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# Public participation and climate change governance: Between political approach and local actors' perspective in two Macaronesian territories

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Climate change (CC) is the major current environmental challenge influencing the balance of ecosystems, livelihoods, social organization, public health, and well-being. The Autonomous Region of Madeira and the Autonomous Community of the Canary Islands, considered outermost regions (ORs), form part of continental countries (Portugal and Spain, respectively) and integrate Macaronesia. Due to their location and idiosyncratic characteristics, they are also particularly vulnerable to CC. Regional and local mitigation and adaptation plans and strategies are in force, but policies still do not respond to CC challenges or fully recognize or integrate public participation in their definition and implementation. This article investigates the relevance of public participation in CC policies and how it has been carried out by decision-makers. Thereby, it intends to understand the evolution of CC policies in the archipelagos of Madeira and the Canary Islands, as they have met the interests of relevant scientific, administrative, and economic actors, often underestimating the contributions of other actors, and how public involvement and participation is key to resolve socio-environmental issues in the territories. With this aim in mind, we have conducted a document analysis of the legislation, programs, and strategies on CC, complemented by 20 in-depth interviews, 10 in Madeira and 10 in Las Palmas of Gran Canaria, to a group of local actors, including scientists, technicians, and politicians. Our study shows that despite the efforts leveraged by European and national guidelines, the *status quo* prevails, with political and institutional arenas systematically keeping their distance from concrete realities of quotidian life. The results show evidence that at international, supranational, and national levels, and at regional/local levels, CC policies often perpetuate domain ties, sectoral and private interests, and are outlined according to narratives not accessible to all actors. Therefore, discourses—political, academic, and corporate—prolong power relations and knowledge that express an institutionalised truth. Thus, we argue that proximity governance is crucial to raise awareness of socio-environmental problems, complement existing knowledge, incite action, and empower local communities. This means that without a collaborative endeavor to boost the required changes, individually and collectively, CC policies might be difficult to implement.

## KEYWORDS

governance, climate change policies, communication, public participation, Autonomous Region of Madeira and Autonomous Community of the Canary Islands

## 1 Introduction

### 1.1 Background

This paper focuses on the analysis of climate change (CC) policies in the Autonomous Region of Madeira and in the Autonomous Community of the Canary Islands, framed in European and national policies, equating the relevance of lay knowledge and public participation in the conception, design, and implementation of these policies and in the resolution of the main challenges of these territories.

Hence, we will start by highlighting the general scientific agreement that CC is one of the most dangerous environmental problems threatening life on Earth. It is also one of the most astonishing consequences of modern capitalist societies and their predatory interaction with nature and natural resources, assuming an undeniable global and anthropogenic characteristic (Rockström et al., 2009; Hamilton, 2015). The broad environmental crisis, with CC being its most visible feature, embodies a demanding challenge to governments and policy makers, scientists, institutions, and societies (Aldeia and F. Alves, 2019). It puts pressure and places, therefore, a heavy toll on present generations and may compromise future ones (IPCC, 2021; 2022).

### 1.2 Policy context

Although CC policies grant a special focus on mitigation strategies and plans, states and governments have reluctantly become aware of the relevance of adaptation at all levels of administration. Given that the nature and severity of CC impacts vary between countries and territories, and the ability to deal with them and adapt differs between communities, economic sectors, and regions, adaptation strategies will be more effective when designed according to regional and local contexts. Moreover, it is paradoxical that the *EU Climate Change Adaptation Strategy* was introduced only in 2013 (preceded by the Green Paper *Adapting to Climate change in Europe* in 2007 and the White Paper *Adapting to climate change: A European Framework for Action* in 2009). The main goal was to set frameworks and mechanisms for preparing each Member-State for present and future climate impacts, urging them to adopt national adaptation strategies and/or plans, and cementing adaptation into the EU's policies. Nonetheless, the approach is mostly political–managerial–sectorial. Communication and auscultatory procedures with the communities are not expected, regardless of their relevance in a well-succeeded adaptation action. In fact, the scope and effectiveness of CC communication are intricate challenges, taken on by even supranational level actors, like the IPCC, which compiled a guide for its collaborators entitled *Principles for effective communication and public engagement on climate change* (Corner, Shaw, & Clarke, 2018). Simultaneously, the complexity and heterogeneity of audiences, circumstances, sensitivities, and readiness to act, have led communicators to realize that the one-size-fits-all model does not actually work (Dupar et al., 2019).

In recent years, socio-environmental issues have been a privileged field of environmental policies and of most sectors, bringing together a wide range of stakeholders regarding decision-making and call to action. The Aarhus Convention of the United Nations Economic Commission for Europe (UNECE), adopted on 25 June 1998, sought to guarantee, for the first time, the legality and constitutionality of citizens' rights in terms of the environment, establishing as fundamental pillars: 1) the right to information; 2) access to justice; 3) public participation in decision-making processes (UNECE, 1998). In fact, our time is populated by a set of multidimensional problems, challenging traditional, political, and administrative structures, such as the socio-environmental crisis.

The awareness that CC already has very serious effects in Europe and worldwide, the scarcity of effective responses from the Member-States, and the realisation that the COVID-19 pandemic, linked to CC, highlighted the tragic consequences of insufficient readiness to act, led to the adoption by the European Commission on 24 February 2021 of the *New EU Strategy on Adaptation to Climate Change-COM(2021)82 final* (European Commission, 2021). It proposes to improve knowledge of the impacts and adaptation solutions; strengthen adaptation planning and increase climate risk assessments; accelerate adaptation measures; and contribute to building resilience globally, toward a smarter, faster, and more systemic adaptation. The new *Strategy* recognizes that European regions and citizens are directly affected by CC, that uneven exposure and vulnerability of different regions and/or socio-economic groups worsen pre-existing inequalities, and that the impacts of CC are not neutral (hence the need for differentiated adaptation initiatives), and pledges to reinforce community engagement in planning/implementing locally led adaptation, to focus on informal settlements, in addition to directing financial resources to the local level, but it still follows a top-down approach, being reluctant to admit individual's and communities' knowledge, practices, and experience as critical to increase awareness, social engagement, and the pursuit of adequate CC solutions.

This scenario echoes throughout national policies as well. Thus, in Portugal and in Spain, it is apparent that the emphasis of legal and official documents still lies on mitigation and on sectoral or intersectoral policies, even in what adaptation strategies and/or plans are concerned. As it happens, in the *Portuguese National Adaptation Strategy* (ENAAC 2020), mechanisms for public participation and attention to diverse socio-environmental contexts are virtually absent. Thus, even though the first ENAAC, in 2010, included the objective of 'participating, raising awareness, and disseminating—increasing awareness of climate change and its impacts' and the *ENAAC 2020* refers to 'raising awareness of the population with a strategic focus on schools' (APA & Governo de Portugal—Ministério do Ambiente, Ordenamento do Território e Energia, 2015:17), there is no reference to the integration of non-formal and lay knowledge. In the Spanish case, policies and environmental regulatory framework face obstacles owing to the statutory development of Autonomous Communities and the performance of the local administration

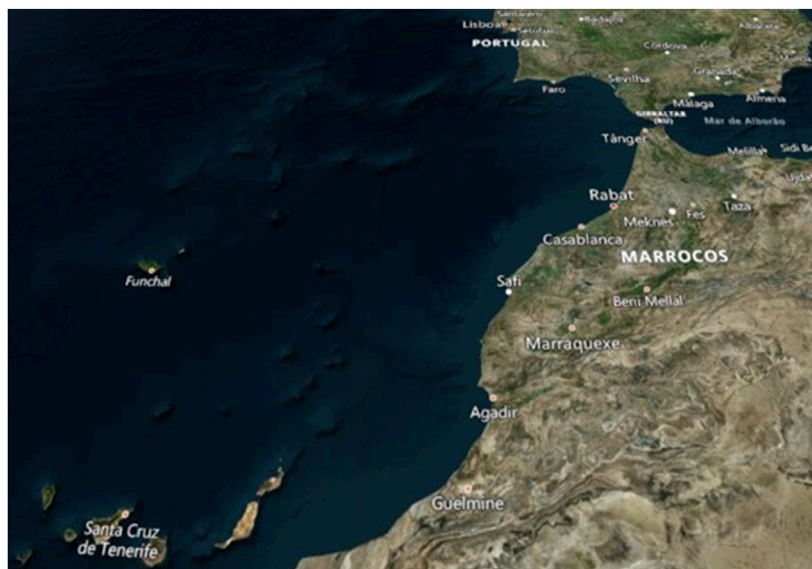


FIGURE 1

Location of the Canary Islands and Madeira archipelago.

(occasionally colliding with the environmental competences of the Autonomous Communities). The Spanish environmental policy is, therefore, divided between state directives, premises of the Autonomies, and subsequent adaptation of both to the European rules (Navalpotro, 1998). In terms of adaptation, the *Spanish National Climate Change Adaptation Plan* (PNACC) established, 4 years before the Portuguese strategy, that participation is a ‘very significant’ aspect (Oficina Española de Cambio Climático, 2006:45). It is noted that in the design and development of impact assessment projects carried out by experts, engagement of all parts involved should feedback the work in progress. The PNACC also foresees a matrix with all stakeholders at global (e.g., UNFCCC, WHO, and UNDP); national (e.g., national government and the various ministries); regional (e.g., regional government, institutes, universities, and media); and local (e.g., local groups, NGOs, civil protection, vulnerable groups, farmers, foundations, and other scientific institutions) levels for each of the initiatives held.

Albeit the PNACC goes, in theory, further than the ENAAC 2020 in terms of communication and participation, in practice, the knowledge and contributions of lay people are not only poorly considered but also subordinated or even excluded, leaving out life contexts and local interactional dynamics, in the name of one-size-fits-all strategies and plans (F. Alves et al., 2020). Seemingly, public participation is required solely as a strategy for compliance with the political agenda. Consequently, subjects are viewed as mere passive recipients of information, and not as active agents of positive change.

The Autonomous Region of Madeira and the Autonomous Community of the Canary Islands, as outermost regions integrating the Macaronesia (Figure 1), are not only unique in their geography (location) and natural characteristics (microclimates, biodiversity, and large number of endemic species) but also in their social organization, culture, and mindset. These aspects contribute to regional and local identity/sense of belonging, given that the construction of human island

identity entails a contrast with the non-islander (Álvarez Santos, 2022), while paradoxically evidence increasing vulnerability to CC (Gobierno de Canarias, 2013; Institute for European Environmental Policy, 2013; Governo Regional da Madeira-SRARN, 2015; IPCC, 2021). Still, some authors, including Ilan Kelman (2018), disagree that the lens normally used to frame islandness aspects (boundedness, smallness, isolation, and littorality) would necessarily justify vulnerability and/or resilience. Kelman argues that these two features are socially and culturally constructed, being able to twist discourses and reinforce stereotypes. Hence, ‘vulnerability and resilience, being neither opposites nor independent variables nor objective variables, are most supportive of island development endeavors when accepted as being subjective, contextualized, and nuanced’ (Kelman, 2018:6).

Regional mitigation and adaptation strategies and plans aim to address CC in these territories, providing decision-makers with knowledge and instruments to deal with the effects of CC on the islands’ most relevant sectors, specifically agriculture, hydro-geomorphologic risks, tourism, energy, biodiversity, health, and hydrological resources (Governo Regional da Madeira-SRARN, 2015). Moreover, CC is closely related to other problems (e.g., disinvestment in the primary sector, fossil fuel dependence, and tourism massification), but this interconnectedness seems to be overlooked by governments, administrations, technicians, and researchers, even when considering major territorial topics (Pina et al., 2019). The ensuing fragmented and segmented overview is also the cause and consequence of a persistent institutional and legal ignorance of lay rationalities and practices, critical for realizing how the subjects understand CC effects on their everyday life and deal with it (F. Alves, 2011; F. Alves et al., 2014; F. Alves & Schmidt, 2022). As it happens, the individual and social perception of not being heard—despite the otherwise discourse from supranational (e.g., the European Union); national (Portuguese and Spanish central governments); and regional (autonomous governments)

actors—contributes to societal distance from public arenas and policy-making fronts. Consequently, individual and collective intakes, regarding formal and informal political and institutional participative initiatives, are still insufficient (more in Madeira than in the Canary Islands and in the Gran Canaria, from what we were able to ascertain). The frustration with the *status quo* has led individuals to join in social movements or incorporate activism associations/NGO's, mobilizing concurrently with public powers, and occasionally against them.

### 1.3 Socio-environmental challenges and governance

The increasing awareness of socio-environmental and climatic problems, together with the urgency to act, led to a change of direction that accompanied, in the last quarter of the 20th century, the development of a theoretical corpus, methodologies, and practices of better governance, directed toward the reform of the State and Public Administration, with power transfer processes in wider or narrowed scales and levels, and in variable directions. The diffuse distribution of authority and power is especially relevant in multilevel governance (F. Alves et al., 2020; J.E.M.; Alves, 2018).

Hence, the suspension of the bureaucratic State and the classic governance of the Public Administration, due to several factors such as markets and strengthening of networks (Rhodes, 1996), constitute the bases of governance as an alternative to centralism; and the State, while maintaining its national sovereignty, witnesses the transfer of power to intermediate scales, which also share the coordination, definition, and implementation of policies (J.E.M. Alves, 2018). In epistemological terms, the concept of governance is linked to the aspects of territorial organization, where public policies are decided; in doctrinal terms, it is close to the theories that advocate the approximation of the State to the people and the interdependence between sectors (Innes and Booher, 2003 apud J.E.M. Alves, 2018), and the notions of participatory democracy and models of collaborative governance (Ansell and Gash, 2008 apud J.E.M. Alves, 2018).

The concept of multilevel governance, developed in the early 1990s by Liesbet Hooghe and Gary Marks, within the scope of the second phase of studies on European integration, is presented as an attempt to understand the emergence of forms of governance distributed across different territorial levels. Thus, multilevel governance is characterized as a system in which 'governments at a supranational, national, regional, and local scale are indisputably linked to territorially wide policy networks' (Marks, 1993:401-402), and the centripetal decision-making process, with an axis in the EU institutions, gives way to a centrifugal process in which decisions pass from the Member-States in a vertically upward direction, to the supranational institutions, or in a vertically downward direction, to the subnational structures of government, which were, inclusively, developing direct access to European bodies (e.g., European Commission), suppressing the role of Member-States as sole intermediaries between subnational and supranational levels of government (Marks, 1993), or even horizontally between different spheres of influence, including the non-governmental bodies, markets, and civil society (Banche and Flinders, 2004 apud Monteiro & Horta, 2018). This notion of multilevel

governance is based on the principle of subsidiarity, preventing decisions from being brought together only at one level of power and that policies are implemented at an inadequate territorial and institutional level, which implies 'the sharing of responsibilities between the different levels of power and the broad participation of the main stakeholders in the management of the public policy cycle' (Monteiro & Horta, 2018:11), through a continuous negotiation process and the use of a set of participation mechanisms.

The governance model resulting from the EU Cohesion Policy underlines the importance of subnational circles and civil society organizations, in addition to national concerns and the configuration of different national and regional interests (Piattoni, 2016). So, the insistence on the subnational dimension has given rise, in Portugal, as in Spain, and in other European countries, to new regional stages of public policies, demanding a rethinking of the actors involved in the design, implementation, and evaluation of policies and public services. Thus, the inter-municipal entities, responsible for functions that were carried over from the central Public Administration, and the common performance of the competences conferred by the municipalities gained political-administrative and thematic-sectoral importance (Monteiro & Horta, 2018). The transfer of competences from the central administration to the regions takes place via sectoral or territorial contracting mechanisms, and decentralization via legislation. Indeed, the growing process of decentralization and the transfer of powers to inter-municipal entities and municipalities is part of the multilevel governance model, understood as a specificity of the broader concept of public governance (Monteiro & Horta, 2018).

Multilevel governance has been widely discussed within the scope of political, administrative, and institutional responses to socio-environmental and CC issues, which, moreover, present themselves as a severe phenomenon, of a transnational nature and in constant evolution, and which pose important challenges to political systems and administrative bodies. The governance mechanisms, the diversity of arenas, and the heterogeneous multiplicity of participants converged to the current relevance of multilevel governance, of a polycentric and multifaceted character (F. Alves et al., 2020), which gradually moved away from the top-down perspective, emphasized in key moments of climate policy, such as the Kyoto Protocol and the Paris Agreement (Wurzel et al., 2019 apud F. Alves et al., 2020:191). Thus, between and within countries, authority and influence in the formulation of CC policies began to be distributed across various levels of government (supranational, national, and subnational) and mobilized a growing number of actors, governmental and non-governmental—e.g., scientists, economic and environmental groups—in the sense of designing, defining, and implementing policies and initiatives. Some authors (e.g., Meadowcroft, 2009) stated that governance at closer levels will eventually be more fruitful than global governance. However, a general tendency toward standardization persists, even with regard to adaptation, namely, through the adoption of national strategies and plans, (usually integrating sections dedicated to mitigation and mechanisms assessment), which, while referring to non-governmental stakeholders, keep presenting an institutional nature, homogeneously prioritizing the global agenda and certain sectors to the detriment of objectives that highlight the

heterogeneities and complexities of contexts and their vulnerabilities. The lack of attention to the idiosyncrasies of regional and local realities thus creates disparities that may indeed jeopardize the implementation and effectiveness of national policies (F. Alves et al., 2020), as is the case with CC communication and citizen participation.

## 1.4 Research framework

We recall that the research question of this paper is to ascertain the relevance of public participation in CC policies and how decision-makers have been addressing the topic in the archipelagos of Madeira and of the Canary Islands. Bearing that in mind, we have outlined two main objectives of this research: the first one is to understand how CC policies have evolved, frequently operating close to relevant scientific, administrative, and economic circles, and what part does public participation play in that matter; the second one is to highlight public involvement and participation as key factors to tackle socio-environmental concerns in the territories. This much is acknowledged by international (e.g., IPCC, 2022), European (e.g., European Environment Agency, 2022), and national (e.g., Oficina Española de Cambio Climático, 2006) establishments, particularly in terms of adaptation (F. Alves et al., 2020), and would largely contribute to effective climatic responses and to empower the communities, but there is still a considerable gap between theory and its feasibility in specific contexts.

Indeed, communication and citizen participation are two structural pillars of the health of liberal representative democracies, and their effectiveness is inseparable from the success of public policies on the environment and climate. However, the successive weaknesses and failures of these democracies call into question the reasons for the legitimacy that democracy grants to political systems (as public recognition and acceptance of the validity of rules of a political system and the decisions of its leaders), bringing about the problem of ungovernability (Aragão, 2005). The crisis of democratic systems seems to get reinforced, among other reasons, because it feeds on itself, through interactions and interdependencies between (the absence of) effectiveness and legitimacy since the less effective the policies, the more the credibility of the structures diminishes, and the growth of popular contestation makes it difficult to ratify appropriate policies. Governance emerges to overcome ungovernability and find solutions to new concerns of society, such as CC, looking for less authoritarian, formalized, and hierarchical forms of governing, which can be simultaneously legitimate, effective, responsible, and coherent. For that purpose, it is essential to develop more articulated, dynamic, and successful communication processes, countering the tendency of citizens to move away from public arenas.

It would be expected that, due to their characteristics, small islands can escape this reality, but our study reveals that communication gaps, overlooking fundamental actors, mirrors and contributes to the disarticulation and ineffectiveness of policies, and to the aggravation of the consequences of socio-environmental and climatic problems even in contexts of apparent proximity. Hence, we believe that in order to be able to provide a double contribution to the scenario, doing what has

not been done so far, first, we thoroughly analyze regional and local policies and the role of participation in respect of CC and second provide information and tools to policy and decision makers in order to facilitate communication with all actors, understand the link between CC and other territorial issues, and facilitate potential proactive processes and timely responses to these unescapable challenges.

The structure of the paper will follow the following criteria: contextualization of the two regions; methods and techniques to collect and analyze the data (desk review of the policies and interviews with diverse actors in Madeira and in Las Palmas de Gran Canaria); presentation of the main results; discussion; and conclusions.

## 2 Materials and methods

### 2.1 The regions

The outermost regions (also including the Azores, Guadeloupe, French Guiana, Martinique, Réunion, Saint Martin, and Mayotte) exhibit specific characteristics, defined in Article 349 of the Treaty on the Functioning of the European Union (TFEU), namely, i) being geographically distant, in a situation of insularity or enclave; ii) remoteness from the main trade flows and economic dependence; iii) difficult topographical and climatic conditions, with greater vulnerability to CC and extreme weather events, as underlined by the EU Strategy on Adaptation to Climate Change (European Commission, 2013). These regions are autonomous administrative entities, in the sense of subnational administrative divisions of sovereign states (Portugal and Spain), and benefit from a certain degree of autonomy (i.e., self-governance), albeit subsidiary of national governments. Consequently, in view of their distance, isolation, geographical context, and socio-economic circumstances, regional autonomies hold their own organic laws, government, and administration.

The Madeira archipelago, of volcanic origin, is located in the North Atlantic, on the African plate, about 900 km southwest of mainland Portugal, approximately 450 km north of the Canary Islands, and 630 km from the Moroccan coast, comprising a total area of 801 Km<sup>2</sup> (DREM, 2019). The archipelago comprises Madeira and Porto Santo (the only two populated islands); Desertas Islands (Ilhéu Chão, Deserta Grande, and Bugio); and Selvagens Islands (Selvagem Grande, Selvagem Pequena, and Ilhéu de Fora). Tourism is the most relevant activity and the main catalyst for regional economy (the same in the Canary Islands), representing between 25% and 30% of the direct global impacts on GDP, and is responsible for around 12%–15% of the jobs (Governo Regional da Madeira, 2015).

The Canary Islands, also of volcanic origin, are located in the Atlantic Ocean, on the African plate, southwest of Spain and northwest of Africa, opposite the coast of Morocco. The territory comprises eight islands and five islets, covering a total surface of 7447 km<sup>2</sup>, comprising, in 2019, about 2,153,389 inhabitants (Instituto Canario de Estadística, 2020), which makes it the most populated region in Macaronesia. In political-administrative terms, the archipelago is one of the 17 Spanish autonomous communities, comprising seven islands with their own administration (El Hierro, La Gomera, La Palma, Tenerife, Fuerteventura, Gran Canaria, and

TABLE 1 Lists of documents.

Document	Level	Content
Kyoto Protocol	International	The Kyoto Protocol was signed in 1997, in Kyoto, Japan. It operationalizes the United Nations Framework Convention on Climate Change by compelling industrialized countries and economies in transition to limit and reduce greenhouse gas (GHG) emissions
Paris Agreement	International	The Paris Agreement is a legally binding international treaty on CC. It was adopted by 196 parties at COP21 in Paris, on 12 December 2015. Its goal is to limit global warming to well below 2, preferably to 1.5°C, compared to pre-industrial levels
Glasgow Climate Pact	International	The Glasgow Climate Pact was the formal outcome of COP26 (31 October–13 November 2021). The Pact applies to all countries that are parties to the Paris Agreement and reinforces efforts to reduce GHG emissions
European Adaptation Strategy on Climate Change	European	The first European Strategy regarding CC adaptation was adopted by the European Commission in 2013. It acknowledged that mitigation efforts were not enough and that adaptation measures are critical to deal with climate impacts and their economic, environmental, and social costs. The new EU Adaptation Strategy was adopted by the European Commission, in 2021, setting out how the EU can adapt to CC impacts and become climate-resilient by 2050
National Climate Change Adaptation Plan (PNACC, in Spanish)	National	The first PNACC was adopted by the Oficina Española de Cambio Climático, in 2006. The National Climate Change Adaptation Plan 2021–2030 replaced the earlier version as a reference framework for the coordination of the Public Administrations in the activities of impact assessment, vulnerability studies, and adaptation to CC in Spain
National Adaptation Strategy to Climate Change (ENAAAC, in Portuguese)	National	Portugal has had an ENAAAC since 2010. In 2015, the strategy was renewed, giving place to ENAAAC 2020, with a deadline by 2020, extended to 2025 due to the approval of the National Plan of Energy and Climate (PNEC 2030). The main objectives are i) improve knowledge about CC, ii) implement further adaptation measures, and iii) promote the integration of adaptation in sectorial policies
Canary Strategy of Climate Action (ECAC 2040)	Regional	It is the reference framework instrument for climate action in the Canary Islands and seeks to mark the path of decarbonization, adaptation to climate change, and new governance processes
Insular Strategy of Adaptation to Climate Change and Boost of a Low-Carbon Economy - Gran Canaria	Regional/local	The Cabildo of Gran Canaria, coordinator of the <i>Pacto de los alcaldes para el Clima y la Energía Sostenible en Gran Canaria</i> , intended a more ambitious local action about CC. The strategy, presented in 2022, is part of the development of the project MAC-CLIMA and its elaboration arised from the recommendations made in the Report of Operational Supervision of the Adaptation of the Island Councils to Climate Change, aiming toward the objectives and commitments of energy policies and climate change at the national level
CLIMA-Madeira: Adaptation Strategy to Climate Change in the Autonomous Region of Madeira	Regional	The strategy was adopted by the Regional Government, in 2015, following European and National guidelines. The aim was to implement it based on impacts and vulnerability assessment in the sectors: energy, biodiversity, agriculture and forestry, water resources, hydro-geomorphological risks, human health and tourism, with periodical evaluation and prioritization of adaptation measures. A revision of the document is due

Lanzarote); La Graciosa was recently included as the eighth island and together with the uninhabited islets of Montaña Clara, Aleganza, Roque del Este, and Roque del Oeste forms the Chinijo archipelago. Gran Canaria has a total area of 1,560 km<sup>2</sup> and is the most populated island in the province of Las Palmas, accommodating, in 2019, about 866,572 inhabitants (Statista, 2020) spread over the municipalities of Agaete, Agüimes, Artenara, Arucas, Firgas, Gáldar, Ingenio, Mogán, Moya, Las Palmas of Gran Canaria, San Bartolomé of Tirajana, San Nicolás of Tolentino, Santa Brígida, Santa Lucía of Tirajana, Santa María de Guía, Tejeda, Telde, Terror, Valleseco, Valsequillo of Gran Canaria, and Vega of San Mateo. The island is home to 33 protected areas that

form the *Red Canaria de Espacios Protegidos*, in addition to incorporating several sites recognized by the UNESCO as Biosphere Reserves. Alongside Madeira, some areas also belong to the Natura 2000 network, in a total of 42.06% of terrestrial protected territories and 9.88% of marine protected territories.

## 2.2 Methods and techniques to collect and analyse the data

We have designed the research in two steps: a desk review of the policies and interviews with different actors in each region.

Regarding data collection strategies, we use documentary research of the normative and legal framework on environment and CC at international, European, national (Spain and Portugal), and regional/local levels (Madeira and the Canary Islands, with an emphasis on Gran Canaria). Thus, the body of evidence revealed the awareness that CC is a global problem also requiring policies and responses at small-scale levels. Therefore, we have considered milestones of environmental and climate policy, such as the Kyoto Protocol (UNFCCC, 1998); the Paris Agreement (United Nations, 2015); the Glasgow Climate Pact (UNFCCC, 2022); the EU Adaptation Strategy on Climate Change (European Commission, 2013); the National Climate Change Adaptation Plan—PNACC, in Spanish (Oficina Española de Cambio Climático, 2006); the National Adaptation Strategy to Climate Change—ENAAC, in Portuguese (APA & Governo de Portugal—Ministério do Ambiente, Ordenamento do Território e Energia, 2015); the Canary Strategy of Climate Action—ECAC 2040 (Gobierno de Canarias, 2022); and the CLIMA-Madeira: Adaptation Strategy to Climate Change in the Autonomous Region of Madeira (Governo Regional da Madeira-SRARN, 2015).

Table 1 lists the different types of documents analyzed at international, European, national, and regional levels, providing details of their content.

Additionally, with the purpose of deepening, through semi-structured interviews, the sense and meaning of the perceptions about CC, especially their relationship with civic epistemologies (Jasanoff, 2005) and with participation mechanisms, in the development of more effective adaptation and mitigation policies, we have interviewed 10 participants in Madeira and 10 in Las Palmas. The sample selection did not obey the principles of statistical representativeness, but of sociological representativeness in relation with the object of study, attentive to diversity. The interviewees signed an informed consent, and full anonymity regarding their identity and answers was guaranteed.

However, we intended to target actors who work directly or indirectly in the domain of CC and who have the means to investigate and greater capacity to decide, without forgetting other social actors that are crucial to understand the socio-environmental crisis affecting the territories and may also contribute to its resolution. This research involved interlocutors from various fields and professional areas, levels of education, and sensitivities. Although there was a predominance of members of the Regional Government of Madeira and the Gobierno de Canarias, local administrative entities (Cabildo de Gran Canaria) and local government (Madeira), technicians, educators, teachers, researchers, and specialists in the area of CC or related areas, we have extended the range of participants to include civil protection agents and firefighters, members of NGOs and civil associations, representatives of the primary sector, and general population. This is the reason why most of our interviewees are more educated. Although it may be desirable to maintain gender parity, this was not a pre-ponderant factor. So, we had more male participants (four women and six men, in Madeira; three women and seven men, in Las Palmas), which eventually relates to the fact that there are more men in government organizations, in leading positions and in technical functions, expressing structural inequalities.

In short, our sample comprises 13 men and seven women, aged between 34 and 60 years, most of whom are highly educated (from students to having higher education, with a predominance of

bachelor's degree (8) and doctoral degree (6), living in the Madeira Island and in the Canary Islands. Based on their sociographic characterization, respondents were coded as follows:

Las Palmas, female, 43, professional degree, hotel maid.

Las Palmas, male, 58, doctorate degree, physicist and CC researcher.

Las Palmas, male, 45, doctorate degree, eng. and department coord. in the Canary Islands Institute of Technology.

Las Palmas, male, 53, bachelor's degree, environ. depart. Cabildo Gran Canaria.

Las Palmas, male, 42, master's degree, head of climate change management, Government of Gran Canaria.

Las Palmas, male, 52, doctorate degree, head of the Gran Canaria's Insular Energy Council.

Las Palmas, male, 54, bachelor's degree, head eng. environ. depart. Cabildo Gran Canaria.

Las Palmas, male, 50, master's degree, eng. and INTERREG-MAC/ADAPTaRES.

Las Palmas, female, 38, master's degree, educator and NGO manager.

Las Palmas, female, 45, environ. educator at Global Conv. Of Mayors for Climate and Energy.

Madeira, male, 49, middle school, bus driver and farmer.

Madeira, female, 58, doctorate degree, school principal.

Madeira, male, 53, bachelor's degree, firefighter.

Madeira, female, 34, student, environmental platform coordinator.

**Madeira, male, 60, doctorate degree, geologist and univ. professor.**

Madeira, male, 46, bachelor's degree, head of environment and climate action, Government of Madeira.

Madeira, female, 55, bachelor's degree, PR in a local council.

Madeira, female, 47, bachelor's degree, MP.

**Madeira, male, 56, doctorate degree, univ. professor.**

Madeira, male, 52, bachelor's degree, agronomist.

The interview script comprised two major domains, one related to the perceptions and conceptions of CC and the other related to CC policies. In this article and given its objectives, we focus exclusively on the domain of the policies, including participation. Hence, the interviewees were asked about aspects such as the responsibility to act, the performance of regional and local political-institutional leaders in responding to the effects of CC, and the main challenges in the Autonomous Community of the Canary Islands (also in Gran Canaria) and in the Autonomous Region of Madeira, alongside with the incentives for participation and its mechanisms.

Finally, the interviews were transcribed and subjected to content analysis (Bardin, (1977)[2002]), which led us at first to identify the main categories and sub-categories and which were systematized and validated throughout the analysis of all the interviews. In this content analysis, the interviews were also coded taking into account the region (Madeira or Las Palmas), gender, age, academic qualification, and professional activity.

### 3 Results

Following what was emphasized in the methodology section, we have organized the analysis of the results according to two central

topics, specifically: the document analysis (policy analysis) and the results of the interviews related to policies, in particular participation. The core conclusions emerging from the examination of each of the topics will also be imparted.

### 3.1 Climate change framework policies in the Autonomous Region of Madeira and the Autonomous Community of the Canary Islands

The international agenda related to socio-environmental and climate issues has seen advances, setbacks, and impasses. Efforts of more than three decades culminated, in the 1990s, in a scenario that underlined the urgency of a serious commitment of supranational and national bodies with CC, concentrating mainly on initiatives aimed at containing global warming and GHG emissions. The focus on mitigation over adaptation was (and still is) apparent in all levels and scales. The *Kyoto Protocol*, binding industrialized nations to observe mandatory limits on greenhouse gas emissions, sets the focus of European, national, and regional climatic policies. Despite its relevance, the outcomes would not fulfil the expectations, and in 2015, the *Paris Agreement* was signed, insisting on limiting the rise of global temperature to 2°C, ideally 1.5°C, on international cooperation as an instrument to combat CC and an economic paradigm shift aimed toward low-carbon economy.

The European climate policy was only consolidated in the beginning of the 21<sup>st</sup> century, even though the European Environment Agency had been created in 1990. Backing the international agenda, the focus was on containing the increase in temperatures and global warming by reducing GHG emissions and making the transition to a low-carbon economy. Thus, the *1st European Climate Change Program* (ECCP), launched in 2000, emerged as a process of elaborating climate policies with which the EU committed itself to complying with the *Kyoto Protocol* (13 years after its signature). In line with the Directive 2006/32/EC of the European Parliament and of the Council, dated 5 April 2006 and, subsequently, the Directive 2009/28/EC, dated 23 April, and in accordance with the provisions of the *Europe Strategy 2020* (European Commission, 2010) regarding mitigation targets, Member-States committed to a package of measures on climate and energy by 2020. The link between climate and energy goals in 2020 was reinforced by the EU Heads of State and Government for the period 2021–2030, pointing to a reduction of at least 40% in GHG emissions compared to 1990, a 27% share of energy from renewable sources in total consumption and a 27% increase in energy efficiency, which, judging by the evolution of the global scenario up to now, is far from being achieved.

Yet, despite the endeavor and the evolution of national energy efficiency policies, the European Commission recognized that, to meet the energy efficiency target, it would be necessary to change the European legal framework. The Directive No. 2012/27/EU of the European Parliament and of the Council, dated 25 October 2012, established a new framework to promote energy efficiency in the EU and actions to achieve it, and the roadmap targets for a competitive and low-carbon economy by 2050. In 2014, a policy framework for climate and energy for the period 2020–2030—COM (2014) 014 final (European Commission, 2014) was approved. In July

2016, the European Commission published the communication on the European Strategy for low-emission mobility—COM (2016) 501 final (European Commission, 2016), assuming that transport represents almost a quarter of GHG emissions in Europe and is the biggest cause of air pollution in cities.

In the Autonomous Region of Madeira and the Autonomous Community of the Canary Islands, CC policies have gradually evolved in since the 2000's, reinforced by the need to comply with European and national targets, and responded to the increasingly visible CC effects either in both regions or in each of them, raise public awareness, and incite the same action, although advances were slow, notably in Madeira. Indeed, the *CLIMA-Madeira: Adaptation Strategy to Climate Change in the Autonomous Region of Madeira* was approved only in 2015 (Governo Regional da Madeira-SRARN, 2015), again following a top-down approach, and long after the first *Canary Islands Climate Adaptation Plan*, in 2010 (Martínez-Chamorro, 2010). The latter contained a whole section dedicated to communication, training, and awareness, while accentuating the importance of the entire society working together to achieve climate goals.

A variety of other environmental and climatic regulations have since then emerged, like the *Municipal Strategies for Adaptation to Climate Change* (e.g., the Funchal adaptation strategy), the *Action Plan of the Europe 2020 Strategy in the Canary Islands* (Gobierno de Canarias, 2013), and the *Insular Strategy of Adaptation to Climate Change and Boost of a Low Carbon Economy—Gran Canaria* (Cabildo de Gran Canaria, 2022), anchored in the cited international and European guidelines, like the Paris Agreement and the new *EU Strategy on Adaptation to Climate Change* (European Commission, 2021). Thus, CC policies at regional and local levels express allegiance to the European and national frameworks and to the political-administrative autonomous circumstance of these regions. The cooperation program Spain-Portugal (Madeira, Canaries and Azores) INTERREG VA—MAC 2014-2020, has mapped interterritorial cooperation, aiming to address the critical cross-border challenges associated with the implementation of the *Europe 2020 Strategy* in the three archipelagos. Two of the five axes are related to CC adaptation and risk prevention (axis 3), along with reducing the environmental impact of the economic development and encouraging resource efficiency (axis 4). The INTERREG VA—MAC 2014-2020 will give way to the INTERREG VI-D—MAC 2021–2027, expectedly in Autumn 2022, incorporating a new range of countries, namely, the Ivory Coast, Ghana, Gambia, Zambia, Senegal, Mauritania, and Cape Verde.

In any case, similar to what was previously noted, the dominant conceptions of CC continued to support mainstream techno-scientific and political-institutional standpoints, frequently ignoring or depreciating non-expert knowledge of those who actually live in the territories and are deeply acquainted with the idiosyncrasies and the challenges they pose.

### 3.2 Addressing participatory processes in climate change policies and agendas

As previously referred, a number of documents issued forth, backed by governments, secretaries, ministries, and administrations,



stress the importance of CC communication (frequently intermediated by the media) and public participation to fulfil the aims of shared governance and co-decision-making (e.g., UNECE, 1998; European Union, 2004; Aragão, 2005). Ideally, public contribution would work as a complement to scientific/technical expertise, guiding CC policies.

In theory, this seems a necessary and fair endeavor of liberal democratic societies, emanating from citizens and societies' right to access information and fundamental justice, as much as participate in co-decision processes concerning socio-environmental issues, but in practice, it is not often so straightforward. As the literature states and we have ascertained from our study, the typology of the term 'participation' has been oscillating from more passive forms, in which the public is a mere receptacle of information about decisions already taken, to self-mobilization in which people take the lead, regardless of external agencies (Pimbert & Pretty, 1996 apud Few et al., 2007). In between stand out views that resort to consultative mechanisms for submission of opinions about planned strategies, as well as interactive processes in which people are summoned to participate in joint decisions. Moreover, there is a substantial contrast between scientific/expert/technical consultation and public consultation. In global terms, but also nationally and regionally/locally, the levels of public participation in relation to fracturing problems, socio-environmental topics included, fall short of the requirement. The result is often social apathy (Juneman, 2013; Lertzman, 2015), aided by what is perceived as a disincentive to collective action. On the other hand, participatory processes are directly and indirectly linked to forms of power, and pre-existing power relations persist, conditioning participation in the multiple forums, regardless of the official bodies prerogative of promoting bottom-up decisions (Few et al., 2007).

Participation is particularly relevant in CC adaptation, where non-global scales are addressed. Ideally, adaptive actions would be designed according to contexts, with implications for a relatively limited number of actors, and would bring together knowledge linked to local circumstances; therefore, the broad inclusion of actors in the formulation of adaptive strategies is not only of practical value but also has an ethical connotation, too (Few et al., 2007). Participation aimed at tackling CC can also bump into other obstacles for Public Administrations, in managerial tendencies (strategic planning is affected by hierarchies of interests and the predominance of technical-rational thinking), and in spatial- and temporal-scale dilemmas. One more difficulty arises from the fact that public participation processes are normally imbued with an institutional background, from which these pre-existing power relations emanate, and it is not clear to citizens as to what extent their contributions will influence decision-making policies. The idea of illusion of participation can culminate in general dissatisfaction, lack of trust in structures and institutions, possible hostilities, opposition, and defiance of authority (Spash, 2001; Treby & Clark, 2004 apud Few et al., 2007). It is not enough, then, to make the apology of public involvement as a deliberative process toward the bottom up; it is essential to properly specify the objectives, limits, expected results, and ensure the real impact that participation will have in the formulation of policies and their implementation (F. Alves et al., 2020).

### 3.3 Adventuring in the field: Perceptions on climate change policies and participation

In order to ascertain CC perceptions, attributed causes and consequences, and people's perspective on CC policies, including political and legal action, as aforementioned, we have conducted 10 in-depth interviews in Madeira Island and 10 in Las Palmas of Gran Canaria, for a variety of actors (scientists and researchers, politicians and decision-makers, technicians, administrative actors, educational agents, and population).

The discourses revealed that among regions and in each of them, respondents' perceptions on CC *visibility* in their everyday life and in their professional life oscillated between the idea that islands are less prone to CC, and the opposite notion.

*"Here in Madeira, the impact of climate change is still not very noticeable due to being an island and there is the regulation of the sea, in environmental terms, in meteorological terms; therefore, it goes beyond some of the effects of global warming."* (Madeira, male, 53, bachelor's degree, firefighter)

*"The boring talk of the European Union regarding the Outermost Regions and all this. To give more money to the big banana landowners, with the moto 'we poor canaries live in an outermost region. . .' It's a lie! The Canary Islands and Madeira are at the center of the planet! No one is better situated than us. We are between Europe, Africa and America, right? We were the crossing point for Christopher Columbus."* (Las Palmas, female, 38, master's degree, educator and NGO manager)

*"The situation is very worrisome."* (Madeira, male, 49, middle school, bus driver and farmer)

Those stating the interference of CC in everyday life identified in the Gran Canaria and in Las Palmas, also in Madeira, the occurrence of less exceptional extreme climatic phenomena, putting security at risk and interfering with the regional economy (heavily geared toward tourism). This means temperature rise, subsequent heat waves (mainly the Canary Islands and in Gran Canaria), and large wildfires, plus changes in rainfall patterns, and a greater incidence of tropical storms (in the Canary Islands and in Gran Canaria) and alluvium (in Madeira), with danger of landslides. The increase in sea level, with loss of coastal and beach areas, was mentioned, too. This perception follows what literature has been mentioning regarding the higher frequency and severity of extreme events, with regional/local effects, in addition to global effects (McMichael et al., 2006; IPCC, 2007; 2013; 2014). The perceptibility of CC effects instigates preoccupation and precipitates the urgency of climate action.

Indeed, to the process of dealing with the socio-environmental crisis and CC converge the understanding of the topic, the causes and consequences attributed and how they manifest in daily life, along with the perception of the emergency to act and who should set the example. The way in which CC is dealt with is, consequently, inseparable from the agency of individuals, and from the action and responsibility that go beyond them, summoning collective and political-institutional structures at different levels and scales.

The political–institutional field is a privileged arena for discussing CC (Giddens, 2009), and the discourses involving public policies are multiple, giving rise to a myriad of debates revealing consensus or disputes (Dryzek, 1997). This is also the field to which most of our interlocutors attributed greater means and responsibility for acting (despite the reference to individual responsibility and the notion of co-responsibility).

*“I think that the powerful ones, like the EU, and USA . . . the big ones (...). Society, people should change a bit, too (...).”* (Las Palmas, female, 43, professional degree, hotel maid)

*“We, in small matters, do what we can do, within our possibilities (...). And then the politicians, who are the ones who can really make drastic changes. It is in their hands, and we will vote for the politicians (...). That is our duty: choose people who are clearly committed to that.”* (Las Palmas, male, 58, doctorate degree, physicist and CC researcher)

*“If we have the capacity to harm the environment, we also have the capacity to make the environment prosper (...).”* (Madeira, female, 34, student, environmental platform coordinator)

*“We are all accountable. Eh . . . all as professionals, all as consumers, and all as politicians. I think that all society is co-responsible, but obviously these things are not done with political decisions going in the opposite direction, right?”* (Madeira, male, 52, bachelor’s degree, agronomist)

In our research, it became clear that the perception subjects build of the involvement of structures and their responses in the arenas of decision-making in relation to CC varies according to the different levels and scales, making it easier to know what is produced by regional governments and by Local Administrations (*Cabildos*, *Ayuntamientos*, municipalities). In Las Palmas, more than in Madeira, it was noted that public authorities have been striving to change policies’ direction, especially the Gobierno de Canarias and the Cabildo of Gran Canaria. Yet, it was also stressed that this is often the outcome of pressure given from civil society. In Madeira, the official voices insisted on leveraged policies, concerning both adaptation (e.g., recent review of the CLIMA-Madeira Strategy, risk and flood management plan) and mitigation (decarbonization, boost to the energy transition through energy wind and high-altitude water systems). A reference was also made to the pioneering role of the Autonomous Region of Madeira in terms of CC policies in the context of Macaronesia. From this perspective, some discourses emphasized, in both archipelagos, that public authorities, regional and local, have sought to fight their own resistance to change, society’s apathy, and the bureaucracy of institutional processes, lobbying to bringing CC to public space. However, the narratives also revealed critical positions, pointing out failures and misrepresentations of public authorities, demanding to society efforts not supported by those who have more leeway to deliberate, decide, and act.

Additionally, it was also noted that CC is closely related to other problems of these regions, occasionally they contribute to evidence, and occasionally to conceal, for instance, what is perceived as autonomous governments and local competent authorities’

disinvestment in the primary sector, ensuing the abandonment of the rural world. This is believed to increase food exports, with repercussions on communities’ purchasing power and on their quality of life, potentially exacerbating situations of social sectorization. The deficit of food sufficiency adds to other vulnerabilities of insular realms. Indeed, the Autonomous Region of Madeira, yet even more the Autonomous Community of the Canary Islands, faces a huge dependence on fossil fuels (most of the water consumption in the Canary Islands comes from desalination and groundwater supply, which makes the water-energy combination inseparable). Despite the advances in recent years, alternative energies are still not able to satisfy the demands of consumption. Appending to this scenario is the massification of tourism, which represents a large share of the regional GDP, but likewise a huge pressure on the territory and resources, being largely cited in the discourses.

*“Here in the Canary Islands, we have about 15 million tourists every year who come by plane, the transport with critical CO<sub>2</sub> emissions per user”* (Las Palmas, male, 53, bachelor’s degree, environ. depart. Cabildo Gran Canaria)

*“We depend economically on two major sectors: tourism and agriculture, and both are vulnerable to problems related to climate change: it can be drought, it can be big storms that are very punctual in time but generate large runoff, (...) fuel supply (...), rising of sea level (...). Depending on the island where we are, we could talk about different challenges or others that are transversal, for example (...) food supply.”* (Las Palmas, male, 45, doctorate degree, eng. and department coord. in the Canary Islands Institute of Technology)

The recent COVID-19 pandemic and the lockdown exposed the risks of the regional/local economy dependency on a given sector. Furthermore, tourism massification (and other political options such as the focus on infrastructure building) is not in accordance with the vision of natural protection since both archipelagos cover a display of protected areas of fauna and flora (in 1999, the UNESCO considered the Laurisilva forest of Madeira, a World Natural Heritage Site), and ecological balance is notoriously fragile.

Furthermore, the CC topic has shifted, every so often, between the center and the periphery, according to the perception of its gravity, the options of the decision-makers, and the political agendas. Anyway, it is clear that CC mainstream policies have not yet come close to a necessary holistic and integrated approach, contrary to what has remained the local communities’ *modus operandi* over time, largely due to the absence of consistent cooperative work with those communities. Thus, an understanding of CC networks, actors, and associations setting up situations of cooperation, or conversely, of antagonism, is lacking (Callon, 1986; Law, 1986; Latour, 1996). Moreover, underlying power relations become apparent, not only in discourses and perceptions, but also in policies themselves and their effectiveness in concrete contexts (Foucault, 1971; 1977).

*“The hand of capitalism is everywhere, and it finances the politicians (...), giving continuity to the modus operandi (...), very powerful groups. Our governments live, especially in that*

*outsourced Europe (. . .). So, the economy is what determines this greater or lesser pressure in the use of natural resources (. . .). Our economy should review the notions of wealth. This is a priority: we should see wealth through citizenship, through humanity, through well-being, right?"* (Madeira, male, 56, doctorate degree, university professor).

*"In Public Administrations, everyone wants to improve the lives of their citizens. Sometimes we do not get it. Sometimes it is very difficult, very complex, the bureaucracy is terrible (. . .)."* (Las Palmas, male, 42, master's degree, head of climate change management, Government of Gran Canaria)

With regards to auscultatory processes and participation, albeit some nuanced opinions, discourses contradicted the theoretical formal envisioning. The opposite is also true: even stakeholders upholding critical views regarding governmental and administrative action find themselves entangled in their professional mindset, indicative of the persistent and broad extent of hegemonic reasoning and practices. Thus, respondents in Las Palmas of Gran Canaria claimed that they were consulted exclusively in their professional capacity, whereas in Madeira, even experts and academics stated never to have been consulted, neither in their professional capacity nor as citizens. Other than the strict veracity of these accounts (formal participatory mechanisms, including the right to vote and mandatory public consultation prior to regulatory legislation have long been generalized), what is mostly relevant is the subjects' perception of parallel universes that only occasionally meet.

*"The decision-makers are still in a different picture (. . .). Some of them are sensitive people, but others live in the Disney World, not in the real world".* (Las Palmas, male, 50, master's degree, eng. and INTERREG-MAC/ADAPTRES)

Hence, the perception of the incentive of regional and local authorities to public participation was not unanimous in Las Palmas nor in Madeira. In Las Palmas, it was noted that this incentive has not yet taken place; leaders are thought to be chosen mainly for political reasons and may not be prepared to address and respond to CC nor manage to involve citizens in the debate. Conversely, other discourses emphasized the endeavor of official entities, especially in the application of consultations, listed in international, national, and regional/local commitments, e.g., the Covenant of Mayors (Pacto de las Alcaldías por el Clima y la Energía). Often, the problem is not that citizens are not consulted or that participation is not encouraged, but that consultations are previously determined by the structure, conceptions, and way of operating of public powers, or that it appears to society that governments, administrations, and institutions encourage participation but do not truly believe in it.

*"What it is called governance is paramount. If we do not change the models of management, we will be able to transform very little (. . .). We demand public participation but don't even believe in it."* (Las Palmas, male, 42, master's degree, head of climate change management, Government of Gran Canaria)

In Madeira, the discourses showed a possibly more discrepant situation because on one hand, they denote the lack of knowledge of any consultation methods and/or instruments, as well as the idea that public contributions are not taken into account by decision-makers, and on the other hand, the government and the administrations argue that citizens are often not adhering when summoned.

*"People's opinions are systematically rejected because they are not specialists, despite being relevant (...) and, therefore, it is not a true public consultation."* (Madeira, female, 47, bachelor's degree, MP)

*"There are several mechanisms of participation: public sessions and so forth (. . .). The mandatory ones, right? But quite often people decide not to participate (. . .) and environmentalists choose to make noise."* (Madeira, male, 46, bachelor's degree, head of environment and climate Action, Government of Madeira)

All in all, it was noted in both regions that lay rationalities, knowledge, and practices should be considered by regional and local governance, particularly by decision-makers, and be integrated into CC policies, given their potential to help respond to socio-environmental problems and other territorial challenges:

*"People can provide knowledge of the territory, knowledge of the management of the territory, of how to farm, knowledge of the social fabric and how to link some people with others to boost changes in attitudes (...). If you observe the territory, a certain region, as a homogeneous element, since at the level of a map you trace it in a homogeneous way without going into the lowest level of information that exists and of anthropological, patrimonial, social particularities, of relations between the people, between people and economic activities and the environment, (...) if you don't take that into account, you are totally lost. You will always make wrong decisions."* (Las Palmas, male, 50, master's degree, eng. and INTERREG-MAC/ADAPTRES)

## 4 Discussion

Addressing CC in concrete contexts is shrouded in pluralities, complexities, and contradictions that must be considered in the design, conception, and implementation of timely and effective policies (F. Alves et al., 2020). Our research makes it possible to identify the intersection between the secondary and the primary qualitative analysis since the quotes illustrate and sometimes go beyond what is pointed out in the main cited documents, with regard to the unavoidable nature of climate change, its consequences in the territories and in daily life, the urgency to act, and the challenges faced by society and governments in terms of developing effective policies suited to concrete realities. Thus, as indicated in the literature (Aragão, 2005) and backed by respondents, CC policies are still based on a technical-managerial and political point of view, underlining the domain of mainstream rationalities and knowledge, while at the

same time defending communication and the engagement of various actors.

Our study mirrors this dichotomy between theory and practice. Public involvement and participation are encouraged, but above all insofar as they legitimize the *status quo*. Therefore, CC policies continue to perpetuate existing domain ties, sectorial interests, and the interests of private groups. Under the cloak of fluidity and openness, dominant discourses and policies reinforce existing power relations and a rigid, institutionalized, and unquestioned truth. Although not mentioned in the breakthrough documents (Gobierno de Canarias, 2013; Governo Regional da Madeira-SRARNAC, 2015; Cabildo de Gran Canaria, 2022), yet appointed by our respondents in the interviews, policies and formal action in relation to CC often take place in parallel with everyday life and the concrete realities of citizens.

The literature states that the *ethos* of a democratic political system is based on citizen participation (UNECE, 1998; Aragão, 2005). Understandably, investing in proximity governance would make citizens feel included and willing to intervene in the dynamics of communication and participation (without prejudice to specialized scientific and technical opinions). Still, that is not the perception of what has been happening in Canarias, in Gran Canaria and in Las Palmas, and least of all in Madeira, with the interlocutors claiming to not being heard in decision-making processes, and not being able to influence them, even in the case of experts and technicians. That is, subjects feel their power is withheld and believe they are only visible to politicians during election periods. This scenario does not comply with the principles of CC governance, such as accountability, management, and institutional strengthening (Knieling & Leal Filho, 2013). Neither does it follow the government model resulting from the EU Cohesion Policy nor the basic principles of multilevel governance, such as the negotiated and co-participated decision-making processes (Marks, 1993; Meadowcroft, 2009; Monteiro & Horta, 2018), concealing its cited polycentric and multifaced character (F. Alves et al., 2020).

Thereby, despite possible attempts of the official actors to restructuring and reorganizing public organizations and administrations, either changing their nomenclature, engaging in public awareness events, or debureaucratising participatory mechanisms, the gap separating society, scientific/technical spheres, and political decision-makers persists, particularly in Madeira. The Canary Islands hold a tradition of environmental activism, with associations, neighbor groups, and NGOs often claiming their rights, though this cannot be generalized to the entire Canarian society. Therefore, the removal (either attributed to a third party or voluntary) though not as much from knowledge centers (except for common citizens) as from decision-making fields, still dictates a fractured and incomplete understanding of CC and action in both regions.

Thus, a set of factors that interpenetrate and feedback mirror these gaps and may help explain them. In fact, the distancing and apathy of civil society regarding socio-environmental problems is aggravated by contradictory information released from the media and institutional bodies, with disagreement on how to act, alongside with the disarticulation of policies and their

distancing from the concrete issues of territories, as well as with the permeability of political power to economic interests. The outcome is the lack of trust in administrations, and consequent withdrawal of individuals and society from public arenas and from participatory mechanisms, due to the perception of not being heard in decision-making processes. The aforementioned not only goes against basic governance goals but also adds to the severity of CC impacts, together with the cited territorial problems, in territories that due to their reduced dimensions and autonomic status could function as communication, resilience, and sustainability clusters.

Hence, our study supports what is cited in literature regarding the need to improve knowledge and action, contradicting the progresses made at the regional/local level, and goes beyond, asserting the need to take CC as a total, complex and multidimensional occurrence, integrating a panoply of networks and actors, consensus, and controversies, to which both professional rationality and non-competitive forms of rationality converge. These are not concurrent but complementary to the formal approach and must guide the policies. Otherwise, key actors and essential knowledge, indispensable to face regional challenges, will remain on the sidelines.

## 5 Conclusion

In line with the literature and with our participants' opinions, specialized structures should broaden strictly expertise and political approaches, and, in a condition of parity with local communities, develop cooperative and collaborative work. This includes not only the assemblage of social and cultural heritage but also its incorporation in deliberative procedures and decision procedures. In short, it is about attending to the concrete relationships occurring in the interaction with communities as a basis to work on, in complementary terms. The advantages for representative democracy and proximity governance are evident, namely, the desired closeness of society to public authorities and technical-scientific agents, and from these to experiential contexts, by blurring possible misunderstandings and resistance, and favoring co-decision and co-participation processes that will help strengthen democracy and political legitimacy, along with the aspired social and territorial cohesion.

## Data availability statement

The raw data supporting the conclusion of this article will be made available by the authors, without undue reservation.

## Ethics statement

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. Written informed consent from the participants was not required to participate in this study in accordance with the national legislation and the institutional requirements.

## Author contributions

AM and FA conceptualized the original idea. AM and FA designed the methodology and analyzed the data. FA and WL reviewed the paper. AM led the writing with inputs from all co-authors. All authors listed have made a substantial, direct, and intellectual contribution to the work and approved it for publication.

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