirkungen und Berücksichtigung des Ergebnisses bei der Entscheidung’, in M. Beckmann et al., Umweltrecht – Band 1, 102. EL, C.H. Beck, § 25, Rn. 2.*

102 *Supra* note 100 Article 21(1) German EIA Act.

participation approach includes a gradation in terms of the potential influence that both groups can have on the project. ‘The public’ is only generally involved (this includes, *i.a.*, a right to information about the EIA), while the ‘public concerned’ is consulted in the participation procedure and has a right to submit objections.¹⁰³ In case the project promotor decides to change the project documents during the course of the procedure, a second round of public participation will be conducted in light of Article 22 of the German EIA Act. In any case, these broad definitions of who is recognised to be a potential participant in the decision-making of energy projects do not contemplate by any means the positive inclusion of the vulnerable and/or marginalised individuals in the participatory processes. From a procedural justice point of view, even though the German legislator has specified the time-frames for public participation,¹⁰⁴ no adaptable time-frames for the vulnerable and/or marginalised are in place either.

Whether an EIA and its consequent participatory phases will be conducted in each of the first three stages of the hydrogen value-chain (production, distribution/transmission, storage) is determined on the basis of Articles 6 and 7 of the German EIA Act and read in accordance with Annex I. Article 6 defines under what circumstances an EIA is deemed to be mandatory. On the other hand Article 7 establishes what projects may be subject either to a preliminary assessment or a site-specific preliminary assessment to decide whether a hydrogen project must undergo an EIA. Projects marked with (A) in Annex I of the German EIA Act, are subject to a preliminary assessment. The competent authority decides whether the projects bears negative environmental impacts and if so, it leads to carry out a fully-fledged EIA. Projects marked with letter (S) in the same Annex, fall under the scope of the site-specific preliminary assessment and have to convey with two consecutive conditions. First, the competent authority shall determine if the project has special local conditions. If not, the project escapes the EIA procedure. But, in the case special local conditions exist, the competent authority, has then to conduct the same preliminary assessment contemplated for (A) projects.

This approach to EIA differs from the one taken at the Spanish level. While the Spanish legislator may only under certain circumstances simplify the public participation process, the German legislator directly decides whether certain phases of the hydrogen value-chain are subject or not to an EIA. This in turn means, that several hydrogen projects will escape the public participation

103 *Umweltprüfungsportal des Bundes*, ‘Wer zählt zur betroffenen Öffentlichkeit?’, <https://www.uvp-portal.de/de/node/310> (11.06.2024).

104 *Supra* note 88, Article 73 of the GPPA.

procedures hence, not even the vulnerable and/or marginalised individuals contribute to the decision-making of the German hydrogen economy.

In specific terms, the phase of the hydrogen value-chain and the dimensions of the project define if a hydrogen project will be compulsorily subject to an EIA and implicitly, its public participation processes. Hydrogen pipelines and underground hydrogen storage must undergo an EIA if they are ranked into the highest diameter, length or capacity thresholds.¹⁰⁵ Electrolysers¹⁰⁶ as well as hydrogen pipelines and underground storage falling within lower diameter, length or capacity thresholds will face preliminary EIA examinations. Lastly, hydrogen pipelines and storage ranged within the lowest size thresholds will have to conduct a site-specific preliminary assessment.

Overall, the abovementioned EIA thresholds for hydrogen pipelines, electrolysers and underground storage facilities show that the German legislator provides more protection to public participation than the Spanish as the thresholds for length, diameter, or capacity are lowered. Even if under specific conditions some hydrogen projects will be exempted from an EIA in line with Article 7 of the German EIA Act, more hydrogen projects fall under the scope of the Act. Yet, the obligatory nature of conducting an EIA and thus, putting the project under the attentive glance of the public only affects projects falling under the greater threshold, thus, larger scale projects. Meanwhile medium or small-scale projects will directly escape the public participation procedures, as no simplified consultations exist under the German EIA Act. Notwithstanding there is more room for public participation, no positive attention to vulnerable and/or marginalised people seems to be present as regards the micro-level hydrogen decisions in Germany.

6 Comparison and Conclusions: Different Approaches but Similar Lack of Inclusiveness

Despite the just dimension of a European energy transition towards a hydrogen economy is gaining greater importance in policy and scholarship, neither at the EU nor at the national levels (Spain and Germany) the regulatory frameworks for public participation seem aligned with this discourse, at least not when considering inclusiveness of vulnerable and/or marginalised individuals. To date, these regulatory frameworks do not consider making special reference to

¹⁰⁵ *Supra* note 100, Annex I of the German EIA Act point 19.2 for hydrogen pipelines, and point 9 for underground storage.

¹⁰⁶ *Supra* note 100, Annex I of the German EIA Act point 4.2.

the participation of the vulnerable and/or marginalised who, often times are unable to participate.

Even if the Aarhus Convention raised the non-discrimination principle, this mechanism endured equalitarian definitions of the public within the three jurisdictions. From an inclusiveness standpoint, treating different individuals equally and employing the same procedural means for them to participate in the decision-making will in turn leave behind the vulnerable and/or marginalised in a hydrogen economy and increase the opportunities-gap between privileged versus unprivileged. The adoption of the Maastricht Recommendations has shown that a change in paradigm is recommended to equitably involve vulnerable and/or marginalised individuals in accordance with the just transition. Neither the hydrogen legal frameworks nor the macro and micro-level decisions of the contested jurisdictions follow these recommendations. Moreover, the national legislations have not enacted their discretionary powers to adequate the Aarhus minimum harmonisation measures to the contextual, territorial and legal reality of their jurisdictions.

In a nutshell, country specific peculiarities have shown that in Spain the lack of a harmonised energy law act entails that from one norm to the other, the participation of the vulnerable and/or marginalised can differ. Meanwhile, Germany bases the subjection of hydrogen projects to EIA on the size of the project, mainly leading the large-scale projects to face public participation but without considering either positively involving the vulnerable and/or marginalised.

This research has evidenced the lack of positive-action in the EU's, Spain and Germany public participation regulatory frameworks to embrace all individuals disregarding their societal group in the decision-making process of a hydrogen economy. Yet, while acting individually in participatory processes may discourage the vulnerable and/or marginalised individuals, new forms of collective participation in the field of energy are emerging. Energy initiatives like energy communities could be a potential way of collectively integrating vulnerable and/or marginalised individuals in a hydrogen economy from a procedural point of view. It is to be determined in future research whether these new decentralisation and democratisation figures in theory and in practice give room for the unprivileged individuals to become active in the decision-making of the hydrogen economy.