

Evidencing Changed Practices in Co-Creation of Just and Inclusive Coastal Transitions

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Abstract

This article examines community-led interventions in six transition coastal labs through the lens of transition mechanisms. Coastal regions face entrenched governance structures that limit just and inclusive transformations, particularly where climate pressures, blue economy expansion, and fragmented governance intersect. Using a three-layered framework of recrafting, substituting, and disrupting practices, we analyzed data from a co-creation workshop, where transition coastal lab representatives and academic partners were asked to test and shape the framework, based on identified examples of changed practices across multiple domains of change: participatory methods, community–governance interactions, and community connectivity. The findings show that even modest shifts—such as expanded participation or new leadership—can hold transformative potential. We argue that the framework is a useful tool for

systematically identifying the transformative potential embedded in bottom-up coastal empowerment initiatives. The findings highlight the value of locally anchored, co-created processes in cultivating just, inclusive, and sustainable coastal transitions.

Keywords

blue economy; coastal governance; co-creation; community empowerment; green transition; nature-based solutions; participatory methods; sustainability transition; transition mechanisms

1. Introduction

Sustainable societal transformations are increasingly recognized as deeply political processes, yet governance structures can often constrain their scope and direction. As argued by Patterson et al. (2017), transformations are shaped by embedded power relations, institutional lock-ins, and governance arrangements, which all tend to reinforce the status quo rather than challenge it. These dynamics are further exacerbated by the complexity of contemporary governance systems, where tensions across spatial, jurisdictional, sectoral, and temporal scales—divided across a multitude of actors and scales—can stall or fragment transformative efforts (Allen et al., 2023). Together, these insights highlight how existing governance structures—designed for stability rather than change—can inhibit the emergence of more just, inclusive, and sustainable futures. These challenges are particularly visible in the realm of coastal governance, where fragmented, multi-level arrangements often reproduce conflicts, exclude key actors, and hinder transformative changes needed to address climate and biodiversity pressures (Gonçalves & Pinho, 2022).

Coastal regions are experiencing profound shifts driven by the expanding blue economy, defined as enterprises and services connected to the ocean beyond just fisheries and maritime transport, such as shipbuilding and repair, navigational and safety services, port operation, the extraction of other marine resources, research and environmental protection entities, and coastal tourism enterprises (Pomianowski & Doburzynski, 2021). This diversification represents a broader societal transition in many coastal areas, moving away from an emphasis on food production towards recreation, tourism, and marine conservation, which introduces new complexities to the challenges facing coastal environments and inhabitants (Salmi, 2015). On another front, coasts are sites where the adverse effects of climate change are already becoming increasingly apparent, with land erosion, sea level rise, storm surges, floods, and severe weather fluctuations putting coastal communities across the globe at risk, a trend that is only expected to continue in the future (Fazey et al., 2021).

Stirling (2015) and Nightingale et al. (2020) posit that the sustainability agenda has tended to frame pro-environmental action as technocratic and apolitical, neglecting aspects of governance, power imbalances, inequality, and conflicts, thus decoupling the ecological and societal. Without integrating sustainability transitions into societal and policy systems, approaches risk overlooking the socio-political and power-laden dimensions that shape sustainability outcomes (Dushkova et al., 2025; Wijsman & Berbés-Blázquez, 2022). This argument is reinforced by empirical work on inclusive and just sustainability transitions (Loorbach et al., 2017; Swilling, 2020), which highlights the role of community engagement, co-creation, and empowerment in enabling transitions that are socially equitable and ecologically sustainable.

To complement this definition of just and inclusive transitions, diverse economies scholarship presents notions of care and reimagining systems and practices to help rethink, reincorporate, and reinvent alternative economic structures, embedded socio-ecological practices, and local resistance to negative exogenous drivers of change (Gibson-Graham et al., 2013). The perspectives of Gibson-Graham et al. (2013) highlight the importance of establishing new means of economic organization focusing on collective wellbeing and wealth generation for sustainable societal transformations, supported by Antonova et al. (2025) as vitally important in coastal communities, whose existing practices engage with diverse conceptualizations of “value” beyond purely monetary dimensions. Diverse economies approaches thus align with broader sustainability and biodiversity debates, including the need to account for diverse values of nature and ecosystem services (Dasgupta, 2021), the necessity of rethinking development trajectories beyond traditional growth paradigms (Kumar et al., 2024), and the critical role of participatory co-production processes that negotiate power, participation, and transformative outcomes (Turnhout et al., 2020).

This article engages with these dimensions for the purpose of clarifying the potential for radical transformation in green (and blue) transition processes, encompassing both socio-technical and cultural, ecological, economic, and political dimensions. The methodological design aims to activate the practical experiences and reflections of actors involved in developing and implementing community-led “transition mechanisms” in coastal communities under the Horizon Europe project EmpowerUs (2021–2025). The purpose is to collectively apply and assess a three-layered theoretical transition framework’s ability to capture and clarify the scope and breadth of changed practices observed across six coastal transition labs (TCLs). TCLs is a terminology used by the EmpowerUs project to denote a community of actors encompassing coastal community actors and researchers working together to co-formulate and implement a small-scale pilot project to enable sustainable transition in a select coastal location, following a “living lab” method (Nevens et al., 2013). The study therefore also contributes to an understanding of what transition across the inter-woven above dimensions looks like from a bottom-up perspective across coastal communities, and ideally it also offers applied insights into a framework that can be used to enquire into and appreciate the transformative potential of small-scale pilot projects in applied research.

We first conceptualize a framework for exploring the transformative potential of transition mechanisms, and then we explore its applicability against empirical examples of transition mechanisms initiated in and by the six TCLs.

2. Conceptualizing Transition: Recrafting, Substituting, and Disrupting

Ounanian et al. (2026, p. 9) observe how the transition literature “attends to pathways where ideas and practices diffuse or spread.” Furthermore, they note how three-layered frameworks play a significant role in the conceptualization of the varying degree of “radicalness” involved in different types of transition mechanisms. In particular, the respective models of Avelino (2017), Lindberg (2022), and Westerink et al. (2023) are highlighted for their contributions in trying to conceptually delineate “a low to high categorization largely built on the reuse, alteration, and deconstruction-reconstruction of practices” (Ounanian et al., 2026, p. 9). Synthesizing the three different frameworks into one model, Ounanian et al. (2026) eventually propose an integrated three-layered framework which presents a continuum of the three categories of “recrafting,” “substituting,” and “disrupting” (see Figure 1).

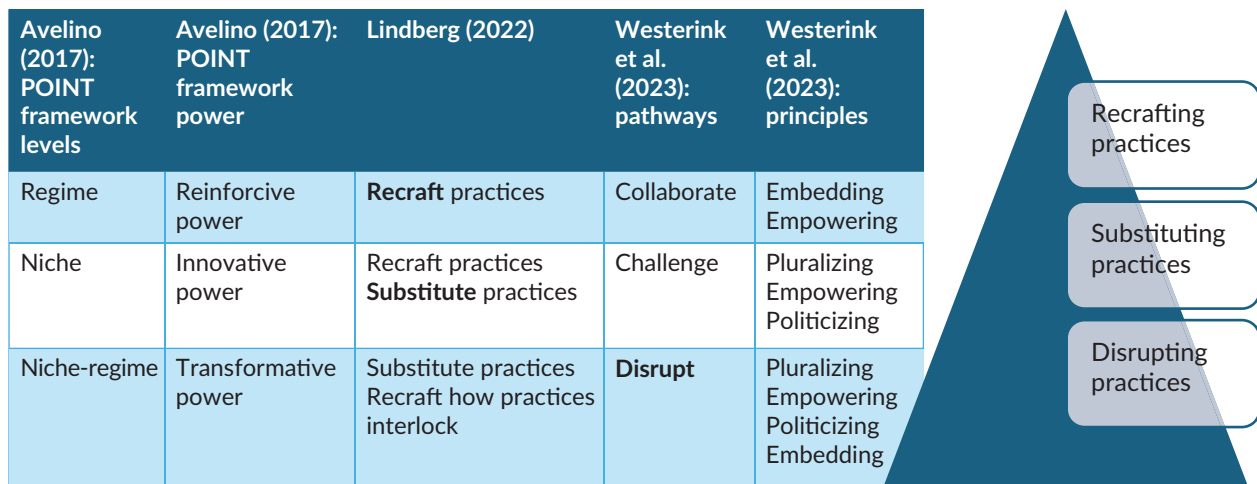


Figure 1. Ounanian et al. (2026)'s synthesis of three-layered frameworks.

In the model, recrafting is defined as “adopting resources and repurposing them to realize new [sustainability, justice, inclusion] goals,” substituting practices is defined as “replacing [unsustainable, unjust, exclusionary] practices and/or institutions with new modes or models,” and disrupting is defined as “counteracting and dismantling hegemonic models through protest, resistance, rebellion, and/or reconfiguration” (Ounanian et al., 2026, p. 8; square brackets in the original).

Whereas Ounanian et al. (2026) elaborate on the theoretical and conceptual implications of their suggested three-layered framework, this article unfolds its practical application to evidence empirical examples in coastal communities. Drawing on data from co-creation processes and examples that helped inform the final framework, this article contributes to a dialogue about the framework’s practical applicability by asking: To what extent is the three-layered framework suitable for evidencing transition mechanisms empirically? Wherein lies its potential when applied to small-scale interventions in coastal communities?

3. Study Design

Using a co-creation approach grounded in principles of respectful cooperation and environmental and social justice, as reflected in other sustainability research (Frantzeskaki & Rok, 2018; Nevens et al., 2013), the study design aims to activate the practical experiences and reflections of actors involved in developing and implementing community-led “pilot” initiatives in coastal communities within the EU Horizon Europe project EmpowerUs (2023–2025). Co-creation has been widely recognized as a distinct mode of collaborative research and governance that brings together diverse actors, including government officials, scientists, citizens, and entrepreneurs, in participatory and iterative processes that integrate knowledge, empower local communities, and foster socially inclusive and ecologically grounded transformations (Frantzeskaki & Rok, 2018).

The pilot initiatives targeted empowerment and inclusive coastal development based on six interconnected pillars: utilizing an asset-based approach to local planning and coastal development interventions; strengthening community ownership of the aforementioned assets; repurposing and revitalizing already-existing governance structures, networks, and capacities; committing to connectivity strategies to

spread inclusivity across coastal areas; supporting coastal communities in enacting advocacy strategies, tactics, and practices; developing the knowledge base to strengthen community economic and ecological stewardship of the coast (EmpowerUs, n.d.). The pilots were actioned in six communities, framed as TCLs, located along the coasts of Bulgaria, Cyprus, Åland (Finland), Ireland, Norway, and Spain, and operated on a close partnership between local academic leads (researchers) and the local host (a local organization or authority working in the community). The pilot activities undertaken by each TCL are outlined in Table 1.

Table 1. TCL and pilot activity overview.

TCL	Challenges	Objectives	Activities
Bulgaria	Large-scale infrastructural projects and privatization restrict access to coastal areas Tourism and industrial pollution create strong environmental pressures Low trust in local and regional government institutions	Connect communities with local landscapes Improve knowledge of local environment Stronger community influence in policy and planning processes	Burgas on the Three Lakes and One Sea as an advocacy platform, mapping local assets with community actors to identify places of value as a key resource, strengthening city–nature connectivity, and advancing ocean literacy and citizen science programs to connect with local landscapes Local Host: Bulgarian Biodiversity Foundation
Cyprus	Poor connectivity to the coast Heavy industrialization near coastal habitats Conflicting economic interests undermine opportunities for sustainable development	Greater community influence in planning processes Revitalize existing governance structures towards inclusivity Centering socio-ecological sustainability in planning	Cape Dolos Strategic Community Development Plan, a co-created strategic coastal plan, outlining specific actions and projects to support sustainable coastal development to connect communities to the coast Local Host: Development Agency of Lemesos LTD
Åland (Finland)	Reduced fish stocks and ability to diversify fisheries based economy Traditional hunting and fishing heritage lost to urbanization Bureaucratic pressures from broader policy and regulatory environments around fisheries	Strengthen community ownership of natural assets Foster community stewardship of sensitive ecosystems Build local capacity for influencing policy and regulation	Revitalizing Åland's Water Owners Associations, as <i>community anchor organizations</i> for a coordinated approach to locally supported coastal planning, mobilizing the water owners to strengthen policy and regulatory environments to better support local communities and ecosystems Local Host: The Fisheries Agency at the Government of Åland

Table 1. (Cont.) TCL and pilot activity overview.

TCL	Challenges	Objectives	Activities
Ireland	Tourism creates overcrowding, damages ecosystems, and raises housing costs Corporate investments in renewables and tourism services diminish the local economy Ocean and coastal commons increasingly being privatized restrict access	Develop social economy Build skills, knowledge, and learning of social enterprises Utilize strong asset base to strengthen economic resilience	Developing the social economy of the Connemara Gaeltacht with <i>social enterprises</i> to resist blue growth pressures and keep value within the community Local Host: Údarás na Gaeltachta
Norway	Poor connectivity, lack of stable employment, and housing shortages exacerbate outmigration Newcomers have difficulty integrating Poor local influence in infrastructural and economic development, and tourism policy	Improve liveability, local economies, and connectivity Strengthen cultural identity to develop heritage-based tourism Build funding support base for community-led projects	Hækta på Træna, a suite of activities co-created with community actors to enhance community resilience, identity, and long-term sustainability through storytelling emphasizing cultural heritage and natural assets Local Host: Kunnskabsparken Helgeland
Spain	Detrimental environmental and socio-economic pressures from tourism Erosion of cultural practices and values in local food industries Diminishing influence of community stakeholders in formal politics	Support local, responsible tourism (Re)connect local public, private, and community sectors to cultural heritage Foster inclusive governance	NaturCap, a web app to promote people and the ocean relationship transformation to limit blue economy growth and anthropogenic pressures, and Viu el Cap de Creus food sovereignty forum integrating fishing culture into sustainable food systems Local Host: Autonomous University of Barcelona

A participatory co-creation session consisting of local representatives and academic researchers connected to each TCL was held two years into the project in connection with a general assembly for project partners on October 8, 2025, in Aalborg, Denmark. The purpose of the session was to collectively activate the experiences and reflections which had been accumulating in the project as an attempt to evidence any emerging examples of transition mechanisms, while simultaneously utilizing and testing the theoretical framework as a conceptual tool in the process. We used an adapted focus group interview and workshop methodology design, working with the framework in a paper prototype format (Barbour, 2018; Maher et al., 2018). The purpose was to collectively assess and build upon the theoretical framework's ability to capture and clarify the scope and breadth of changed practices observed across TCLs during the project period. Participants were briefed on the objective of the session, as well as their roles as co-designers, before being divided into four predetermined groups of six to seven participants with one to two facilitators each.

The session was conducted in one and a half hours, divided into three exercises of increasing co-creation levels between participants. Low-fidelity materials were used extensively to guide discussion, evaluation,

and co-design of the developing theoretical framework, with paper and pens provided to participants for use on a prototype developed by the facilitating team. This prototype was informed by prior work with TCLs and academic consortium partners in identifying transition mechanisms and synthesizing literature on transformative change. Initially, the exercises involved individual brainstorming on the prompt “are there examples of the EmpowerUs project being able to influence or shift practices?” and evidencing them for later use, aided by probe cards labeled with the EmpowerUs project guiding principles and strategy clusters, which had previously been defined to characterize and group the purpose of the pilot projects (Sørensen et al., 2025). Later, participants began collectively relating the generated data on changed practices to the framework and experimenting with the prototype to produce greater clarity on the nature and quality of the examples. The interactive format of the session also served as a form of triangulation, utilizing peer feedback to verify or challenge examples presented by participants, and informing the subsequent shared interpretations of the data (Mishler, 1990).

Transcripts were coded deductively according to the categorizations presented during the session to generate an overview of examples, later combined with an inductive data analysis for the purpose of assessing the participatory process and identifying themes and categories as presented by the participants themselves, in multiple rounds. This abductive approach of moving between data, analysis, theory, and interpretation in multiple iterations was chosen for its ability to encompass both the evaluation of theoretical insights related to the primary objective of the session, as well as incorporating emerging insights not previously included in the initial study design (O'Reilly, 2009, pp. 104–108). The data emerging from the session was thus co-constructed through the intellectual contributions of all participants, and while facilitation and subsequent analysis were initially conducted by a smaller group, all participants were invited as co-authors for the final article.

In the following results section, we will present our analysis of the session material, presenting (a) the identified examples of changed practices and (b) discussing how to categorize the examples according to the three-layered theoretical framework of recrafting, substituting, and disrupting. Finally, the conclusion summarizes strengths and weaknesses of the framework.

4. Results

4.1. *Identifying Examples: Signs of Changing Practices in TCLs*

A total of 86 instances were identified in the workshop transcripts for when an example of changed practice was suggested and/or discussed in the workshop. In addition to coding all the examples one by one, an inductive content analysis attempted to sort the 86 coded incidents into thematics for the sake of overview, and eventually, three overall domains were used to organize examples for this section of the article: (a) intra-project participation methods ($n = 27$), (b) community-governance interactions ($n = 26$), and (c) communities' connections ($n = 25$).

The following section will present the three thematics of “changed practices” as a brief introduction to the type of examples identified. For further information about the individual examples (e.g., the TCL pilots and the methods used), we refer to other articles in this thematic issue on the EmpowerUs Project, as well as the pilot descriptions in Flannery et al. (2024).

4.1.1. Intra-Project Participation Methods

A significant group of the identified examples centered on how the TCLs had worked with developing participatory practices during the EmpowerUs project. Participants reflected upon situations where new methods and toolboxes managed to include and give voice to new and more people within the TCLs. Several examples unfolded around observations of “empowered” individuals, who had spoken up and actively contributed to the meetings; who had shown a lot of initiative and enthusiasm around the pilots; and new leaders reshaping community engagement dynamics. The wide and varied use of inclusive methods was highlighted as multiple examples of changing practices. This included the combination of multiple methods for engagement (workshops, one-to-one interviews, and field trips) and the need to ensure translation (e.g., for groups with immigrant backgrounds) to reach different groups. The participatory and engaging methods of citizen science and ocean literacy activities applied throughout the EmpowerUs project were also highlighted as examples of changing participatory practices.

Being familiar with the problem of research fatigue and the risk of over-burdening local partners, workshop participants also reflected on the TCLs’ approaches to ensure meaningful engagement of existing partners and participants. This included sensitivities towards building on existing interests and capacities (e.g., when defining new pilots), seeking project synergies (e.g., using deliverables from the project for a community purpose), pursuing continuation of ongoing activities (e.g., finding ways to continue work after the project ends), aiming at concrete outcomes (e.g., tangible pilot projects), and ensuring actual influence of participants. TCL hosts presented examples of how participation in the EmpowerUs project had benefited their organization with networks and concrete, usable outputs.

4.1.2. Community-Governance Interactions

Whereas the above examples can be grouped as changes pertaining to participatory methods in the project, others focused more on signs of changes in the way communities interacted with governance arrangements. Most TCLs provided direct input to formal coastal planning processes with specific objectives to influence policy and planning (see also Table 1). Some local hosts also held a formal position in the governance landscape themselves as a public authority (Åland) or were a civil organization with a long-term role in business development and planning (Cyprus, Ireland, Bulgaria, and Norway).

Some examples of changed or changing practices therefore focused on the way community organizations started to show signs of empowerment in a governance and policy context; or, how the pilot projects could be expected to impact the desired policies if things go according to plan. In Åland, private water owners received targeted information about their rights and responsibilities in governance as part of the pilot project. This was discussed as an example of how water owners are now starting to see themselves in new roles, while regional authorities also continued to discuss further broadening their stakeholder involvement, changing their understandings of what may constitute community partners and knowledge-holders. A related example arose around Træna, where co-creation activities (including the plan Hekta på Træna—hooked on Træna) represent a shift towards providing more people with knowledge of how to “follow through, plan, and do something locally.” The strong position and integration of environmental perspectives in Burgas was highlighted, in itself, as an example of a changed practice in governance decisions. Building capacity for existing social enterprises in Connemara was identified as deepening their policy impact by providing a clearer pathway to achieving

their goals. The development of a new typology of social enterprises could lead to a change in how policies address them, it was argued.

In another example, it was observed how local authorities seem to have adopted the co-creation workshop design that they were exposed to in the project activities, indicating that governance processes were changing towards more inclusive engagement with citizens.

Changes in communities' relations to EU policies also emerged as examples, with building the capacity and courage to have their own interpretation of EU policy documents being observed across TCLs during the EmpowerUs project (with policy briefs co-created with and for each TCL). Aspirations of changing research-community partnerships were identified as well, with communities calling on the research community for cooperation around their needs rather than being subjected to an "assemble-disassemble" principle under current (EU) funding regimes.

Whereas the above examples focus on what we may call signs of community empowerment in governance arrangements, another group of examples focused more on the way governance of economic activities in communities was intentionally addressed by project activities—how economic activities are in the process of becoming re-imagined and re-organized around community-oriented purposes. The examples are closely related to pilots developed in some of the TCLs, including the promotion of eco-tourism over mass tourism in Cap de Creus; the visibility and inclusion of recreational fisheries in Åland's fishery governance; and the way the social enterprise concept is now expanding into the marine domain to promote blue economy community ownership in Connemara.

4.1.3. Communities' Connections

A third group of examples centered on how communities were engaging in new practices of "connecting." The most prevalent theme was the re-connection of local communities to nearby coastal areas. Several of the TCLs had developed pilots (apps and exhibitions) and organized ocean literacy activities (apps, quizzes, games, surveys, and a biodiversity carnival) to build environmental knowledge and engage people in the discovery and exploration of local coastal places and history. Examples emphasized how such activities had managed to reach and engage diverse demographics: children and parents, visitors and residents, and newcomers and retirees. These examples of people "re-connecting to the sea" were framed as changing practices in themselves.

Some of the "re-connecting" had been facilitated by the establishment of new, nature-based infrastructures in the TCLs. In Burgas and Cyprus, bicycle lanes and nature trails were planned to create new connections between urban and natural environments (city with lake, inland neighborhoods with coastline, etc.). The community-led push on municipalities to prioritize these rather "economically modest" and environmentally sustainable types of nature-based infrastructures was discussed as a change of practice.

Community development initiatives facilitating "extra-community" connectivity and viability emerged as another theme. In Træna, transport and digital infrastructure to the mainland were put forward as examples of practices that helped "connect" island communities to the outside, sustaining viable "year-round" communities in remote locations. Digitalizing work life in Træna and establishing better transport connections to the mainland would represent a shift in practice in this example.

And finally, some examples revolve around “inter-community” connectivity. In the EmpowerUs project, the six TCLs from across Europe had been put in analytical proximity to each other. The way TCLs had experienced “mirroring” themselves in each other as coastal communities was discussed in terms of a changing practice, which could help shape emerging notions of “who we are” as users of the sea and “how we are connected to the sea.” Also, the potential of such collective self-awareness was discussed in terms of its transformative potential as part of a social movement. Another example of “inter-community” connectivity is the economic example of “seasonal blue-green synergies” emerging in Cap de Creus. The Cap de Creus Nature Park spans both sea and mountain areas, and different projects in the area have engaged both wine producers and small-scale fishers, connecting land- and sea-based food producers. Finally, several pilot activities had generally been gathering and engaging youths from nearby and neighboring communities (e.g., during festivals).

4.2. Testing the Framework: Recrafting, Substituting, or Disrupting?

Having first identified examples of “changing practices,” workshop participants were subsequently asked to collectively explore if any of the identified examples could be meaningfully sorted in the three categories of the theoretical framework: recrafting, substituting, or disrupting practices.

A summary of the suggested sorting categories emerging from the workshops was characterized by some ambiguity, presented in Table 2. Roughly 24 examples were discussed, of which 14 were eventually designated to the “disruptive” category, while five examples were sorted as “recrafting,” and another five examples were

Table 2. Example distribution and overlap between categories.

	Recraft (n = 5)	Substitute (n = 5)	Disrupt (n = 14)
Transition mechanism	Inclusivity Citizen science Rethinking water owner role in governance New platforms for public consultation Help re-focus existing organizations	Retain value from tourism Substitute coal for wind Nature-based solutions (NBS) Ocean literacy and connecting to the sea Substituting one type of tourism for another	Inclusivity Establish local governance committee Ocean literacy New mapping Eco-tourism becomes the norm Cultural heritage focus Stronger NGO Lifting gender Stopped brackish water solution Empowerment and giving voice “Let new leaders emerge” Providing space to develop shared vision to protect nature From project-to-project, to making a plan “It is very different from what it used to be” Connecting water owners
Categorization overlap	Inclusivity and empowerment		Inclusivity and empowerment
		Changed tourism	Changed tourism
	Local governance		Local governance
	Ocean literacy	Ocean literacy	Ocean literacy

sorted as “substituting.” Importantly, several examples ended up appearing in several categories. For instance, changes related to governance arrangements and inclusive/empowering methods were categorized as both re-crafting and disruptive, where reorganization of industries and ownership were eventually categorized as both substitution and disruption.

We note that discussions during the sorting exercise expressed a sensitivity towards the fluidity of the theoretical categories, leading to examples becoming categorized into more than one category. These sensitivities contain insight into the conceptual challenges and possibilities in applying the theoretical framework to small-scale practice examples. Even more importantly, they provide in-depth reflections, offering insight into the nature of transitions emerging from small-scale pilot activities. Below, we therefore spend the rest of the article unfolding the reflections that took place during the sorting exercise, including quotes from the workshop participants to illustrate the reflexive and deliberative process that informed the categorizations as a process.

4.2.1. Recrafting Practices

To most groups, new participatory approaches to include more or new people were best described as “recrafting” practices:

Allowing a young person to develop their own projects as a form of participation. [Researcher] going out in the community and intentionally reaching for those people who are not engaged. Talking to people who are kind of giving up, one-on-one. That’s very different than workshops and community meetings. It feels like recrafting.

One group leaned towards categorizing expanded citizen participation in town hall meetings as a “recrafting” of practices, reflecting on the way overall decision-making processes are still maintained, rather than “disrupted”:

A: These wider town hall-style workshops can go in the middle, because it’s substituting one decision-making process with another one. More than disrupting the entire idea of...

B: I don’t think it’s disruptive, either. For me, it is also recrafting.

On similar grounds, the same group also opted to categorize the example of including water owners in Åland as “recrafting,” arguing that the initiative was building on, and innovating, an existing governance framework:

That’s recrafting because you have an entity you are already using and you’re innovating it. You’re taking the policy that’s already existing in Åland, and you’re trying to get the water owners to take responsibility and realize their role, and how that has influence.

In another group, “recrafting” was used to categorize citizen science activities:

We have a citizen science approach in our project. It could be recrafting practice, when ordinary people also contribute to the scientific tasks with data collection.

All in all, “recrafting” was reserved for changed practices that allowed for including more or new people into existing processes, but which did not seem to radically alter underlying rationalities for governance and/or participation.

4.2.2. Substituting Practices

Citizen science and ocean literacy activities also appeared under the category of “substituting practices.” For example, the children’s biodiversity carnival in Burgas:

A: I had the new activities for children and families, which kind of fit in with substitution. And I think you could add citizen science somewhere as well.

B: So that’s a substitute? Or are we changing one or more elements of current practice?

C: They are a little fluid across categories, especially recrafting and substituting.

B: Yeah. So, I might call it substitution. Because you are also playing on the carnival as an institution or something, like a cultural touchstone.

C: But we don’t have a classic carnival culture. So, it is a cultural decision.

The “substituting” category was also deemed relevant for identifying shifts in the way industries are reorganized:

Substituting, it’s also trying to reduce mass tourism. In the case of Cap de Creus, it’s trying to substitute for the kind of tourism taking place. More linked to eco, social practice, and not seeing the sea as a product of consumption, restricting recreational activities that can produce damage.

“Substitution” was also suited to categorize shifts in energy sources and transportation systems:

For the Connemara Gaeltacht. If shifting from using coal to green energy like wind or solar energy, would it be substituted in practice? Yes.

Meanwhile, the strict categorization into “substituting” was challenged by the notion that NBS was also associated with a change in underlying norms and larger-scale regulations:

I would say that NBS is also something crossing through all three types of practices because in one sense it can substitute unsustainable practices. Yeah, like going from a traditional high-emission energy sector or transportation system to a sustainable one. But it also can be like recrafting practices through the change of mindset, behavioral attitudes, norms, and regulations.

In summary, “replacing” could be used for participatory broadening as well. However, it also readily invited participants to think of examples pertaining to the organization of economy and ownership, and it was also particularly suited for examples related to the implementation of more environmentally sustainable technological alternatives and NBS.

4.2.3. Disrupting Practices

While “recrafting” and “substituting” seemed to invite some rather quick and intuitive understandings and categorizations, examples of “disruptions” tended to emerge as discussions progressed. The very meaning of “disruption” was also subject to debate and interpretation. In one group, it was initially debated whether the movement from recrafting over substituting to disruption was mostly a matter of scaling up from an individual to a more collective governance level, which ended with developing a working definition of “disruption” as “going against the normal running of things.” Another group took note of the negative connotations of the concept from tech discourse, leading to some hesitation to apply the concept. As one person summarized the concern: “It feels aggressive. We don’t mean to be aggressive.” In yet another group, it was noted how the BIOAGORA framework emphasized how transformative networks need to weave between “collaborating,” “challenging,” and “disrupting,” and that perhaps you start with “substituting” and “recrafting” practices, then make slow, incremental changes towards a direction that contains a “disruptive” element towards unsustainable practices. Essentially, “the disruptive moment happens because you have prepared the ground.” It was suggested that “disruption” may be empirically identified by a state of irreversibility, a tipping point in what becomes the norm, where going back becomes unthinkable. All these suggested interpretations seemed to be at play in the categorizations that emerged from the sorting exercise.

As dialogues around the examples evolved, an increasing number of disruptive elements could eventually be teased out in many of the empirical examples around inclusivity and connectivity of communities. And so, for example, the example around Åland water owners was first assessed as “recrafting” of existing governance, but with the possibility that it has “a hint of disruption” because things are now being done differently than before:

A: So, if we look at Åland’s water owners, if they could operate in a different way, more connected to each other and in a more similar way, where would that be?

B: Recrafting, I think. But I understand where you’re going because you feel like there is maybe a hint of disruption because they do things differently than before.

C: Maybe it could lead to that, but the starting point might be recrafting while they’re getting increasingly connected before moving towards disruption.

This type of reflection also occurred in another group, which had first categorized the Åland example as “recrafting” practices:

A: Could recrafting be something with the Finnish maps and how [local host] has gone out to the local communities? There has been a different type of data collection in the way that he’s done it.

B: Or maybe even in the whole thing around the recognition of the informal protection maps of the various oceans, that would require a new way to register these areas, so I think that’s a disrupting practice, that is, we’re changing how we do this on a fundamental level.

The examples pertaining to project inclusivity—broadening of the user of the sea constituency and what may be termed individual empowerment through participatory approaches—were initially discussed as

“recrafting” in many of the groups. As the session progressed, however, examples of increased participation were revisited in terms of their “disruptive” potential. The role of one specific community leader during the workshop process in Cyprus was put forward as a key driver in developing alternative visions, and from this example, the “disruptiveness” in “letting new leaders emerge” was formulated:

It's quite interesting when [Cyprus TCL participant] is talking about the community leader. It's disrupting practice to let new leaders emerge. With this workshop, probably, new leaders are emerging. And that is very disruptive because normally there is a hierarchy of some people making decisions and others following. But having people that you didn't expect come, raise their hand, and move things around, I would say it's disrupting.

So, it transpired that examples first identified as seemingly small-scale and time-limited changes could later be attributed to something more deeply transformative, like changing norms, or “locally” disruptive because ways of doing something constituted something “radically new” in the context of the TCL. This prompted a recategorization between, or at least a straddling across, theoretical layers. More of these “recategorizations” occurred as eco-tourism was moved from “substituting” to “disruptive,” highlighting the fluidity of transition processes:

A: Maybe substituting practices, like substituting normal tourism for eco-tourism. I think that could lead to a disruptive practice when it becomes the norm.

B: That's a great example of how these practices can shift and increase transition.

C: I think your [TCL's] ambition to have stronger NGOs is a disruptive practice, depending on what they mean by strength, but if it's to be able to advocate better for the lakes and nature, I think that would be more disruptive than what they have now.

Against a dominant regime of economic growth, it was also suggested that showcasing cultural heritage in terms of sustainability appears as “disruptive”:

A: I have one that I don't know where to place, but the showcasing of cultural heritage and sustainable use...

B: On the top maybe [with recrafting]?

A: Yeah, exactly, maybe “in between land,” the cowardly choice, but that's because it can be very disruptive as well. The current regime in all the rural activities or agriculture or fishing, or whatever, is economic growth and economic viability, so if you shift focus from that into preserving culture, values, etc., it's quite disruptive.

“Disruptive” elements were also teased out from the connectivity aspect of opening coastal spaces up to communities in Burgas and Cyprus with the prioritization of nature-based infrastructures like bike paths and a nature trail. “Disruption” was identified both in terms of changes in people's perceptions, and in the co-creation processes used to create a space for finding and agreeing on a shared, alternative vision:

There's something there in that story about how [Cyprus stakeholders] could agree on a trail rather than discuss a road, [which is] about moving from conflict of interest to unity for an informed, shared vision. That there's been this space where they have discussed and unpacked the need for protecting nature, while also creating some kind of connectivity, so they arrived at an informed shared vision that they can agree on rather than the conflicting poles.

Furthermore, “disruptive” elements were also found in the ways the various TCLs have worked with initiatives aimed at reorganizing the economy to retain value in communities:

We have categories that apply, I think, to Connemara, but also in Burgas, introducing or enforcing practices that retain value from the tourism industry. But I think for any blue growth industry locally, the act of introducing these practices is innovative, or disruptive.

In connection with community ownership, “disruptive” elements were also identified in how community groups think of themselves as active participants rather than passive recipients, with awareness and knowledge of the power and initiative communities can have. The following example was presented from the Connemara TCL:

There's an interesting case study in the region between a large-scale offshore wind farm that is being pushed through by the regulators, and then there's a small-scale community-owned renewable co-op that is having an incredibly difficult time getting anything built because of how stringent the regulation is in the community sector. And then the more fundamental disruption side of things is changing the way that we think about organizing the economy, and that's this idea of, if you're able to get these community groups to think of themselves not just as passive recipients of change but active participants, then, yeah, that can be a slightly more transformative version of things.

In another group, the establishment of a governance committee in connection with formulating a community plan in Træna was also suggested as an example of “disrupting” practice for purposes similar to the ones highlighted in Connemara:

Would [Hooked on Træna] be a disruptive practice? You've set up local governance committees that didn't exist before. And then from that, you're putting upward pressure on the municipality to start thinking about the island in a different way. So, I would say it's more disruptive.

With reference to the Cap de Creus pilot, the networking of citizen action was discussed in terms of social movements where people who—in the beginning—work separately start to join forces, using the power of collective action to speak authoritatively about topics and bring them to the table. The food sovereignty forum was forwarded as an example because the idea is to work towards an alliance of incorporating the seafood fisheries into the agroecological change movement, a movement which had originally emerged from Latin America:

In our TCL, we managed to join forces for the first time. The different social profiles, different people that act individually in each entity, association, and so on, will unite to speak about problems and concerns that worry citizens, such as the question of food sovereignty, and about production,

distribution, consumption, and so on....It's something that we can escalate because we can act as a global network and join forces. This is important because it's a project legacy.

The importance of collaboration was stressed again later in the session for its role in building momentum:

The collaboration aspect is very important in any change. You need to have a lot of people think similarly and then realize they are not alone. And then you feel more empowered, where you feel collaboration leads to more empowerment, and so on.

In summary, most examples were eventually identified as having some “disruptive” elements defined as something “radically new” for the context, something that reflects a change in norms, something that indicates a sense of empowerment, something that indicates the gathering around new and shared visions, and/or something with the potential for further social mobilization.

5. Discussion

Several methodological limitations should be acknowledged. First, the relatively short observation period constrains the ability to assess long-term transformative impacts. Secondly, the reliance on self-reported and co-created data introduces potential bias, as participants may emphasize successes over challenges. Still, the three-layered framework prompted much critical and self-reflexive discussion in the workshop. Eventually, discussions prompted by the framework led participants to discuss how transition mechanisms can be categorized differently. This led to discussions that were particularly sensitive to how seemingly incremental changes, such as new engagement methods or intra-community connections, may potentially—or may not—contribute to longer-term transformative dynamics when sustained and collectively enacted. This sensitivity was not unique to the workshop outcomes but aligns with prior work highlighting participatory and co-creative approaches that foster empowerment and social inclusion in sustainability transitions (Dushkova et al., 2025; Frantzeskaki & Rok, 2018). The findings suggest that co-creation can contribute to just and inclusive transitions beyond the implementation of specific activities, and similar processes of moving from participation towards capacity-building, shared ownership, and institutional embedding have been observed in other participatory research contexts (De Hernandez et al., 2021). The overlap between “recrafting,” “substituting,” and “disrupting” practices suggests that co-created interventions often result in multiple, interconnected forms of change. Activities expanding participation may initially appear as “recrafting” practices, but in contributing to community capacity-building and collective agency, have the potential for “substitution” or “disruption.” Therefore, the transformative capacity of co-creation in just transitions lies not only in broadening participation, but also in enabling community influence in decision-making and reshaping power relations (Avelino et al., 2024; Turnhout et al., 2020).

While the role of TCL hosts positioned the pilot project well within some ongoing governance and/or planning processes and networks, the tension between small-scale pilot initiatives and larger-scale policy and planning processes remains a difficult challenge for assessing transformative change. And the impact of small-scale pilots vis-a-vis larger-scale governance figured prominently in discussions. For example, the locally developed coastal plan co-created in the framework of the project and led by the local development agency of Lemesos has been side-lined, and currently a marine aquaculture harbor is being constructed in the middle of the area of the Cape Dolos Strategic Community Development Plan (Kyrönviita et al., 2026).

And so, most TCLs were acutely aware of how their transformative potential may continue to build, or risk being stalled, dependent on supportive vs. counter-productive planning decisions at higher scales in municipal and national levels. Still, these discussions have helped position coastal communities as vital agents in their own transitions and articulate the desirability and value of policy support and continuation of locally co-created initiatives to enact sustainable transformative change.

6. Conclusion

The fluidity and inter-connectivity of the three analytical categories of “recrafting,” “substituting,” and “disrupting” practices quickly became clear in all group discussions, and using the three-layered framework to sort examples during the exercise was productive in clarifying how this was the case. The observed overlaps across the three analytical categories echo the interconnectivity of transition mechanisms, resonating with transition scholarship on the limitations of linear or discrete categorizations (Loorbach et al., 2017; Ounanian et al., 2026). Rather than fitting into predefined categories, transitions are increasingly understood as complex, nonlinear, and structural processes of change within adaptive systems (Avelino et al., 2024). Notably, participant discussions suggest that co-creation processes can themselves function as “disruptive transition mechanisms,” particularly when enabling shared visions and collective decision-making, as observed in the TCLs.

Concretely, the three analytical categories of the framework were useful in teasing out how *different aspects* of the *same pilot examples* could be assessed differently in terms of both “radical” or more “incremental” change. Thus, we arrive at the conclusion that while the three-layered framework is perhaps less suitable for landing on any final empirical categorization for a distinct pilot project, it is helpful as a heuristic device for “seeing empirically” how various transition mechanisms can actually emerge from within one single “pilot” action/initiative—and if not simultaneously, then perhaps gradually with continuity, collectivity, and sustained intention. Openly playing with the categories of the framework and recognizing the sorting’s experimental character can perhaps promote similar discussions around transformative change in other living labs and pilot projects.

A key perspective resulting from this sorting exercise was the possibility of bringing forth how practice changes—no matter how incremental they may seem at first—can, upon closer inspection, be connected to emerging “disruptive” effects in terms of changing norms, self-perceptions, individual agency, and collective ways of “doing” at the community level. As such, the emerging discussions clarified the current effects as well as the long-term potential of the local, the small-scale, and the bottom-up. Contrary to any prestigious top-down and large-scale initiatives, what emerged as impactful in these discussions were the empowering effects of co-creation stemming from changes that may appear minor, but which are felt quite radical locally. Instead of focusing mostly on singular up-scaling needs, “disruptive” potentials were explored first and foremost in terms of the modest and incremental processes of cooperation and continuity in themselves.

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