# What does "just" mean in just energy transitions? Different perspectives between EU institutional debates and scientific literature

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**Introduction:** In light of systemic challenges and radical transformations, such as those at the intersection of energy transitions and justice, there is an increasing need for closer integrations between academic research and policy planning. From this assumption, the current article examines institutional and scientific discourses on just transition to understand which themes and perspectives are common and which areas could benefit from mutual exchanges between the two domains.

**Methods:** Thematic analysis of institutional texts about the Just Transition Mechanism and scientific literature on energy and environmental justice (2020-2023) was conducted to uncover shared or disputed discourses. Three overarching aspects and seven sub-themes were highlighted: focus (topics and levels of abstraction), justice (forms and dimensions), and actors (typologies, agency, and relationships).

**Results:** Institutional texts emphasize economic-financial stances and restorative or distributive justice, while the scientific literature stresses social stances and recognition or procedural dimensions. A few cross-cutting discourses further organize these results.

**Discussion:** The prevailing discourse, common in institutional and scientific texts, focuses on criticisms of policy and governance. They advocate for the inclusiveness of Global South actors, reflecting on their agency against (in)just transitions and suggesting strategies for building public engagement and resilience. Overall, institutional and scientific texts reveal internal and reciprocal tensions among themes, with the scientific literature exhibiting greater diversity than institutional debates.

KEYWORDS

energy justice, Just Transition, institutional debate, scientific literature, thematic analysis

## 1 Introduction

A recent article by LaBelle et al. (2023) suggests summarizing the main approaches to environmental justice in a few large families. The first set includes studies that describe cases of injustice based on specific pre-defined typologies. Initially traced to three core tenets (distributive, procedural, recognition, hence the label "triumvirate conception"), the conceptualization of justice in the literature has expanded, delving into the nuances of its different foci (e.g., energy, climate, green, spatial, urban, and ecological justice) or reflecting on the possibility of theorizing transversal or

complementary principles to those classically recognized (e.g., interactional, epistemic, and intergenerational justice; Temper and Del Bene, 2016; Sovacool et al., 2017; Davis et al., 2019). A second set includes the so-called principled approaches, which focus on what we ought to do to counter forms of injustice. A third set consists of the more critical perspectives, emphasizing the structural aspects and power dynamics inherent in transition. From this latter perspective, the energy transition process must not create or further amplify social inequalities (Huang and Liu, 2021; Saraji and Streimikiene, 2023).

In our view, constructivist and culturalist approaches can integrate these three perspectives, focusing on the social and situated construction of different forms of justice, on the communicative practices that unfold in the public arena, and on the power relationships that always permeate them (Sarrica et al., 2016b). In this perspective, transitions can be conceived as inherently political processes, where competing interests and perspectives engage in a veritable battle of ideas (Castro et al., 2018) and where the issues at stake are subject to continuous transformations.

Pivotal to this dynamic—but not unique—are the discourses within scientific and policy spheres and the inclusive or exclusive interaction between these spheres, which contribute to defining what justice is and, therefore, how normative can foster it. Indeed, although it is now widely agreed that justice is an integral part of transition policies, it is still unclear which "justice" is needed, how it should be implemented, by whom and for whom (Heffron and McCauley, 2018; Henry et al., 2020; Bombaerts et al., 2023).

Following this perspective, this paper focuses on the social construction of environmental justice by examining the relationship between the policy and academic discourses around it. In particular, we will concentrate on Just Transition Mechanism (JTM) as a key policy in this domain.

Whereas, the institutional framework JTM provides regulates and defines policies, the scholarly debate criticizes and broadens the concepts and dimensions of energy and environmental justice. However, a closer comparison between policy and academic perspectives is still needed to highlight commonalities, differences, and areas for expansion (Van Bommel and Höffken, 2021). This paper aims to fill this gap and adds to previous contributions that provide a historical and conceptual overview of the literature on just transitions (Stevis et al., 2020; Wang and Lo, 2021; Abram et al., 2022). Specifically, in the following sections, we will shortly introduce the facets of JTM explicitly related to justice and the key elements of the scholarly debate. We will then present a thematic analysis of institutional and academic discourses on just energy transitions. For each discourse, we will examine three main aspects: focus, justice, and actors; finally, we will discuss the cross-cutting discourses between the two domains.

## 1.1 Justice in Just Transition Mechanism

The Just Transition Mechanism (JTM) is a policy framework supporting EU Member States in decreasing their dependence on fossil fuels and transitioning to low-carbon economies (European Commission (EC), 2019; EC, 2022). JTM, which is an integral

part of the EU's broader growth strategy, the European Green Deal (EGD), is built on three main foundational components: the Just Transition Fund (JTF), the InvestEU Just Transition scheme, and the Public Sector Loan Facility. It requires identifying territories significantly affected by energy transitions and preparing *ad-hoc* plans as part of cohesion policies. JTM thus serves as a key financial tool assisting communities facing the socio-economic challenges of ongoing transitions to mitigate their effects (EC, 2022). Its recommendations emphasize the importance of considering the trade-offs between economic, social, and environmental objectives, promoting active public participation, and prioritizing the needs of individuals while ensuring no one is marginalized.

These mechanisms follow the triumvirate conception of justice and consider distributive, procedural, recognition, and restorative justice. Compensations envisaged by JTM take into account the distributive dimension of justice, including the unfair distribution of risks, social and environmental costs and benefits, and differential access to environmental and energy resources and services (Del Guayo and Cuesta, 2022; Jenkins et al., 2016). The EGD include a procedural dimension, which refers to fair procedures regarding access to information and decision-making processes. The dimension of recognition is also often evoked by the discourse around these policies, including issues such as misrecognition, lack of respect, non-recognition, devaluation, and cultural domination. Finally, European policies adopt the restorative dimension of justice when they refer to all those actions that tend to "repair" any injustice or situation of inequality. Careful consideration of these dynamics is justified not only by ethical and democratic principles of caring for vulnerable communities and groups (Burke and Stephens, 2017; Wang and Lo, 2021) but also by the fact that failing to address justice issues may impede the effectiveness of internationally planned decarburization trajectories and lead to the failure of climate neutrality goals (Marquardt and Nasiritousi, 2022; Süsser et al., 2022).

Although the value of JTM and EGD is undeniable, many authors from principled and/or critical perspectives have criticized their focus on economic and political processes. Several scholars have raised significant concerns and criticisms of EGD, especially accusations of increasing inequality, favoring private interests (Pérez, 2021a,b; Khadim and van Eijken, 2022) and neglecting or not adequately addressing the multiple facets and impacts of injustices, potentially leading to further inequalities and vulnerabilities (Jaiswal and Jayaraman, 2019; Schröder, 2020). These critiques align with studies that show the profound societal implications and the dynamics of inequality that may arise in an energy transition (Sovacool et al., 2016; Sarrica et al., 2016a; Stark et al., 2023). Scholars working in this field look at transition as a process characterized by systemic changes and conflicting dynamics, with potentially significant social and economic impacts (e.g., job losses, wage cuts and reduced employment opportunities, disempowerment, dispossession changes in lifestyles; Groves et al., 2021; Healy and Barry, 2017; Krumm et al., 2022). The challenges of procedural and recognitional justice are often expanded to supporting new identities and visions of the future for the most affected places and populations, including minority

narratives (Magnani and Carrosio, 2021; Llavero-Pasquina, 2023). These principles only partially exhaust the complexity of the social dynamics and tensions that create inequalities and conflicts with affected communities (Bal et al., 2023; Wood, 2023).

Pellow (2004) integrated environmental justice framework suggests considering several interrelated dimensions and examining inequalities and injustices within the socio-historical processes and contexts in which they arise and develop. This entails not only more complex policies but also that researchers should consider all the actors involved, their interrelationships, their roles in producing or mitigating inequalities, and their agency (see also Rubino et al., 2020).

Thus, if, on the one hand, the JTM has taken into account the central tenets of justice (at least at the level of explicit intentions), the scientific reflections propose more nuanced visions and perspectives. From a constructivist and critical perspective, we can ask whether and to what extent the two discourses are coherent, whether institutional discourse has met the scientific discourse, and whether the latter has contributed to a dynamic transformation of the idea of environmental justice inherent in the policy, or vice versa.

## 2 Aims

This paper examines institutional and academic discourses on just transition to converging on a comprehensive framework and highlighting potential tensions between perspectives.

This overall aim translates into specific research questions.

(1) What are the tensions in just transition discourses in institutional agendas, scientific debates and between them?
(2) What are the consequences of drawing upon and implementing a particular discourse over others?
(3) How might different or competing discourses be linked?

This aim has both theoretical and applied implications.

The theoretical aim is to elucidate potential contradictions, help scholars navigate the complexity, and make informed choices. We expect to reveal a multifaceted picture of justice in which the division into distributive, procedural, recognition, and restorative tenets is dominant but also challenged. We also anticipate that multiple meanings of just transition orient some decisions and lead to neglecting other options. Finally, we expect this complexity to inevitably embody mutual tensions between academic and political visions that must be highlighted.

From an applied perspective, this article aims to provide insights for practitioners and stakeholders to interpret tensions that may hinder the achievement of a "full" just energy transition for all. In this sense, we expect to identify different discourses of energy justice and make more explicit how these often implicit assumptions underpin different transition agendas and priorities. This will also inform diverse decision-making processes and the effective development, implementation, and translation of energy justice policies into practice.

## 3 Method

### 3.1 Materials

The study involved two sources of data: the institutional debates and the scientific literature on just energy transitions. Below, we will describe the specific procedure for collecting data from each source.

#### 3.1.1 Institutional debates

The corpus of institutional debates consisted of diverse typologies of documents on the JTM and its foundational component, the JTF. We collected debates and interventions by members of the European Parliament (EP) and official statements (e.g., opening addresses, keynote speeches, and plenary remarks) made by members of the EC about JTM and JTF.

Specifically, concerning parliamentary debates and interventions, we retrieved documents on the EP website using the search function of the EP plenary session transcripts. The keywords employed were "just transition," "just transition mechanism," or its acronym "JTM," and "just transition fund," or its acronym "JTF," limiting the search to their presence in the title of the debates. The selection was based on the transcripts where the debate's topic (or a significant portion thereof) centered on the JTM and/or the JTF. We identified three parliamentary debates dated January 14, 2020,[1] May 17, 2021, and June 24, 2021, totaling $n = 159$ interventions by EP members. Some of these interventions were initially delivered in English, while others necessitated translation. To address this linguistic divide, the translation process was facilitated using the DeepL translation software.

Concerning statements, given the absence of transcripts specific to the JTM in its dedicated section, their retrieval was conducted through the search function available in the Press Corner section of the EC website. Consistent with the parliamentary debates, we used the keywords "just transition fund," "just transition mechanism," or "just transition," accompanied by the words "statement," "keynote," or "speech" until the end of 2023. Due to incomplete internal indexing of materials and transcripts on the EC website, the "search:" feature of the Google search engine was also used to obtain a more comprehensive corpus, employing the same search criteria. Overall, we identified 11 items, consisting of $n = 159$ parliamentary interventions and $n = 12$ commissioners' statements, including $n = 6$ opening addresses, $n = 5$ keynote speeches, and $n = 1$ plenary remarks (cf. Annex_institutional_debates).

#### 3.1.2 Scientific literature

We created the corpus of scientific literature using the Scopus database due to its multidisciplinary nature and reliability in retrieving accurate records (Inger and Gardner, 2016). Specifically, we used the string "just transition" AND "energy justice" to identify documents with these keywords in abstracts, titles, or keywords, ensuring the topic was particularly relevant. We focused on documents (i.e., journal articles, reviews, and editorials) published in English and, for comparative reasons with institutional debates,

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1  Just 10 days after the EC presented for the first time the New Green Deal to the EP.

on the timeframe from the beginning of 2020 to the end of 2023, collecting $n = 73$ documents.

Moreover, to integrate the corpus, we replicated the process using the additional combination of keywords "just transition" AND "environmental justice," employing the same search criteria. This produced $n = 71$ documents.

Thus, the resulting corpus comprised $n = 145$ documents ($n = 130$ journal articles, $n = 12$ reviews, and $n = 3$ editorials; cf. Annex_scientific_literature).

## 3.2 Analyses

Using thematic analysis, the research team examined the two textual corpora on institutional debates and scientific literature (Braun and Clarke, 2006, 2022). Thematic analysis is applied to textual corpora to identify shared or contested patterns of meaning within data. It is based on an iterative coding process, which requires data synthesis by applying short labels (i.e., codes) to relevant portions of texts. In particular, it involved manually exploring materials with a deductive approach (i.e., based on existing theoretical knowledge inspired by Pellow's 2004 contribution) and a semantic approach (i.e., based on the explicit contents of the data).

We used a coding grid based on three overarching aspects and seven sub-themes: *Focus*, which includes the themes "general topic" and "abstraction vs. concreteness"; *Justice*, which encompasses the themes "forms of justice" and "dimensions of justice"; and *Actors*, which contains the themes "typologies of actors," "agency of actors," and "relationships among actors."

Specifically, the seven sub-themes are defined as follows:

1. *General topic*. This theme provides an overview of the main issues addressed in the texts within which just transition is inserted and conceptualized. Examples include the environment as a collective good, environment as a resource, backwardness, access to information, industry, and labor.
2. *Abstraction vs. concreteness*. This theme describes whether the issues addressed in the texts are discussed in conceptual and/or theoretical terms or, on the contrary, in applied and/or practical terms.
3. *Forms of justice*. This theme clarifies the perspective through which justice is conceptualized and interpreted. Examples include ecological, spatial, urban, and climate justice.
4. *Dimensions of justice*. This theme specifies the central tenets widely recognized in literature: distributive, procedural, recognition, and restorative justice.
5. *Typologies of actors*. This theme identifies the multiple key actors mentioned in texts. These include individuals, civil society, trade unions, businesses, NGOs, politicians, environmental activists, and academics.
6. *Agency of actors*. This theme accounts for the roles played by the actors within the processes described in terms of agency, i.e., whether and to what extent they have an active or passive role.
7. *Relationship among actors*. This theme defines how the actors interact with each other, establishing social influence processes and power dynamics.

## 4 Results

The thematic analysis results are presented and discussed by comparing institutional and scientific discourses about the three aspects considered (i.e., focus, justice, and actors).

Then, we propose four cross-cutting discourses that organize and connect the diverse features of institutional debates and scientific literature.

## 4.1 Focus

Overall, institutional discourses focus mainly on economic and financial stances, emphasizing a tension between the limits of market competitiveness and the urgency of more sustainable transition models. Conversely, scientific discourses mainly focus on stressing the failures of European energy policies and proposing concrete solutions for implementing new fair and socially just policies.

### 4.1.1 Focus in institutional debates

Regarding the parliamentary interventions, the topics cover various aspects, including economic, environmental, and social dimensions. A recurrent slogan in the interventions is that the policy's objective is to realize a transition that "leaves no one behind."

The dominant topics revolve around economic aspects, which are at the heart of most discussions. These include green investments, funding, and financial policies. The primary concern is the impact on various economic sectors, particularly the coal industry, which plays a leading role among the policy discourses' main topics. Environmental issues, including climate neutrality, ecological transition, a sense of urgency regarding climate change, and the necessity for a transition that embraces solidarity, are also present. Some arguments highlight that any welfare initiative is ineffective if it does not generate further wealth. The topic of "a fourth industrial revolution" is thus used in some discourses, connected to a "stronger social Europe," possibly complemented by measures like the minimum wage.

From the examination of the debates, abstract framing emerges as prevalent. Discourses broadly and frequently encompass ideal concepts such as justice, equity, responsibility, sustainability, and inclusiveness. However, when shifting from abstract to concrete framing, the analysis reveals significant discursive tensions that are predominantly expressed in critical discussions about the effectiveness of the EU initiatives. For instance, while there is a general agreement on the need for sustainable development, equitable policies, and a just transition, the allocation of specific funds like the JTF and legislative measures exposes disparities in interpretations and expectations:

> It is impossible not to notice that the figures proposed for such an important instrument are ridiculous compared to the investment needs identified by the Commission in 2019 (European Parliament (EP), 2021).

These tensions between abstract and concrete do not involve merely technical issues (such as the exclusion or inclusion of natural gas) but also appear when a concrete framing is applied to the role of government, the market, and justice itself. Consequently, what may abstractly appear as a unified front for a just transition often masks a complex battleground of competing agendas and priorities.

The parliamentary debates show that economic and financial issues are central to the Commissioners' statements. This highlights the tension between the limits of market competitiveness and the structural need to move toward more sustainable models equitably.

Issues such as mass unemployment and worker reskilling, energy independence from Russia, and the necessity of becoming the first decarbonized continent are presented and coherently integrated into this vision.

The discrepancy between abstract ideals and concrete actions is less pronounced than in parliamentary statements. However, the policies are introduced through a predominantly top-down approach. This framing often limits local involvement to abstract rhetoric rather than substantive and concrete engagement.

The only concrete elements are the Just Transition Territorial Plans, which ultimately integrate regional policy with what comes from the EU. However, interestingly, the aspect of inclusiveness and the concept of "leaving no one behind" appears less noticeable than in parliamentary debates and what it argues in the framework of EGD.

### 4.1.2 Focus in the scientific literature

The scientific literature reviewed primarily focuses on justice as a policy issue intertwined with social dimensions and environmental considerations as a collective good. When discussing injustices and challenges in achieving a just transition, scholarly papers delve into conceptualizations and reflect on failures alongside positive examples of justice principles in concrete implementations.

For instance, Sokołowski and Heffron (2022) analyze the causes and consequences of energy policy failures, focusing on the 2015 Paris Agreements and energy and climate obligations. Other studies also scrutinize energy policy failures (Millward-Hopkins and Johnson, 2023; Heffron and Sokołowski, 2024), highlighting the importance of learning from past mistakes and identifying various failure categories across all stages of energy policymaking.

Moreover, scholarly literature proposes concrete measures to establish equitable, socially just policies with minimal inequality. Examples include activating ministerial energy justice offices to support policymakers (Pepe, 2022), detailed analysis of factors influencing consumer inclusiveness in community energy (Hess et al., 2021), and specific policy strategies such as community choice aggregation (CCA; Greenleaf et al., 2023; Diezmartínez and Zhang, 2023), citizen assemblies (CA; Shehabi and Al-Masri, 2022), or renewable energy communities (REC; Heldeweg and Saintier, 2020; Hanke et al., 2021). Biddau et al. (2016) analyzed the socio-psychological aspects of grassroots participation in a Transition Town Movement (TTM) community initiative. They highlighted the importance of social representations, shared social identities, and collective efficacy beliefs in promoting, sustaining, and shaping activist engagement. Furthermore, a subset of the literature adopts a postcolonial perspective on

justice issues (e.g., Müller et al., 2020). From this viewpoint, justice is argued as intertwined with racial domination and environmental capitalism, emphasizing the centrality of recognizing individuals and communities (Pelot-Hobbs, 2021).

## 4.2 Justice

Although different forms of justice can be identified in the various stages of the parliamentary debates, the dominant dimensions of justice are distributive and restorative. In particular, the need for a fair distribution of resources is invoked, as well as the need for restorative action toward those who have suffered most from the imbalances of economic change in EU territories. The discourse is different when it comes to the forms of justice found in the scientific literature. Here, a systemic and multidimensional vision of justice is central, including and linking the different dimensions. In particular, it highlights the injustices and power dynamics that emerge in energy transition processes.

### 4.2.1 Justice in institutional debates

More than two-thirds of institutional debates involve justice's distributive and restorative tenets. These tenets highlight the focus on effectively redistributing resources, which remains consistent across all debates.

Along with this commonality, diverse forms and dimensions of justice occur in different phases of the parliamentary debates.

The first debate, which took place about a month after the EC presented the New Green Deal to the EP, marks a moment of intense confrontations. A restorative vision of justice strongly emerges at this phase. Quoting the introduction of the first debate:

> Madam President, honourable Members, it's just last month—ten days into office—that the Commission was in this Parliament to present the Green Deal for Europe: our answer to the millions of citizens who demand action on the climate and our proposed roadmap to make Europe the first climate-neutral bloc in the world by 2050. [...] But let me start with the Just Transition Mechanism. What we're doing here is sending a message to coal miners in Asturias, western Macedonia, or Silesia, to peat harvesters in the Irish midlands, Baltic regions reliant on oil shale, and many more (European Parliament (EP), 2020).

This debate also introduces the slogan "leaving no one behind" into the political discourse. This emblematic expression illustrates the restorative notion of just transition articulated within the EU's policy discourse. Due to its extended duration, the first debate also covers other dimensions and forms of justice (e.g., intergenerational and social justice), though to a lesser extent.

The subsequent two debates concerning the JTM solidify the policy's essential elements. The debates are not solely about the policy but also indirectly about how a "just" transition should unfold. Despite the differences in tone, a common thread ties the concept of just transition across the parliamentary debates.

In parliamentary debates, key forms of justice include spatial and ecological (e.g., mitigating the impacts in the most affected

regions) and social (e.g., effects on the labor sector and workers reskilling). The tools for addressing these forms of justice include green investments, the allocation of additional funds, loans, and retraining programs, thus returning to a form of justice more closely related to economic issues, consistent with the nature of the policy.

A minority of interventions, however, discuss intergenerational and social justice, which are also related to the inclusiveness of minorities, gender equity, and broader participation processes. Connected to the latter forms, discourses refer to procedural and recognition dimensions. For instance:

> The second major challenge is a just transition, where no one is left behind. And no one being left behind is not just a slogan. It means providing the Just Transition Fund with additional financial resources so as not to reduce the cohesion and standard agricultural policies; enhancing learning skills that enable future generations to confront ecological and digital transformation successfully; and guaranteeing dignified working conditions to eradicate the wage gap and fight child poverty (European Parliament (EP), 2020).

And more specifically, regarding social justice and participatory approaches:

> I believe that we require an inclusive Just Transition based on three main pillars: participation, support, and creation. Involvement of affected workers and communities in planning and advancing climate action. Support through targeted financial programs and capacity building that prioritises the most vulnerable. Creation of high-quality and sustainable jobs and strong social measures, including reskilling and upskilling of workers (European Parliament (EP), 2020).

Looking at the discourse on justice, it is notable that references to fair wages and participation in just transition are argued in abstract terms rather than providing a concrete discourse of the issues, such as clarifying how to implement participatory approaches.

Regarding the commissioners' statements, they appear even more stringent in limiting justice forms within the economic realm, i.e., balancing the need for structural transformation with the operational and financial efficiency of market structures. For example:

> As we rebuild our economies and societies, we will have to resist falling into the trap of rebuilding old structures. We simply cannot afford to go back to business as usual and then pay again to transform. Instead, we should grasp this opportunity to rebuild a more sustainable economy. We will protect nature, climate and biodiversity, but we will not let Europe become a museum. Instead, it will be at the forefront of the new world economy (Speeches by EVP Timmermans, Commissioner Ferreira and Commissioner Simson at the Just Transition Platform Launch Event, 2020).

Thus, a just transition in the context of the JTM appears more as a "fair" transition, focusing primarily on the equitable distribution of resources. Along with this distributive vision of justice, discourses refer to restorative justice. Restoration is once again related to economic forms, including addressing the imbalances caused by economic shifts in the Eurozone, providing job opportunities for those affected by the transition, training, and supporting training to adapt to new working roles.

## 4.2.2 Justice in the scientific literature

Unlike the political discourse, social, and environmental forms of justice receive significant attention in the reviewed scientific literature. Studies also delve into democracy issues, unequal power structures, and political ecology (Droubi et al., 2022; Knuth et al., 2022; Boateng et al., 2023), often linking these forms with deficiencies in recognition, distributive, and procedural justice (e.g., Pepe, 2022). These dimensions are primarily used as a framework to analyze (and often critique) national and international policies.

In addition to specific forms and dimensions, several authors advocate for a systemic and multidimensional view of justice where various forms and dimensions are interconnected (Fraser, 2003; Schlosberg, 2013; Heffron, 2020). Among the articles reviewed, for example, one study highlights how the distributional impacts of energy in the UK have been largely overlooked (Millward-Hopkins and Johnson, 2023). Another study exploring critical aspects of implementing transition policy in China suggests improving governance in energy policy communication and responsiveness to stakeholders (Zhong et al., 2024).

Echoing some political discourses scrutinizing the economic vision of justice, Boyle et al. (2021) analyzed 14 Green New Deal-type climate policy proposals, showing that not all are economically supported by states. Another study examined transition policies in Germany, the UK, the EU, Japan, and Canada, illustrating the need for revised policies providing more guarantees for workers regarding retirement, re-employment, and economic income (Pollin, 2023).

The perspective changes in research involving countries in the Global South or where coal and fossil fuels are central to the economy, such as Macedonia (Pavloudakis et al., 2023) or concerning hydrogen transition in Morocco, Namibia (Müller et al., 2022), or South Africa (Mirzania et al., 2023) compared with Germany (Hägele et al., 2022). In these studies, social inequality and recognition, distributive, and procedural (in)justice are key issues analyzed across ecological, spatial, and urban contexts.

Energy transitions are often depicted as unsustainable and unjust due to structural violence and power inequalities (Bedi, 2022). For example, Roy and Schaffartzik (2021) highlight the energy transition paradox in India, where the coal industry thrives within fossil-based energy systems, particularly the electricity system.

The EU's energy transition often ignores human rights in countries with developing economies, highlighting the importance of restorative justice and the EU's commitment to just transition programmes in such contexts, working with environmental movements in a democratic, bottom-up approach (Weber and Cabras, 2021). A "just" transition in Africa must address challenges such as energy poverty, security, and economic growth and ensure access to services for all through a comprehensive and

inclusive approach, given the heavy reliance on fossil fuels in many African economies. In general, African policies address multiple dimensions of justice, some of which satisfy distributive justice, while others satisfy neither distributive nor procedural justice (Müller et al., 2020).

Overall, these studies highlight the challenges these countries face related to all aspects of justice: distributive (e.g., vulnerability), recognition (e.g., of vulnerable groups or misrecognition of places; exclusion of local communities), and procedural (e.g., stakeholder representation). Furthermore, they underscore the need to explore the hydrogen transition process's socio-ecological, political, and economic risks.

## 4.3 Actors

The leading actors in parliamentary debates are the institutions, the EU, the Member States, small and medium-sized enterprises, entrepreneurs, and workers. However, the latter are seen as passive beneficiaries. Furthermore, all civil society organizations are neglected. The role of actors such as the EU and the member states is underlined in the scientific literature, but the difference between the global North and the global South is more strongly emphasized. Other actors, such as universities and scientific research, as well as the voices of minority communities, are also present.

### 4.3.1 Actors in institutional debates

Recurrent actors consistently mentioned in both statements and parliamentary debates include EU institutions, Member States, small and medium-sized enterprises (SMEs), entrepreneurs, impacted regions, and workers. The presentation of relationships among these actors is predominantly collaborative, reflecting the institutional setting of these discussions. Speakers emphasize the importance of coordinated efforts and shared goals, often adopting an institutional and future-oriented tone. EU institutions consistently exhibit full agency, actively managing and directing initiatives. They are portrayed as the driving force behind policy formulation and primary decision-makers in resource allocation and responsibilities.

On the other hand, Member States primarily serve as implementers, identifying territories needing attention and overseeing agreement implementation. This often involves coordination with local governments and stakeholders to tailor funds to specific regional needs.

Despite mentions of procedural justice principles (e.g., participatory approaches), workers and businesses are primarily viewed as passive beneficiaries. Moreover, these actors are frequently portrayed equally, overlooking their unique challenges. This lack of differentiation persists in most interventions, obscuring these groups' specific problems.

Furthermore, the discourse often overlooks other actors, such as civil society organizations and grassroots movements. Although mentioned, NGOs are not perceived as active agents of change in this context. Notably, one intervention stands out:

> Honourable Chair, today we speak of the mechanism of just transition, but there can be no just transition. At the same time, the resources, property, and power of corporations and the super-rich are not limited. Citizens must be able to control and co-own the production of energy. They must also control and co-own the production of food and seeds, and the same goes for water and communications. We must wrest control from the hands of a few corporations and return it to the citizens; that is a democracy (European Parliament (EP), 2021).

### 4.3.2 Actors in the scientific literature

The reviewed scientific literature considers states, governments, the EU, and states of the Global North, often highlighting power imbalances among stakeholders and communities. A sense of passive agency among these critical actors is evident. Despite efforts, as Heffron (2023) noted, energy policies often fail, resulting in various forms of distributive or procedural justice inequality, inadequate support for workers, and a lack of evolution in the legal literature on energy.

Some papers take a reflective stance, focusing on scientific research as an actor and stressing the need for interdisciplinary and intersectional approaches (Preuß et al., 2021), government funding, and collaboration with agencies and NGOs in participatory approaches (Buck, 2021) to be genuinely inclusive.

When the voices of actors such as communities (e.g., rural, indigenous) and social movements (e.g., activists, trade unions) are excluded and unheard, resulting in passive agency, then injustice and further inequality are inevitably produced (Muttitt and Kartha, 2020; Córdova et al., 2023).

In studies involving perspectives from the Global South, the leading actors include national or international entities, the EU, governments of the Global South, communities, industries, and scientific research. These studies critically examine the energy transition processes in Global North countries, often criticized for privileged transitions limited to their borders, excluding Global South countries, and exacerbating inequality, injustice, and human rights concerns (Weber and Cabras, 2021; Swarnakar and Singh, 2022). Consequently, communities' perspectives in the Global South are marginalized, and the relationship between actors tends to favor governments and industries, leading to asymmetry.

Central to these discussions are alliances between actors and the rejection of discriminatory policies toward marginalized black and Indigenous communities. For instance, Shah (2023) highlights the importance of listening to and supporting rural community policies and engaging in community dialogues. Distributive and procedural justice dimensions prevail, but the agency is recognized within rural agricultural communities in this context.

## 4.4 Cross-cutting discourses

The analysis of institutional debates and scientific literature reveals several main discourses, with the scientific literature exhibiting greater diversity than institutional debates. Specifically, four main discourses were identified. The main one refers to (1)

criticisms of policy and governance. However, whereas the first is common to both institutional and scientific texts, only the latter further elaborates on (2) (in)just transition and the need to include (3) Global South perspectives and (4) community voices, activist movements, and workers.

We will describe these discourses below by discussing the overarching aspects of framing, justice, and actors.

### 4.4.1 Criticisms of policy and governance

The most severe criticisms of the European funding scheme and the JTM come from euro-skeptic parliamentary groups. While they acknowledge the need for a transition, they question the utility of the fund, with some labeling it an "unjust transition fund" and criticizing the overall decarburization strategy due to its potential economic impacts. These groups aspire to fairness in the transition, framing justice around "fairness," primarily focusing on economic aspects. Despite the ambitious climate goals and inclusive language, the conditional nature of financial support raises concerns about equity and feasibility, particularly in less economically robust regions. This aligns with the future-oriented nature of the discussions, where the ecological transition is articulated through reactive measures and fundamentally reparative policies.

The Commissioners' speeches counter these criticisms, presenting a unified vision reflecting the EC's perspective and the broader narrative the EU wants to project regarding a just transition. Despite varying personalities delivering these speeches, the EU's commitment to a just transition within and beyond the eurozone is distinctly projected. However, the transition—to be "just" —must uphold the economic stability of the involved regions. The strategic representation of energy positions Europe as an energy-independent continent and a leader in technical change. References to the mining sector, workers, and industrial areas are frequent, yet the prevailing dimension is distributive and restorative. The rhetorical commitment to "leaving no one behind" lacks tangible application beyond fund and loan mobilization for reskilling. The JTM and the JTF are integrated into the EU's growth strategy, driven by the need for economic reskilling, particularly in the coal sector.

Overall, the JTM is discussed primarily along economic lines, being an essential component of the Green Deal and addressing a key aspect of its financial pillars alongside the InvestEU investment framework and the European Investment Bank loan system. Despite opposing positions, skeptics and commissioners use the same economic emphasis and justice dimensions in their discourse, highlighting a systemic pattern in role distribution and broader citizenship involvement. This raises questions about the perceived inclusiveness of the "just transition." Despite the aim, workers' and communities' voices seem unheard, being seen as passive recipients of top-down decisions.

The scientific literature forms a third discursive coalition, connecting with the institutional debate but focusing on different policy implementation criticalities in realizing the energy transition. It calls for a fair, socially just, and low-energy demand policy pathway that is dynamic, bold, and focused on policy implementation and evaluation. For example, Millward-Hopkins and Johnson (2023) emphasize the need for equitable policies addressing income inequality and advocating for a low-consumption, zero-emission energy transition. Zhong et al. (2024)

recommend governance that fairly addresses rural consumers' energy transition needs and develops targeted energy subsidies to increase distributive justice. Boyle et al. (2021) warn that Green New Deal frameworks are crucial for tackling climate change but stress the need for climate policies integrated with a vision considering social and environmental injustice.

Failures in applying distributive, procedural, restorative, and recognition justice dimensions are evident in transition policy and governance, mainly in procedural justice. As Sokołowski and Heffron (2022) argue, the causes of this failure include inadequate structure, little policy coordination, soft regulatory approaches, nationalism, deregulation, inconsistency, and lack of political will. Fairness, equality, equity, and inclusive decision-making in energy projects must be evident in policies. This critical discourse in the scientific literature highlights broader problematic elements in how the transition is conceived and enacted.

### 4.4.2 (In)just transition

A second theme that evokes the injustice of transition is more prevalent in the scientific literature than in parliamentary debates. In the latter, there is little room for the injustices that the transition can generate, despite the motto of "leaving no one behind" and the attention paid to the distribution of resources. On the other hand, there is a lot of literature on the subject. In general, this discourse critically examines whether a transition can occur without producing some form of injustice or perpetuating an inequality of power. A just transition is complicated, and its definitions are contested (Del Guayo and Cuesta, 2022; Stark et al., 2023).

Various studies highlight the darker side of sustainable transitions, which are not universally positive and have effects that are only sometimes beneficial to all (Sovacool, 2021; Fathoni and Setyowati, 2022; McGowan and Antadze, 2023). Roy and Schaffartzik (2021) refer to the phenomenon known as "renewables extractivism," where the energy production model replicates patterns of violence like those in fossil fuel extraction (Del Bene et al., 2018; Roy and Schaffartzik, 2021). At the same time, a political ecology analysis by Bedi (2022) highlighted the injustices and power inequalities associated with the transition to renewable energy in the southern Indian state of Kerala. There are studies in the literature that highlight the dark side of sustainable transitions, which are generally non-positive processes that have diverse impacts that are not always beneficial to all (Sovacool, 2021; McGowan and Antadze, 2023). Specifically, some authors carefully examine the downsides of sustainability transitions, considering the multifaceted nature of transition processes, particularly highlighting issues related to colonialism and racism. This would avoid problems of injustice and inequality (McGowan and Antadze, 2023). Other studies highlight the need to promote collective and community resistance actions to combat injustice and environmental capitalism (Gorman, 2022). Furthermore, assuming that the energy transition is difficult to "just," the role of scientific research is to adopt an interdisciplinary and intersectional approach (Preuß et al., 2021). From this perspective, it is crucial to take into account intersections and diversity in order not to discriminate against anyone. In this regard, Pelot-Hobbs (2021) suggests the importance of transitional policies that focus on distributive justice and the recognition

of individuals and communities beyond racial domination and environmental capitalism. Weber and Cabras (2021) highlight how energy transitions in the EU are often at the expense of third countries, such as Colombia, and injustice and human rights. In this sense, these authors stress the need for research on restorative justice and suggest the importance of the EU engaging in "just transition" agendas in developing countries, working with environmental movements in a bottom-up democracy. According to Hernández et al. (2022), another problem is the lack of consensus on common terminology to refer to, for example, housing energy affordability. They analyze and compare the use of five standard terms in their different applications. Indeed, the unclear use of terms such as "fuel poverty," "energy burden," "energy poverty," "energy vulnerability," and "energy insecurity" can lead to problems of understanding and communication between the different actors involved. In the light of their work, the concepts of "energy vulnerability" and "energy insecurity" are most likely to satisfy the dimensions of distributive justice, procedural justice and recognition justice. The authors emphasize that care should be taken to use inclusive language and labels that better guarantee access to the dimensions of justice. From a systemic perspective, the authors stress that current visions lead to a problem: on the one hand, participatory processes can increase justice, particularly in the procedural and distributive dimensions, but they also slow down the transition process. On the other hand, working with incumbents plays a central role in speeding up the process but consolidates injustice in its three main dimensions (Newell et al., 2022).

### 4.4.3 Including the perspectives of the global south

The third discourse, found primarily in the scientific literature, emphasizes the need for a "just" transition that includes the voices and perspectives of Third Countries in the Global South. This discourse involves different actors and justice dimensions compared to the previous two. A bibliometric analysis by Swarnakar and Singh (2022) shows that more than half of the scholarly literature focuses exclusively on countries in the Global North, largely neglecting the perspectives of the Global South. Nsafon et al. (2023) explore the political implications of a "just" transition, arguing that such a process in African countries needs to be reinforced by considerations of justice and equity. Krüger et al. (2022) contend that there is a need to reinterpret the dimensions of justice through a multidimensional approach that considers postcolonial discourses, critiques, and perspectives on the Global South. This approach can help realize a condition where no one is left behind and address equity issues related to the three justice dimensions. However, this theme is not always discussed satisfactorily.

### 4.4.4 Strategies for building engagement and resilience

A fourth discourse emerges strongly in the scientific literature and is only marginally echoed in political debates. This discourse emphasizes that for transitions to be just and effective, communities must be involved in decision-making through a participatory approach (Tarekegne et al., 2022). Pellow et al. (2022) provide

an example of how generative and impactful actions on climate change can be produced through a community-based participatory research approach involving university research and non-governmental organizations (NGOs). Other authors focus on building social resilience by involving environmental movements in the Global South and the working class (Friedrich et al., 2021) and demonstrate how social movements can influence policy (Buzogány and Scherhaufer, 2022; Gardner et al., 2023). This also entails enhancing the responsibility dimension (Eitel, 2022), where alliances and solidarities between social movements can become the strategy guiding toward an inclusive decarburization approach (Wilgosh et al., 2022).

## 5 Discussion

Our results show that the discourse in parliamentary debates and commissioners' statements on the JTM primarily concentrates on the transition's financial, economic, and infrastructural adaptation aspects (Jaiswal and Jayaraman, 2019; Schröder, 2020). Thus, despite the focus on realizing a just transition, the economic-financial dimension emerges as the dominant theme in the analyzed corpus. A fundamental dichotomy arises between maintaining the competitiveness of key businesses, following market logic, and the goal of converting entire sectors of the economy to achieve carbon neutrality. In this context, JTM becomes the tool to realize a just transition through economic reconversion, resolving the underlying dichotomy. Consequently, the just transition appears more as a "fair" infrastructural adaptation than a more profound systemic transformation.

Narratives on equity, justice, responsibility, and inclusiveness are present in the discussion, but they often remain abstract and conceptual. An apparent discrepancy emerges between the interests of different regions, industries, and social groups, as well as tensions over the concrete details of the transition and the spending of the funding. What remains consistent is the self-ascribed role of the EU and of its policymakers in the process: leaders in the route toward carbon neutrality and the realization of a just transition. This theme is particularly evident in the commissioners' statements, which suggest this responsibility lays the groundwork for new forms of internal and international cooperation. The only mention of countries from the Global South, such as South Africa and Indonesia, is made from the perspective of presenting the EU as a leader of the energy transition in the international community. This is not surprising given that these discussions are within the context of a policy targeted at the eurozone. However, the implications of such a self-reassuring discourse should not be overlooked, as the analyzed scientific literature inspired by Global South and decolonization perspectives suggests.

The agency's construction is fundamentally top-down, with European institutions directing actions, member states executing plans, and communities, industries, and workers receiving the benefits of the funds. Despite general aspirations toward collective commitment, numerous categories are excluded from participation in the transition processes, envisioned only as funding recipients. Thus, when a triumvirate approach is considered, the principles of distributive and restorative justice prevail, and even when procedural and recognitional justice are addressed, this remains consistent with a hierarchical structure of agency.

Overall, the results suggest that policy discourses could benefit from a broader consideration of the scientific debate, both in terms of expanding the scope of justice and gaining in-depth consideration of insights gained by principled approaches to EJ about other levers that should be used beyond the techno-economics ones. The results resonate with Khadim et al. (2024, p. 277), who stresses that "for the European CET to be just, it must address considerations of distributive, recognition-based, restorative, procedural, and interactional justice, and be participatory, deliberative, inclusive, legitimate, democratic, sustainable, socially just, and spatially and temporally just." Specifically, this needs to include the views of communities of origin throughout the supply chain of critical raw materials and, thus, in general, of the countries of the Global South.

From our results, the scientific discourse proposes a different overarching picture; the "just" transition is examined as a political issue associated with social problems and a conceptualization of the environment as a collective good. Our data suggest an increased relevance of critical perspective; the scientific literature highlights the failure of energy policies and the need for fair and just policies that do not generate inequality (Huang and Liu, 2021; Saraji and Streimikiene, 2023). Issues of democracy, equity, unequal power structures, and political ecology are prominent. Multidimensional views of justice that consider various interconnected dimensions are also present (Pellow, 2004; Rubino et al., 2020). Post-colonial studies also seem to have influenced the recent scientific debate: the power imbalance between states, governments, the EU, and the Global North toward affected communities stands out, as these communities suffer from actions and decisions that lack distributive and procedural justice, producing injustice and inequality.

More in detail, four cross-cutting discourses emerged from the analyses, expanding the central tenets of environmental justice and showing different nuances in principled and critical approaches. From a constructivist perspective, this suggests that EJ, as a social object, is far from having reached a definite representation and that its contours are still negotiated among political and scientific actors.

The first discourse resonates both in the policy and scientific corpora and focuses on the limits of current policies and the failure to apply distributive and procedural justice principles. Different discursive coalitions emphasize that not all Green New Deal-type climate proposals are economically supported by states and highlight the need for more worker guarantees. The scarcity of post-colonial perspectives, especially in research and intervention with African countries, is also stressed. This discourse calls for equitable policies that enhance distributive and procedural justice, equality, and equity and include communities in decision-making.

The second discourse shows a more radical argument against a "just" transition since any transition inevitably produces some form of injustice. For instance, at the international level, the transition in the EU often detriments non-EU countries; at the country level, where coal still plays a central role, the transition can be neither just nor sustainable; at the community level, whenever these are ignored and not involved in the decision-making and distribution of resources.

The third discourse adds a new perspective that calls for a different vision of justice and for whom. This discourse advocates

for incorporating the perspectives of Third Countries in the Global South. Amplifying the postcolonial voices and perspectives of the Global South is presented as an imperative to fostering a just and equitable transition that avoids generating inequality and respects human rights.

The fourth discourse fits with principled approaches to justice and stresses the importance of involving communities in decision-making through a participatory approach. It is prevalent in the scientific literature and occupies a marginal position in policy debates. A truly "just" transition can only be realized locally and if all stakeholders are involved in the decision-making process, starting with communities, activist movements, and workers. This discourse underscores the collaborative and participatory aspect of all actors involved, from states to industries, communities to social movements, in the form of alliance, solidarity, and shared responsibility. This approach is the key to achieving a transition inspired by the principles of equity and justice, which leaves no one behind and does not foster power asymmetries and inequalities.

From our point of view, only the first and, to a limited extent, the fourth discourses show some dialogical encounters between policy and scientific spheres. More critical and post-colonial studies and research suggesting alternative solutions do not find a voice in the analyzed political discourses, suggesting some form of silencing and a more decisive battle of ideas. On the contrary, there is a need for exchange and dialogue between the institutional and scientific discourses, recognizing the difference and epistemic plurality of the two perspectives. In this sense, it would be interesting to support an exchange between the two fields in the light of the motto: how do we "leave no one behind?" And how can we enlarge our understanding of actors and perspectives to be involved beyond top-down and even neo-colonial perspectives?

# 6 Conclusion

This contribution invites EU policymakers and academic scholars to a more systematic and open dialogue on what constitutes a just energy transition.

The first research question explored potential tensions in just transition discourses in institutional agendas, scientific debates, and between them. The present study showed that the fundamental discursive tension lies in the concrete implementation of transition policies on the one hand and the inclusiveness toward all actors and communities involved in the process on the other. The institutional discourse focuses on financial and economic aspects and the speed of the transition process, which cannot satisfy the elements of equity and justice emphasized in the scientific discourse. Conversely, the scientific discourse suggests that a transition can be just if it is local, inclusive, and involves all actors in a collaborative and participatory approach. This enhances the dimensions of justice with a view to equity and inclusiveness but slows down the speed of the transition process.

A further research question was about the consequences of selecting and implementing one specific discourse over others. In this regard, the tension is reflected in the approach adopted by states, the EU, and the institutional

discourse. A top-down approach may produce injustice and reduce the agency of local communities, social movements, workers, marginalized communities, and, from a global perspective, countries of the Global South. Conversely, including the voices of these communities means adopting a collaborative and participatory approach, leading to negotiations in policy decision-making and the transition process.

Then, the last research question concerned the possible modalities through which different—or even—competing— discourses may be connected. The results suggest that a conceptual effort is required to envision a connection between the arguments of the two contrasting discourses. Provocatively, we could label the transition depicted by the institutional discourse as economic and that of the scientific discourse as social and participatory. The two types of discourse are not compatible or symmetrical. Hence, from our viewpoint, the challenge for the social sciences is to illuminate the path that leads to a transition process aspiring to be truly "fair," "equitable," and "inclusive" for all actors involved, excluding no one from the decisions but accepting the compromise of slowing down the speed and its exclusively economic emphasis.

In this respect, further considerations are necessary. The institutional discourse surrounding the JTM does not address some of the concepts highlighted in the literature, especially those concerning greater inclusiveness, involving the voices of Global South Countries and minority communities in decision-making processes and resource distribution. Further research is needed to clarify whether this is due to the scale of intervention and the institutional paradigm within which this policy is situated. The inconsistencies and divergences between scientific elaboration and this specific institutional discourse should not be generalized to all political debates on just transition. In this regard, additional investigations are yet to be conducted, considering policies of different scales and locations and a broader typology of discourses beyond the institutional and scientific ones. In particular, by looking at a multitude of actors and texts, constructivist and critical approaches to discourse can contribute to identifying cross-cutting dynamics of exclusion (Newell et al., 2022) and how these are reflected in discourses (Sarrica et al., 2018; Biddau et al., 2023; Brondi et al., 2024), as well as the power dynamics that should be to subvert to give voice marginalized communities (Culley and Angelique, 2011). If we think of environmental justice not as a pre-defined object but as an ever-changing objective whose contours are the result of meaning-making processes, then exploring the discursive dynamics involved in policy meanings means uncovering issues of power that implicitly or explicitly silence "other" knowledge and ultimately disrupting them to promote a truly just and equitable energy transition (Sovacool, 2021; Cummings et al., 2023).

## Data availability statement

The datasets presented in this article are not readily available because the articles analyzed are subject to copyright. Requests to access the datasets should be directed to giacomo.chiara@unive.it.

## Author contributions

GC: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Validation, Visualization, Writing – original draft, Writing – review & editing. IT: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Validation, Writing – original draft, Writing – review & editing. MS: Conceptualization, Methodology, Supervision, Validation, Writing – original draft, Writing – review & editing. SB: Conceptualization, Funding acquisition, Methodology, Project administration, Resources, Software, Supervision, Validation, Writing – original draft, Writing – review & editing.

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## Supplementary material

The Supplementary Material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/fpos.2025.1572855/full#supplementary-material

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