

The background of the cover is a photograph of a busy city street. In the foreground, a large group of people is walking, their figures blurred to convey a sense of motion. In the background, there are cars, a bus, and buildings. A green semi-transparent overlay covers the right side of the image, containing the title text.

POLICY BRIEF

CULTURAL, IDENTITY, BEHAVIOURAL AND DEMOGRAPHIC ISSUES IN PUBLIC ENGAGEMENT AND ENERGY COMMUNITY TRANSFORMATIONS

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Summary

This policy brief draws on the results of the TIPPING+ research, case studies, published and ongoing publications, underlining the role of cultural, demographic and identity issues in policy strategies, aimed at fostering public engagement and support for sustainable transformations in Coal and Carbon Intensive Regions (CCIRs). Particular emphasis is given on the role of **trust, social representations, collective meaning** and **identity-making processes** and the role of **behavioural factors** affecting new forms of **collective action**, as well as of denial and resistance, related to decarbonisation processes.

Cognitive and psychological enablers, as well as barriers, exist. They influence the way individuals cope with **abrupt change** or adopt low-carbon, **resilient strategies** at household or community level. In CCIRs, the respect and visibility of **cultural heritage**, such as mining heritage, and the creation of participative local and inter-generational spaces of **community representation** are of particular importance. These spaces for **dialogue, experimentation and mutual learning** can also ensure accountability, fairness and transparency of regional and local decision-makers related to socio-energy transformations.

Energy communities is an example that not only can empower citizens to generate their own clean energy, reduce energy poverty and adopt more sustainable behaviours, consumption patterns and lifestyles, but also can help individuals to become active agents and local community ambassadors to overcome potential resistances associated to feared negative effects derived from transitioning away from traditional coal and carbon intensive development pathways. However, low-carbon transformations trigger new **migration flows** and **demographic changes** at regional level, and in particular in terms of **gender and age**, which need to be anticipated and integrated in positive transformation processes in a fair and equitable way. Finally, **re-skilling** and training the regional workforce to innovate and carry out low-carbon alternative socio-economic activities becomes imperative.

Objective

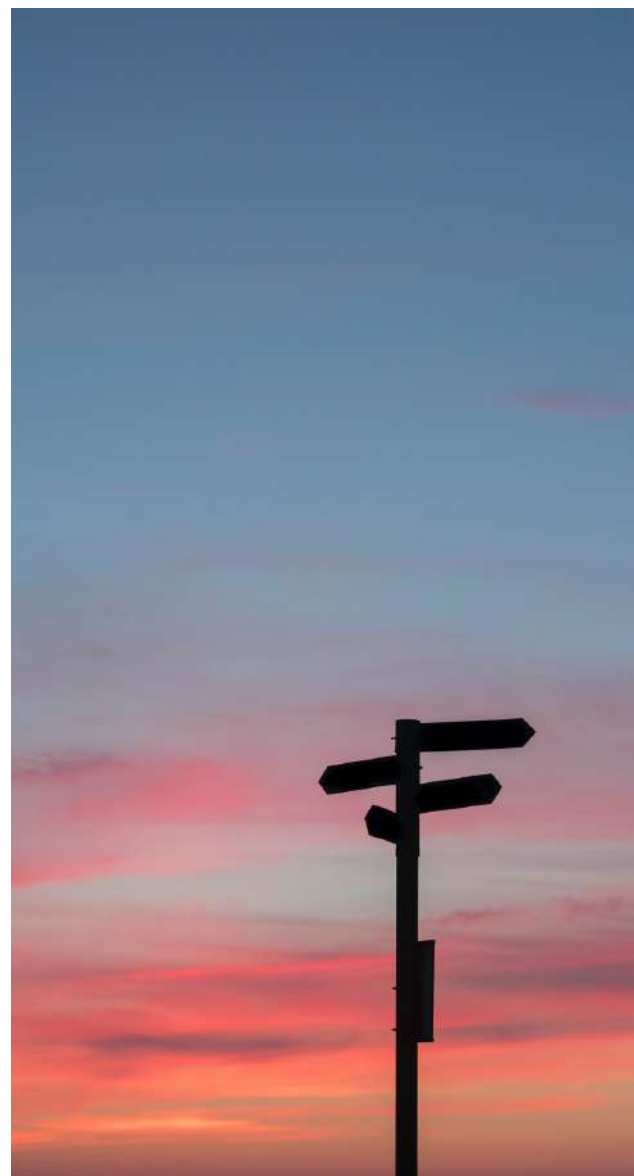


Moving towards the EU target of a net-zero emissions society by 2050, requires the active participation and cooperation of many individuals and communities. The adoption of **sustainable behaviours**, lifestyles and consumption patterns, able to trigger demand-driven transformative **cascades of changes** is necessary. Very often though, before certain governmental interventions can take place, fast mobilisation of society or fast changes in taken-for-granted conventions are required, especially when such interventions are aimed at enacting transformative tipping points. In this policy brief, we provide some insights on which psychological, demographic and cultural aspects should be taken into consideration when deepening **public engagement** and enhancing community endogenous capacities, to tip CCIRs towards low-carbon development trajectories and overcome potential resistances to structural changes accordingly.

Background

People engage into systems' transformation processes only if this makes sense to them. From a psychological and informational stance, a tipping point can be defined as the moment at which people begin to perceive noise as signal. Hence, a key issue regarding low-carbon transitions in CCIRs is to understand the complex social processes related to the qualitative translation of information experienced by individuals. Cultural traditions, language, identity, senses of place, belonging and identity, as well as personal judgements of potential benefits and costs of change, among many other psychological factors, affect public communication and engagement processes regarding decarbonisation. Furthermore, compensatory policies to social justice in managing low-carbon transitions, such as providing early-retirement packages to miners or affected workers and communities, may be necessary to counter resistances to transformative changes.

However, they are clearly insufficient to trigger reinforcing chains of regional positive feedback changes towards systemic transformations. Previous experience has proven that such compensatory policies are not efficient enough since many stakeholders perceive themselves as "losers" rather than active participants involved in the design and implementation of the new regional plans, such as the EU **Just Transition territorial plans**. Hence, a more empowering and place-based perspective, involving local/community concerns, perceptions and actors is required, whereby all relevant stakeholders can play an active role, and the government is not expected to continue handing in subsidies or large companies to take the lead.



Key Messages

- ✓ **Tipping social-ecological systems towards sustainable development pathways, requires cross-scale engagement, and empowerment of citizens and communities in materialising changes in individual behaviours, social practices and lifestyles.** This should be done in a way that can create broader synergies and broader changes in society. Research on social practices is becoming increasingly central in explaining social-environmental change, and in particular the challenges facing deliberate societal transformations (Haberl 2021, Rau 2018). Social-material practices are mostly derived from routine and normalised habits, like the consumption of high-energy intensive goods and services, the decisions of which are not fully deliberate or conscious by individuals.

It is reproducible and intelligible acts, mostly taken for granted, or generally accepted procedures that in turn affect the reproduction of these same acts, that create new conditions in the form of institutions. Social-material practices have their own logics-to-be in particular contexts, and because of that they are often difficult to change, unless the reason for the existence of those contexts disappears (e.g., the demise of whales' populations made the normal practice of using whale oil for lighting unattainable, while alternative sources of energy were also becoming available).

Therefore, it is important to understand how individuals can contribute to the transformations of their most immediate contexts of action where social practices are reproduced, in areas like food consumption, financial and investment decisions or education, and in doing so, tip larger systems towards deliberate sustainable pathways in other contexts and scales. That is, to trigger a cascade of multiplicative positive synergies and structural qualitative changes at larger systems towards sustainable, safe and just development trajectories.

- ✓ **Public authorities should support local communities when dealing with the emotional aspects, such as loss, trauma or grief, originated by energy related transformative processes, taking into consideration identity and demographic issues, but also and foremost providing hope and convincing evidence of positive alternative futures.** It is therefore necessary to use an array of tools to visualise future economic alternatives, and create constructive dialogues to overcome resistances and move to new projects or community identity. Public authorities can manage these identity issues, that may change over time, by understanding the implications of how local populations perceive their future job opportunities and related lifestyles. Then, during public engagement processes, they can incorporate the visualisation of future economic alternatives, with a clear message about the timing and the impact on the citizens' daily routine. For instance, changes in demographic structures, both in terms of gender and age, may affect stakeholders' capacity to envision and look for potential economic alternatives. Additionally, changes in how residents of CCIRs perceive and define their identity, can either generate resistance, or enhance their capacity to generate and embrace economic alternatives.
- ✓ **Changes in behaviour and conventions can have a non-linear nature,** since once a message has been adopted by a **critical mass** of population, self-reinforcing expectations may accelerate positive feedback loops and overcome resistances to change. **Public engagement and awareness raising programs** can be used to carry on strategic shifts of a critical segment of the population. This segment may serve as a catalyst of positive feedback effects, leading to a transition from denial to acceptance. Acceptance is defined as a situation where a sufficient proportion of the population accepts and actively favours the new energy low-carbon paradigm.
- ✓ **Coal-dependent regions are often characterised by a rich cultural and historical heritage linked to the coal and mining industry. While transforming CCIRs to a low carbon economy may have remarkable social and economic impacts, particularly on the local population, strategies to preserve and restore collective and social memory and local heritage** could lower, or at least make such impact more bearable, while also providing a sense of continuity and identity. This can be achieved through activities, such as documenting the history and culture of the region, creating **museums or cultural centres** and involving local communities in the planning and decision-making process. Moreover, social memory can also help to facilitate a **smooth transition to clean technologies** by leveraging **knowledge and expertise**. For example, coal mining communities may have skills and knowledge, such as experience with heavy machinery or electrical systems, that could be transferred to the renewable energy sector. By recognizing and building upon these skills, the transition to clean technologies can be more efficient and effective. All these aspects should be taken into consideration when designing public participation processes.



- ✓ **Moving from a consumer to a prosumer mentality is crucial in terms of enacting social-ecological tipping points at the level of individuals and communities.** Such a shift in mentality allows citizens to take a more **active role** in transforming CCIRs, by taking advantage of the incentives promoted by new European policies on energy communities and circular economy. By adopting this mentality, citizens are no longer passive observers of the energy transition, but rather, they can have a key role in accelerating decarbonization. By empowering individuals and communities to generate their own renewable energy, they become less reliant on coal and carbon-dependent energy sources. This also fosters a **sense of ownership and responsibility** for the energy production, which can motivate individuals to adopt more sustainable energy practices. It also facilitates the **decentralisation of energy systems**, reducing the need for long-distance transmission and distribution, making energy systems more resilient and less vulnerable to disruptions. Finally, it can lead to the development of **new (local) industries and business models** and contribute to building stronger and more cohesive communities. As individuals and communities work together to generate and manage their energy, they may develop new **social networks and partnerships** that can strengthen local economies and social ties.
- ✓ **Energy communities are proving successful examples of how to tip local social-ecological systems towards sustainable trajectories.** Among other things, they can address the lack of ownership and perceived injustice of top-down development strategies. They can also deal with identity-related concerns by creating new identities and fostering a sense of place. This approach also helps overcome other negative cultural aspects related to CCIRs and the associated stigma of being labelled “dirty energy regions”. Their implementation can also lead to the development of new industry and business models, and contribute to building stronger and more cohesive communities, capable of upscaling their learnings to other communities.
- ✓ **Public engagement to support system-wide positive development trajectories, is about creating the conditions for a second-order learning process that is able to generate alternative and more collective perspectives on the common good,** not only about negotiating different individual perspectives based on partial or corporate interests. Such second-order processes should necessarily be inclusive, to ensure that all relevant and diverse voices are considered, taking into account the perspectives of various stakeholders, based on factors such as gender, age, geographical location, social class or ethnicity. This approach has the potential to lead society towards collective reconfigurations. For instance, it is necessary to extend public participation processes beyond trade unions, where traditionally there is a stronger presence of males, and be sure to have a broader perspective and include the views of women and the youth. Also, the role of farmers and the primary sector must be incorporated, in order to prevent the dominance of the industrial sector over the rural one.
- ✓ Ensuring inclusive and participatory engagement in decision-making requires **clear and consistent communication**, as well as providing **arenas for dialogue**. Clear and consistent communication means understanding the implications of the use of language and the discourse in agenda setting. For instance, when the transformation of a CCIR is presented as an industrial crisis, the envisioned future is often perceived as an issue of resolving conflicts between unions and employers. On the contrary, when such transformation is presented as a co-productive, win-win process of creating a positive future, more favourable attitudes, policies and institutional adaptive arrangements may be implemented. Thus, questions such as how, when and who is involved in the design of public engagement processes need to be carefully assessed, often through professional intermediaries, working at the interface of policy, science/technical expertise, and community advocacy.



- ✓ **Low-carbon transformations often provoke important new migration flows and demographic changes at regional level which also have an impact on local identities, traditions and job expectations.** This is particularly important with regard to gender, youth and older people, as well as ethnic groups, such as indigenous groups in the Arctic regions affected by the EU Green Deal policies. Hence, such demographic changes need to be anticipated and integrated in a just way, contributing to synergies, rather resistance and opposition.
- ✓ **The transition of CCIRs to decarbonization requires a significant shift in the skills and labour profiles needed to support the new energy landscape.** As a start, it is important to understand the characteristics and skills of the current workforce. This can be done through surveys, interviews, and focus groups with workers in the energy sector. This will help identify the skills and expertise that are currently available and the gaps that need to be filled during the transition to a decarbonized energy system, focusing on what work opportunities may be available for labour in declining sectors.
- ✓ **Place-based training and education programs should be carried out to equip workers with the necessary knowledge and skills for innovation and development of economic and social activities.** This could be done through partnerships with local or regional universities, training centres and companies to develop apprenticeships, vocational training programs, and academic degrees in relevant fields. Also, there is a need for specific support for workers who may be displaced by the transition from coal and carbon-intensive energy systems to decarbonization, through retraining programs, financial assistance, and career counselling.

Insights from Case Studies

In **Sulcis (Italy)**, there has been significant political resistance originating from powerful discourse coalitions, including workers, industries, unions, and regional political administration. These coalitions have historically benefited from state aids aimed at protecting industry and workers, which has resulted in constraining local energy visions and strategies, delegitimising and postponing the phase-out of coal. Media discourse on energy issues in the **Sulcis region** have legitimated coal over time, presenting it as a potentially “clean source”, making reference to clean coal and carbon capture and storage technologies, as the “most suitable source” and “local asset” for responding to industrial energy needs and the stability of the power system, and as part of the “local tradition, culture, heritage, identity, and vocation”.



In **Andorra (Spain)**, stakeholders highlight the importance of funding and keeping the cultural and industrial heritage associated with coal through European funds. For instance, the role of the Andorra Mining Museum, which is very active in keeping and maintaining the memories associated with the coal industry, should be highlighted. Some groups, such as the Association of Aragonese Studies have even called for the already closed Andorran Thermal Power Plant to be listed as part of the Aragonese’s cultural heritage.

After 120 years of exploitation of the last coal mine in **Svalbard (Norway)** and its imminent closure in 2023, the discourse in the social system has shifted radically. The new focus is on which alternative energy sources to use, and how to maximise the returns of investments in education, research, and tourism. With the loss of about 80 coal-mine related jobs and the rise of new economic activities, the demographic characteristics have also evolved from being mainly composed of male coal miners, to a more even gender balance and seasonal workers, working in a more diversified economy. Hence, a tipping intervention towards decarbonisation can also open alternative demographic scenarios and trajectories, more aligned with economic and energy diversification.



In **Carloforte (Italy)**, when stakeholders were asked about the reasons for participating in individual power plant projects, every single one of them emphasized the desire to reduce energy consumption and achieve associated cost savings, thus describing themselves as consumers rather than as citizens or actors of a socio-environmental or cultural change. This highlights the prevailing focus of stakeholders on personal economic benefits rather than on wider social and environmental considerations. On the contrary, public participation processes aimed at supporting fast decarbonisation must find venues for developing strategies that go beyond deploying individual solutions and take into account a second-order framing for collective reflectivity and opportunities for reorganisation, e.g., at community level.

Policy Recommendations



Tipping social-ecological systems towards sustainable development pathways requires the engagement and empowerment of citizens and communities in a multi-scale manner, which is reflected in changes in social practices, individual behaviours and lifestyles, so that broader synergies are promoted in society

Hence, it is important to understand how individuals can effectively contribute to the transformation of their most immediate contexts of action, where social practices are reproduced. This takes place in areas such as food consumption, financial and investment decisions, or education. By influencing change, individuals have the potential to tip larger systems towards deliberate sustainable pathways in other contexts and scales. Public engagement and raising awareness programs can be used, to carry on strategic shifts of a critical segment of the population, which may serve to catalyse positive feedback effects and move from a denial to an acceptance stage, in which a sufficient proportion of the population accepts and actively favours the new low-carbon energy paradigm.



Promoting and facilitating prosumerism is a key strategy in enacting social-ecological tipping points at the level of individuals and communities.

Prosumerism helps citizens to take an active role in the broader transformative process of CCIRs, for instance making use of European policies on the promotion of energy communities and circular economy strategies. In order to move from a consumer to a prosumer mentality, it is necessary to go beyond the design of public participation processes, and make use of the potential of citizenship to accelerate the energy transition process in CCIRs. Energy communities are showing potential as citizen empowering tools, which at the same time can tip the local social-ecological system towards a sustainable trajectory. Among other things, they can address the lack of ownership and perceived injustice of top-down development strategies.



CCIRs often have a rich history and culture that is closely tied to the coal industry. Transitioning to a low-carbon economy can have significant social and economic impacts on these communities.

Public authorities should take into consideration identity issues, supporting local communities in dealing with the emotional aspects derived from transformation processes, such as those related to managing loss, trauma and grief. On top, they should also provide evidence of the positive aspects and validate hope of alternative futures. In doing so, strategies to preserve and value collective and social memory and local heritage should carefully be taken into account in CCIRs. Social memory can help to preserve their cultural heritage and traditions, while also providing a sense of continuity and identity.



Public engagement, aimed at supporting system-wide positive tippings, is about creating a second-order learning process to bring a system-wide collective perspective of the common good and of the possible alternatives for community reorganisation.

Such second-order processes should necessarily be inclusive to ensure that all relevant and diverse voices are considered in terms of gender, age, geographical areas, social class or ethnicity. With this regard, it is important to keep in mind that low-carbon transformations often provoke important new migration flows and demographic changes at regional level, which also have an impact on local identities, traditions and job expectations. Hence, such demographic changes need to be anticipated and integrated in a way that can contribute positively to sustainability transformation processes, using a strict and multidimensional perspective of justice, instead of becoming a source for resistance and opposition.

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About TIPPING+

TIPPING+ provides an empirical in-depth social science understanding of fundamental changes in sociodemographic, geographical, psychological, cultural, political, and economic patterns which give rise to Social-Ecological Tipping Points (SETPs), both positive and negative in relation to socio-energy regional systems. Such empirical and theoretical insights sheds new light on the interdependencies between changes in regional socio-cultural structures and the technological, regulatory and investment-related requirements for embracing (or failing to embrace) low-carbon, clean-energy and competitive development pathways in selected coal and carbon intensive case study regions (CCIRs). The overall goal is to understand why and under which conditions a given social-ecological regional system heavily dependent on coal and carbon-intensive activities may flip into a low-carbon, clean energy development trajectory – or on the contrary may fall into an opposite trajectory with all its negative implications. Towards this goal, main focus of TIPPING+ is the participatory co-production of knowledge on the driving forces and deliberate tipping interventions leading to the emergence of positive tipping points toward clean energy transitions in European CCIRs.

www.tipping-plus.eu

WHO WE ARE



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