

Citizen participation in food systems transitions: How inclusive should it be?

Else Giesbers^{a,b,*}, Thomas J.M. Mattijssen^a, Cees Leeuwis^b

^a Wageningen Social & Economic Research, Wageningen University & Research, Droevendaalsesteeg 4, 6708 PB, Wageningen, the Netherlands

^b Knowledge, Technology and Innovation Group, Wageningen University & Research, Hollandseweg 1, 6706 KN, Wageningen, the Netherlands

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ABSTRACT

Within food systems transitions debates, various arguments are given for inclusive citizen participation in decision-making processes. This article critically discusses these arguments through an integrative literature study. We link scientific papers on transition studies, public participation, inclusivity, and food system research to discuss the need for and relevance of inclusive citizen participation in food systems transitions. The article distinguishes five arguments for the inclusion of citizens in decision-making processes: normative, substantive, legitimate, social learning, and empowerment arguments. These arguments are connected to various dynamics relevant to a transition process. This study shows that there is a fundamental tension between food systems transition thinking and inclusive participation. This tension plays out differently in different dynamics of food systems transitions. Therefore, we propose that the most meaningful form of inclusive citizen participation differs for each dynamic of food systems transitions.

1. Introduction

Transitions are long and complex processes in which a wide variety of actors play a role. This makes these processes difficult to steer (Frantzeskaki et al., 2016). There needs to be an understanding of the interests and roles of various actors to develop governance approaches that address the societal and environmental challenges related to our food systems (Cifuentes and Sonnino, 2024; Huttunen et al., 2022; Leeuwis et al., 2021). Several studies mention the inclusion of citizens as a crucial aspect for achieving effective and legitimate innovation and for promoting just, fair, and effective steering approaches in the context of societal transitions (e.g., Affre et al., 2024; Hofmann et al., 2020; Huttunen et al., 2022; Kok et al., 2021; Visseren-Hamakers and Kok, 2022). This paper contributes to these debates by discussing the need for and dilemmas around inclusive citizen participation in various dynamics of food systems transitions.

1.1. The urgency for food systems transition

There is a large impetus to change our food systems. The food industry accounts for a third of the global anthropogenic greenhouse

* Corresponding author: Droevendaalsesteeg 4 6708 PB Wageningen, the Netherlands.

E-mail address: else.giesbers@wur.nl (E. Giesbers).

gas emissions and is a big contributor to environmental pollution, biodiversity loss and social inequalities (Candel, 2022). Implementing incremental changes in societal systems¹ will not meet the societal and environmental challenges in global food systems (Linnér and Wibeck, 2020). Therefore, there is an need for more urgent transitions in food systems (Ingram and Thornton, 2022). Transitions refer to a “fundamental, systemic shift in the structure, culture and practices of sociotechnical, socioeconomic and socio-institutional processes” (Visseren-Hamakers et al., 2022), caused by mutually reinforcing developments in economic, cultural, technological, environmental and institutional domains (Rotmans et al., 2005). Food systems are complex processes associated with food production, processing and utilisation, as well as the inputs, results and impacts of these actions (van Berkum et al., 2018). Multiple food systems exist, depending on the different geographical locations and value chains (Jani et al., 2022).

Transitions in such systems are long-term processes that require the involvement of various actors. Because existing structures and habits need to change, it takes considerable time before the foreseen fundamental changes are realised (Hölscher et al., 2019; Markard et al., 2012). Transitions are the work of people, as “all change must be implemented by *people*, as individuals, groups, organizations or societies” (Bradbury, 2007, p. 279).

1.2. Including citizens in food systems transitions

Citizens are differently and unequally affected by transitions in food systems, depending on their role and position in food systems and society. Basing decisions only on in-depth technical knowledge or political opinions is not sufficient to govern transitions, as it often leads to practically unworkable and unpopular outcomes (Nguyen and Bosch, 2013; Renn et al., 2013) or does not lead to lasting changes (Leeuwis et al., 2021). Instead, including citizens and other actors is essential (Leeuwis et al., 2021). This should make a transition more democratic and fair, and it ensures that the transition complies with the complex societal context in which it is embedded.

According to many authors (e.g., Hofmann et al., 2020; Huttunen et al., 2022; Kok et al., 2021) and policies (Fors et al., 2021), these decision-making processes should not only be participatory, but also inclusive. A more sustainable food system in which inequities and power imbalances are addressed can only be created when diversity is acknowledged and various societal perspectives are integrated (Drimie et al., 2018; Hebinck et al., 2021; Wals, 2007). However, this requires an inclusive involvement of citizens (Visseren-Hamakers and Kok, 2022). The European Commission (EC) also advocates for ‘just and inclusive’ participation of citizens in the European Green Deal because “[t]he transition can only succeed if it is conducted in a fair and inclusive way” (European Commission, 2019, p. 16). This is why the EC adapted the ‘leave no one behind’ principle, which is particularly relevant for food systems transitions because there are many inequalities and power imbalances in food systems which are often overlooked (Crivits and Mingolla, 2022; Hebinck et al., 2021).

1.3. Aim and research questions

This article aims to critically study the topic of inclusivity in participation in food systems transitions to highlight and discuss dilemmas around inclusive governing approaches. To achieve this, we aim to combine insights from studies about inclusive citizen participation with studies about the governance of food systems transitions.

The main research question that we address is: *what is the need for and role of citizen participation in various dynamics of food systems transitions?*

To answer this question, three sub-questions are formulated:

- i. *What rationales are given for citizen participation in food systems transitions?*
- ii. *What dynamics of food systems transitions can be distinguished?*
- iii. *What are various understandings of inclusivity in the context of citizen participation in food system transitions?*

Section 2 describes the methodology used for addressing these questions and further explains the structure of the article based on these methods.

2. Methodology

This article is based on an integrative study of literature. Such studies combine insights from various research disciplines, aiming for a cross-cutting and integral perspective on a topic to gain new perspectives or build towards a new framework (Snyder, 2019). A strict and structured approach to reviewing literature can hinder a cross-cutting analysis when the topic of study is difficult to capture in general search queries (Wong et al., 2013). The ambition for an integrative study of literature is not to give an overview of all relevant articles that have been published, but rather to combine various perspectives from different research fields (Snyder, 2019). Whenever new topics of interest come up during the analysis, additional information is collected and the analysis is expanded (Mattijssen, 2022). As this study combines literature on food system transitions with work on citizen participation and inclusivity, such an explorative, flexible, and iterative approach to data collection is most suited.

¹ Societal systems are systems that fulfil a societal need. Examples of societal systems are agricultural systems, mobility systems or energy supply systems (De Haan & Rotmans, 2011).

An integrative study of literature often starts with presenting an overview of the relevant knowledge as a point of departure for a critical reflection where various perspectives are combined and/or integrated. In this way, an integrative literature study can help to create a new framework, a set of key principles, or to combine empirical findings from various disciplines to come to new and broader perspectives on research topics (Snyder, 2019). Common expressed critiques on integrative literature reviews include that there is no clear structured way of collecting data, as is the case in systemic or semi-systematic literature reviews, that they are not transparent, or that they lack integration of the research (Snyder, 2019). While we understand these critiques, the integrative literature review best fits the goal of this article to combine perspectives from different fields of study, requiring a more creative, flexible and iterative way of collecting data – a major strength of the integrative review compared to other approaches (Snyder, 2019).

This study primarily focused on food system literature as inclusivity in the context of food systems is more specific compared to inclusivity in the broad sense. Literature on citizen participation and inclusivity studies is combined to present an overview of the objectives of citizen participation (Section 3). From transition governance studies, a framework that distinguishes various dynamics of a transition is presented in Section 4. The insights from Sections 3 and 4 are combined to illustrate objectives for inclusive citizen participation linked to various dynamics of food system transition in Section 5. The research questions are answered in these sections and then discussed in Section 6. The paper ends with a conclusion in Section 7.

2.1. Selection of literature

This research did not start with a strictly defined query, following the same approach used in other integrative literature studies (e.g., Dijkshoorn-Dekker et al., 2020; Mattijssen, 2022). Data was collected in three ways: 1) by using different queries and additional literature was collected with new queries to further explore topics that came up during the research. 2) A snowball method was applied, which means targeted reading of articles that are referred to in other articles (Naderifar et al., 2017). And 3) additional references were collected through contacts with peers. The inclusion of articles was an iterative process that took place continuously while reading and analysing the literature. In total, about 230 empirical papers, conceptual articles, and review studies have been collected throughout the study. Most of the articles are based on research done in European countries, which could be a bias in this study. About half of the articles have been published in 2020 or later, which shows that research in this field is emerging. For each of these articles, the abstract was read to assess whether it could provide relevant information for answering our research questions. Because of familiarity with two languages, we confined our literature to English and Dutch-written pieces.

Three selection criteria were applied to the abstract to assess the articles' relevance: i) a focus on (subdomains of) food systems, ii) a focus on participation, and iii) consideration of aspects related to inclusivity. Articles that complied with at least two selection criteria were included in our study. Some articles that only complied with one of the selection criteria, but nevertheless seemed highly relevant, were also included. About 90 articles were assessed as relevant.

2.2. Literature analysis

The selected articles were read, and the most important topics and sub-topics were highlighted for each article and categorised to unravel conceptual frameworks used in different bodies of literature. Conceptual insights on understanding food systems transitions were linked with literature on inclusion and participation. The reading and analysis of literature was conducted iteratively. An interpretative approach was used to develop our own conceptual framework. Interpretations of the studies are made, meaning that biases and perspectives of the researchers working on this paper influenced the conceptual framework. By discussing our own interpretations with each other, we aimed to minimise the influence of our biases and build a thorough conceptual framework.

3. Inclusive citizen participation in context of food systems transitions

In this paper, 'citizens' refers to 'everyday' or 'lay' citizens "because they are citizens, rather than because they claim expert authority or are the representatives of an organised group within society" (Smith, 2009, p. 5). This distinguishes citizens from stakeholders. Citizens are more than consumers or users. It refers to all people who are in some way affected by the matter at hand (Verhees and Verbong, 2015). While it might seem like a neutral term, the term 'citizen' is prone to power dynamics. It refers to a status, connected to rights and obligations which are not neutral and hide inequalities. Powerful citizens can "shape definitions of rights (...) and are able to turn rights discourses and entitlements to their advantage", something which structurally excluded people are often unable to do (Jones and Gaventa, 2004, p. 11). Furthermore, citizenship is associated with the active exclusion of people without citizenship rights (Bhambra, 2015). Maleta (2018, p. 32) argues that the "notion of 'the citizen'" is still based on a "property-owning white male". Structural and cultural barriers hinder the equal involvement of people who do not comply with this notion of 'the citizen'. Being aware of these discussions and implications, we nevertheless decided to use the word 'citizen' throughout this paper as this is most commonly used in the literature we addressed.

Renn and Schweizer (2009) emphasise it is important to take the perspectives of citizens into account for well-informed decision making 1) to have sufficient knowledge about the possible impacts of the decision and 2) to consider the (un)desirability of the consequences of action for the people involved by reflecting on their values. Integrating these two factors for well-informed decision making should, according to Renn and Schweizer, be done by involving actors that bring in relevant knowledge and contribute to the diversity of values within society. This endorses the importance of inclusivity (e.g., Huttunen et al., 2022; Kok et al., 2021).

3.1. Inclusivity in citizen participation

Inclusive citizen participation can refer to the demographics of the individuals involved (e.g., an equal balance in terms of gender, age, and educational level (Hofmann et al., 2020)), diverse forms of knowledge (Bäckstrand, 2004; Butzin et al., 2024) or different values (Huttunen et al., 2022). The ideal is that inclusive participation gets people empowered with the aim of redefining power relations (Peuch and Osinski, 2020). However, exactly these power imbalances lead to unequal possibilities for people to express their thoughts (Hofmann et al., 2020; Leeuwis, 2000, p. 940; Ryan et al., 2023; Turnhout et al., 2010). This is particularly relevant in food systems, where power imbalances are omnipresent. Therefore, these power imbalances and structural barriers need to be recognised and challenged (Affre et al., 2024; Linnér and Wibeck, 2020), to avoid internal exclusion (Harris et al., 2021) and for the process to contribute to sustainable systemic change (Hunt, 2014). Power imbalances are an integral part of all facets of participatory processes and play a role in different practices. For example, it is usually expected that participants will verbally express their thoughts rationally, using facts. This biases those theoretically skilled (Han et al., 2015; Mattijssen, 2022), but silences those who prefer to communicate in other ways or who speak another language (Turnhout et al., 2010).

Organising inclusive citizen participation is more than just inviting a broad range of people to processes. It requires processes to be sensitive to power dynamics and structural barriers. Understanding inclusivity from an equality perspective gives everybody the same opportunity and treatment, irrespective of differences. Taking on an equity perspective instead acknowledges differences and gives structurally excluded groups different opportunities for engagement (Fors et al., 2021). This is about levelling the playing field to reach inclusive participation. While some authors move towards equity approaches, because that leads to a more equal outcome (Fors et al., 2021; Minow, 2021), others argue that the approach should follow from the goal of the process (Beauvais and Baechtiger, 2016).

In some instances, a specific focus on marginalised groups may be preferred, even when this goes at the expense of including others. Deliberation in which structurally disadvantaged populations “deliberate in their own enclaves (...) before entering the broader public sphere” can address uneven participation and level the playing field (Han et al., 2015, p. 15). Providing more space for people that are seen as less powerful, ensures that processes are perceived as fairer (Mercer-Mapstone et al., 2019). Leeuwis (2000) describes that a certain sense of mutual interdependence amongst actors is needed for them to constructively contribute to a decision-making process. An example is given of a West-African farmer community dealing with the European agro-industry in market distortion issues. When the agro-industry does not feel responsible for, or does not even recognise, the problem, they won't constructively engage in participatory decision-making processes (Leeuwis, 2000). This issue raises the question whether they should be included in these processes at all?

3.2. Arguments for inclusive citizen participation

In the literature, we found that scholars often make a distinction between three arguments or objectives for citizen participation: i) normative or democratic, ii) substantive, and iii) instrumental or legitimacy (Bidwell and Schweizer, 2021). Some, like Schmidt et al. (2020) add a fourth objective: social learning. The literature also brought up other arguments for inclusive citizen participation, which are related to empowerment. These five objectives focus on different aspects of citizen participation but partly overlap and are interrelated. The next section describes these five arguments, based on the literature assessed in this study.

3.2.1. Normative arguments

It is considered fair that citizens have the possibility to express their opinion and influence a proposed outcome. While including societal actors in processes does not automatically make these processes democratic and responsible, it can provide more socially robust processes (Kok et al., 2021). The normative argument for citizen participation emphasises that those who are affected by (the outcome of) a process should have the opportunity to influence it (Bell and Reed, 2022; Köhler et al., 2019; Rowe and Frewer, 2000). This is called the ‘all-affected principle’ (Leeuwis et al., 2021).

More so than the other arguments, this argument relates to value judgements about what is fair. Bidwell and Schweizer (2021) argue that the fairness and justice of processes increase whenever those who are often excluded from decision-making are included. Batavia et al. (2020) connect this to the moral community, which encompasses “all the entities to whom humans may have direct moral obligations or responsibilities” (p. 1). Following an anthropocentric worldview, the moral community solely encompasses humans. However, an ecocentric approach considers animals, vegetative organisms and collectives like ecosystems to be part of the moral community as well (Batavia et al., 2020). In several countries like India, Ecuador and New-Zealand, rivers and nature have legal rights and can be represented by humans (Sheber, 2020).

To meet normative arguments, an inclusive approach needs to be considered. However, not everybody is affected by decision-making processes in the same way and has the same decision-making power. This can be a barrier for participatory processes and can hinder fair outcomes. To do justice to the experiences of all, one may be required to temporarily exclude the most powerful actors until they get recognise the issue and their role in it. Such actors could otherwise dominate processes and limit the deliberative space for others, especially when they do not feel dependent on other actors (Leeuwis, 2000). An example is given by Smith and Owen (2011, p. 213) when they describe Machiavellians' perspective on democracy, which claims that “unless elites are formally excluded, they will continue to dominate and their interests will continue to be realised to the detriment of common citizens”. Countercoalitions provide space for structurally excluded people to express their needs in a safe way (see Fraser, 2014). Deliberately excluding actors because they are less supportive of change might be accommodating for achieving change in the short-term, but it might decrease support for process outcomes and associated changes in the long-term (Meyer and Stensaker, 2009).

3.2.2. Substantive arguments

Substantive arguments imply that including citizens improves both the quality and the relevance of decision-making processes by bringing various forms of knowledge together (e.g., [Bidwell and Schweizer, 2021](#); [Candel, 2022](#); [O'Neill, 2001](#); [Schmidt et al., 2020](#)). Including a plurality of people opens up the possibility of seeing the richness of voices, values, and perspectives and to fully understand the issue at hand ([Anderson and Leach, 2019](#); [Huttunen et al., 2022](#); [Kok et al., 2021](#)). [Affre et al. \(2024\)](#) argue that inclusive citizen participation ensures that policies are more responsive to the needs of the community. It also uncovers local resistance and finds entry points for change ([Anderson and Leach, 2019](#)). This argument therefore not only focusses on the process, but also on the outcome of participatory processes.

Lay knowledge is mostly based on lived experiences and therefore grounded in everyday reality and regional contexts ([Butzin et al., 2024](#)). Because it is complementary with other forms of expert knowledge, it provides a holistic understanding of the issue at hand ([Stirling, 2008](#)). As all forms of knowledge are situated, knowledge is tied to specific geographical places and cultural and political contexts. And “if all knowledge is situated, no one’s standpoint holds enough information to solve collective problems” ([Brush, 2020](#), p. 162). As all knowledge is based on interpretations, no form of knowledge is truly neutral ([Anderson and Leach, 2019](#)). [Bäckstrand \(2004, p. 699\)](#) argues that scientific knowledge “is associated with rationality, objectivity, control and distance – traits that in western societies are associated with masculinity” and grassroots knowledge, associated with femininity, is often not included in science. The denial of this ‘feminine principle’, that promotes diversity in agriculture, has led to practices of monoculture and therewith to a loss of biodiversity ([Bäckstrand, 2004](#)).

As [Agarwal \(1998\)](#) illustrates, women living in rural areas are often custodians of specific knowledge around plants and nature. This knowledge is particularly relevant in transitions connected to natural processes, like food systems. However, experiences from the past have shown that a dialogue between citizens does not necessarily equal fairer environmental decision-making. Often, anthropocentric values are pushed before the interests of other species ([Ryan et al., 2022](#)).

3.2.3. Legitimacy arguments

Legitimacy arguments also refer to the outcome of participatory processes. When citizens consider an institution or authority as a legitimate governor, this strengthens their motivation to comply with laws and rules and to cooperate with this authority ([Jackson, 2018](#)). In this context, legitimacy concerns the (perceived) rightfulness, legality, acknowledgement and acceptance of the exertion of power by citizens ([Leistra, 2014](#)). Based on how they perceive the institution, citizens judge the authority and decide whether they obey the rules and laws that are established by this authority ([Jackson, 2018](#)). The literature analysed for this review specifically discusses the influence citizen participation can have on the legitimacy of authorities or other governors.

Arguments related to this objective emphasize that engaging citizens increases the general acceptance of and support for decision making and also contributes to giving ownership over the solutions to citizens ([Bidwell and Schweizer, 2021](#); [Candel, 2022](#); [Olivadese et al., 2021](#); [ter Haar et al., 2023](#)). People do not necessarily have to be personally included to support a decision. When other citizens or civil society actors are included in the process, citizens tend to feel more represented ([Kok et al., 2021](#); [Moragues-Faus, 2020](#)). A process is considered fair when all citizens have an opportunity to voice their opinions and if the concerns they bring in are considered seriously and treated equally ([Salazar and Alper, 2002](#)). This is because citizens are seen as “the best judge of their own interest” ([Smith, 2009](#), p. 9). Inclusive participation can therefore be a way for governments to legitimise their practices.

3.2.4. Social learning arguments

There are various definitions of social learning. According to [Wals \(2007, p. 39\)](#), social learning refers to learning in which “divergent interests, norms, values and constructions of reality meet in an environment that is conducive to meaningful interaction”. Interactions between people with different backgrounds and different visions stimulate social learning ([Peuch and Osinski, 2020](#)). This can change understandings of a topic and be the basis for action ([Leeuwis, 2000](#); [Reed et al., 2010](#)). [Bradbury \(2007\)](#) argues that for realising transitions, it is crucial that there is a space for open-minded, out-of-the-box thinking, and that people can discuss new ideas or experiments and learn from one another. When people learn from each other, there can be an increasing convergence between their ideas and visions. This can lead to raised awareness of peoples’ interdependent positions and form a basis for concerted actions ([Leeuwis et al., 2002](#)).

Realising transitions is all about changing human behaviour. To this end, behaviour and the context first need to be understood. When citizens are aware of their own position and consider the perspective of others, a shared understanding can be created and some scholars argue that citizens then come to a rational balance or consensus ([Ryan et al., 2023](#)). When citizens have the possibility to learn from all perspectives in society, a transition can become more equitable, socially just and less polarised ([Dryzek et al., 2019](#); [Schmidt et al., 2020](#)). However, this presumes that rational consensus is the goal and something to strive for. To a lesser extent, social learning is also associated with “the translation of experiences in local projects into general knowledge, rules, and norms, thus creating knowledge flows between these places” ([Van Mierlo and Beers, 2020](#), p. 256). To promote social learning, it is important that participatory processes allow for deliberation so that polarisation can be overcome, and mutual understanding and learning is promoted ([Dryzek et al., 2019](#)).

3.2.5. Empowerment arguments

While the above four categories provide a broad perspective on the relevance of inclusive citizen participation, they generally do not focus on the added value for individuals. This objective shows that being included in decision-making processes can also be highly relevant for individuals to feel empowered.

How empowering a participatory process is, strongly depends on the role citizens are given. In the spectrum of engagement,

empowerment is the highest form of participation (Fors et al., 2021). In these processes, citizens and professional experts share decision-making power (Fung and Wright, 2001). Participating in decision-making can be a way for people to “move ‘away from life-denying systems and relationships’ like patriarchy and colonialism” (Warren, 2000 in Hunt, 2014, p. 241). Scholars like Hunt (2014) use the wording ‘empowering’ when it comes to participation, especially when they mention the participation of people from structurally excluded communities. People are encouraged to develop new skills and be recognised as valuable contributors, regardless of their background. However, participation can only be empowering when the structures in which people are to participate allow them to have a certain level of power and allow them to be and feel empowered. One of the often-mentioned critiques of participatory processes is that when citizens are given responsibilities but no means to actually implement changes, processes easily become dis-empowering (Kesby, 2003).

4. Food systems transitions

As Section 3 shows, many different arguments support the importance of inclusive participation. In this section, we explore the underlying dynamics that drive and challenge change to better understand how food system transitions unfold in practice.

Food systems are complex and diverse systems that concern “all elements and activities that relate to the production, processing, distribution, preparation and consumption of food, as well as its disposal. This includes the environment, people, processes, infrastructure, institutions and the effects of their activities on our society, economy, landscape and climate” (EC FOOD 2030 Expert Group, in Kok, 2022, p. 20). The food system also shows effects of activities on food utilisation and the availability of and access to food (Ingram and Zurek, 2019). As various actors in the food system have different dependencies and different visions of the system (Leeuwis et al., 2021), it is challenging to realise transitions in food systems.

Scholars in transition studies focus on understanding and, to a certain extent, influencing or supporting transitions towards sustainability (Hölscher et al., 2023). Scrutinising the multidimensional relations between social and technical systems (Wolfram and Kienesberger, 2023), transition governance claims that unsustainable practices and strategies can be disrupted by external pressure, internal crises and the rise of alternatives (Visseren-Hamakers et al., 2022). One of the frameworks that is often referred to in the literature is the multi-level perspective (MLP) (Hebinck et al., 2022). According to the MLP, transitions are “the outcome of interactions on three levels: regimes, niches and landscapes” (Raven et al., 2012, p. 64). *Niches* are protected spaces where innovations happen and where path-breaking radical alternatives or innovations are developed (Metelerkamp et al., 2020). *Regimes* refer to generally accepted practices, common rules and administrative structures enacted by various actors and embedded in dominant understandings and institutions (Buijs et al., 2023). *Landscapes* are the exogenous socio-technical environment (e.g., climate, demography, economy) in which the regimes and niches are embedded and from which pressure on the system may emerge (Geels and Schot, 2007; Köhler et al., 2019; Markard et al., 2012). Interactions of activities on these levels can eventually result in a transition through a shift in regime. This is not a process based on rationality and consensus but is often combined with political struggles between established regime practices and niche practices that aim for change (Schot and Kanger, 2018). The MLP addresses these political struggles on a macro level but power dynamics and related politics and frictions occur on a micro level, however, and are therefore not very visible in the MLP. As discussed in ‘just transitions’ literature, when power imbalances and the potential effects these power imbalances can have on outcomes of transitions are not considered, the needs of less-powerful actors are easily excluded (e.g., Bennett et al., 2019). This is especially a pertinent issue in food systems as inequalities are pervasive. Several authors like Shove and Walker (2010) argue that within sociotechnical transitions more attention needs to be given to the ‘demand’ side of transitions, which requires the inclusion of various voices in transitions. This does not fit well with the MLP focus on vertical and structural relations between niche, regime, and landscapes.

Furthermore, while the MLP “consistently emphasise[s] the dynamics of alternative build-up and innovation” (Hebinck et al., 2022,

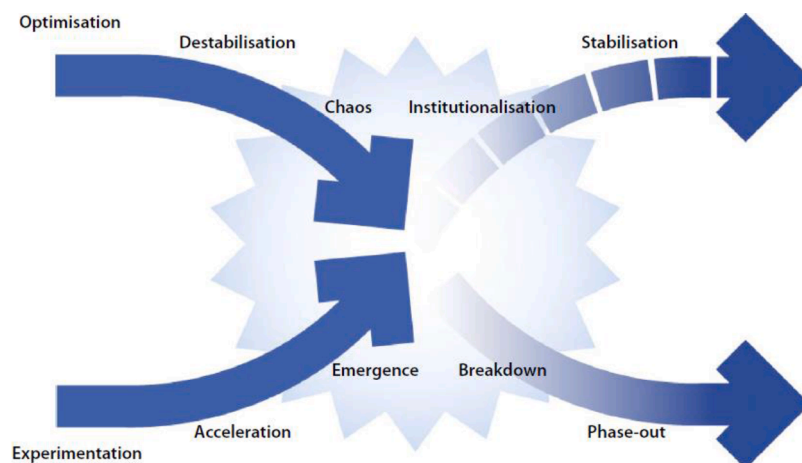


Fig. 1. X-curve that shows patterns of build-up and breakdown (Hebinck et al., 2022).

p. 1010), a transition does not only consist of an upward stream of innovations. Transitions are only realised when existing societal patterns are broken down as new innovations challenge existing regimes (Hölscher et al., 2023). In response to this, the X-curve is developed, as seen in Fig. 1. Next to the upward stream of innovations, the X-curve provides attention to the phasing-out of established systems (Hebinck et al., 2022; Köhler et al., 2019). Where the aim of the MLP is to analyse the collaboration of the different levels in a transition, the X-curve focusses on the roles niche actors and regimes play in transitions.

The upward stream of build-up starts with **experimentation**. As a reaction on the current dominant practices, radical new alternatives are developed. After a while, these alternatives become more developed, visible, and better understood. This contributes to “**accelerating** processes of diffusion” (Hebinck et al., 2022, p. 1013) in which the alternatives become more widespread and well-known. This leads to the **emergence** of new structures, rules, and therefore to new regimes. When more actors from within the regime become active in this transition, **institutionalisation** is achieved. Eventually, this leads to a **stabilisation** of the new regime. What used to be a niche, has now become the newly established regime (Schot and Kanger, 2018).

Next to that, patterns of breakdown are visible. Due to continuous efforts to maintain stability within a regime, and efforts to **optimise** current practices, it becomes difficult to initiate fundamental changes. But when the existing regime is confronted with exogenous pushes for change, it can lead to tensions, unrest and, therewith, **destabilisation**. This can be the beginning of a dynamic that Hebinck et al. (2022) refer to as **chaos** which characterises itself by unstable institutions and organisations, acute crises, and an uncertain future. Because of this chaos, a regime can no longer successfully fulfil its function which leads to a **breakdown** of this system. Eventually, the once-established regime will **phase-out** (Rogge and Johnstone, 2017).

Models like the X-curve are one-dimensional displays of transitions. However, in reality, they are complex and non-linear processes that are paired with disagreement, mechanisms of in- and exclusion, power imbalances, and conflicts (Köhler et al., 2019). Transition pathways have their ups, downs, and setbacks with periods of slow and fast development (Rotmans et al., 2005) and differences between actors in adopting new practices (or not) (van Raak et al., 2022). While the X-curve is a simplification of reality, it allows us to think about transitions in different dynamics with ‘upwards’ and ‘downwards’ pathways, which we link to inclusive citizen participation. The X-curve structures our analysis and embeds it into existing academic debates.

5. Linking inclusive citizen participation to dynamics in food systems transitions

In this section, Sections 3 and 4 are brought together by linking inclusive citizen participation to different clusters of transition dynamics. To make the dynamics of a transition more comprehensible, we followed van Raak et al. (2022) and divided the X-curve into four clusters: build-up, conversion, normalising, and break-down (see Fig. 2). Two notes are important to make. First - though we understand that there are actors that prefer a continuation of the current system – we take the necessity for a transition in our food systems as a starting point. This is why the dynamic ‘optimisation’ is taken out of consideration. Second, the connection we make should be regarded as a normative framework, not as the only way to replicate reality. While the X-curve as well as the arguments for inclusive citizen participation are based on literature, the consolidation of these two is prone to a certain level of our interpretation.

5.1. Roles of inclusive participation in clusters of food systems transitions

Prior studies, like Fohim and Jolly (2021), paid attention to the role key actors play in promoting transitions. They describe four types of key actors: 1) initiators who develop new solutions; 2) connectors that create new alliances; 3) topplers who create places for the new developments; and 4) supporters who create a larger supporting base (Fohim and Jolly, 2021). They specifically focus on actively involved actors or ‘frontrunners’ in transformative change. In this paper, however, we also focus on other actors who are not

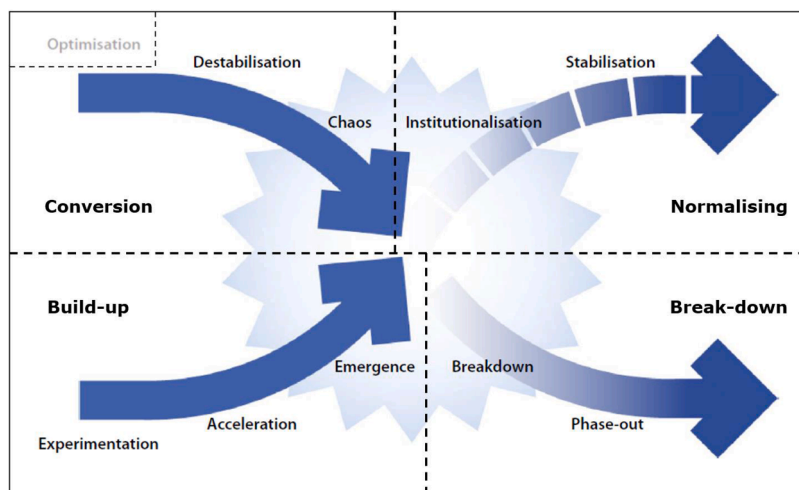


Fig. 2. Classification of X-curve in four clusters (based on (Hebinck et al., 2022)).

necessarily frontrunners. The contribution of citizens can take different emphases in each of the four clusters. Some of the traits of citizen participation are specific for certain clusters while others apply to all clusters of a transition. Legitimacy arguments, for example, are significant in all clusters as legitimacy of decision making can be a topic of discussion in all dynamics of a transition.

Integrating findings from literature on inclusivity and citizen participation with transition literature, Table 1 provides an overview of the roles which inclusive citizen participation can play in each of these clusters.

5.1.1. Build-up

De Haan and Rotmans (2011) identify three conditions for realising transformative change: *tensions* (between the environmental and the societal system), *stress* (when the regime inadequately meets societal needs) and *pressure* (when alternatives become competitors or take away the need for the existing regime). Often *tensions* are already visible when people start thinking about transitions, like signs of inequal food systems, climate change or rising food prices. Citizens that experience *stress* regarding the existing regime are likely to organise themselves in *pressure* groups and are amongst the first to act (Frankowski et al., 2021; Huttunen et al., 2022a). Regime actors are known to downplay the need for change and are seen as opponents of transitions by such frontrunners (Fischer and Newig, 2016). Involving both niche and regime actors has two main advantages in these dynamics of a transition.

First, to think beyond the most-usual perspectives and discover alternatives (Hölscher et al., 2019; Thomassen, 2006). Because niche and regime actors most likely have different perspectives on the food system, including them both leads to a broader diversity of ideas for change, acknowledges different kinds of knowledge and reflects a diversity of values present in society. This allows for a better understanding of society and behaviour and as a result, alternatives are more likely to provide fitting solutions to existing problems (Kok et al., 2021). This points towards the importance of both **substantive** as well as **social learning** arguments for inclusive citizen participation. As Kok et al. (2021, p. 1813) describe, “collective learning is a key element of experimentation for sustainable transformation.” Participatory processes like citizen assemblies can be a way to include “bottom-up, place-based answers that consider local needs, and diverse value positions” (Schmid et al., 2024, p. 836).

Second, **legitimacy** and **normative** arguments are relevant. In a transition, many people and organisations think about new

Table 1
Connecting roles of inclusive citizen participation to four clusters in transitions.

Cluster	Aim of dynamics in cluster	Role citizens can play in each cluster
Build-up	The main aims of the dynamics in this cluster are to come up with radical new alternatives and to make these alternatives more visible and mature. In the end, (democratic) choices must be made about what kind of alternatives are taken up and supported by politicians. This gives direction to the transition and marks the start of the development of new regimes.	<ul style="list-style-type: none"> - Look beyond usual framings of issues and solutions (Hölscher et al., 2019) - Discover various alternatives and interests, by both opponents as well as proponents of the transition (Thomassen, 2006) - Co-produce knowledge and acknowledge the diversity of knowledge and values in evaluating and ‘choosing’ what alternatives will emerge (Kok et al., 2021) - Contribute towards legitimacy of innovation processes (Candel, 2022) - Enlarging acceptance of choices made (Bidwell and Schweizer, 2021; Olivadese et al., 2021) - Creating spaces and providing information for changes in the food system (López Cifuentes and Gugerell, 2021)
Conversion	The first signs of change are visible but is it not yet clear what the direction of change will be. Choices need to be made about what niches are supported and what direction the transition should take. The established system is destabilised and there is uncertainty about the future.	<ul style="list-style-type: none"> - Forming a coalition to put pressure on the system (Hajer, 2002; Leeuwis and Aarts, 2011) - Discover entry points for change (Anderson and Leach, 2019) - Legitimate putting pressure on the system (Leeuwis et al., 2021) - It is considered fair that citizens are able to express opinions and influence the proposed outcome of transition (Köhler et al., 2019; Rowe and Frewer, 2000) - Consider (un)desirability of consequences by reflecting on values (Renn and Schweizer, 2009) - Holistic understanding of the issue at hand (Butzin et al., 2024; Stirling, 2008) - Uncover local resistance (Anderson and Leach, 2019) - Reduce conflicts and decrease polarisation (Dryzek et al., 2019; Peuch and Osinski, 2020)
Normalising	The need for this transition becomes widely accepted, just like the alternatives that were chosen. The new system becomes the new norm instead of the exception.	<ul style="list-style-type: none"> - Increase general acceptance of decisions (Bidwell and Schweizer, 2021; Olivadese et al., 2021; ter Haar et al., 2023) - Create conditions for a lasting change (Anderson and Leach, 2019) - Development of capacity and new knowledge (Hunt, 2014) - Contribute to the development of policies that fit the lived reality of citizens (Affre et al., 2024)
Break-down	The once-established regime breaks down. While some actors already found their place in the new regime, others are searching for their new position. It becomes visible which parties and actors experience loss because of the transition.	<ul style="list-style-type: none"> - Map the ones who lose because of the transition and design solutions so they can find a place within in the newly developed regime (Frankowski et al., 2021) - Knowledge about the impact of decisions (Renn and Schweizer, 2009) - Empowerment for citizens (Hunt, 2014) - Provide space for loss, pain, and acceptance (Frankowski et al., 2021) - Gain insights into (specific) problems that arise for actors because of the transition (Tribaldos and Kortetmäki, 2022)

alternatives. Most often, these cannot all be integrated into a future food system. Instead, choices need to be made regarding what alternatives to stimulate. By including a broad range of citizens in this process, more understanding is gained on what they would like to see integrated in the new system (Kok et al., 2021), thereby enlarging the possibility that the choices made fit a large part of society. Furthermore, more citizens are likely to accept these choices (Bidwell and Schweizer, 2021; Olivadese et al., 2021). Not involving regime actors can constrain transitions in food systems as they can contribute to systemic change by making food available and affordable and by providing information (López Cifuentes and Gugerell, 2021).

5.1.2. Conversion

In this cluster, the first signs of changes are visible but it is unclear yet what exact change will happen and what the newly established regime looks like. Inclusive citizen participation can play various roles here: it contributes to understanding the position of citizens regarding the transition, applying pressure on the regime, legitimising this pressure, and reducing conflict and polarisation.

If a broad range of people is included, the position of society towards the transition can be expressed. The types of questions relevant in these dynamics refer to how people understand the current situation, how desirable change is for them, and what the future food system should look like (Renn and Schweizer, 2009; Stirling, 2008). This covers **normative arguments** which claim that every person affected by the issue at hand should have the opportunity to be involved. By directly involving a broad range of people who are affected by the issue at hand, various entry points for change can be discovered (Anderson and Leach, 2019) which support governmental institutions in the formulation of strategies for change.

There are various ways in which citizens can apply pressure on existing regimes. Citizens gather in societal groups or networks, demonstrations, or advocacy activities. They form coalitions of alliances to strategise and analyse the situation (Hajer, 2002; Leeuwis et al., 2021). These coalitions of people who experienced and acknowledged *tension* and *stress* regarding the existing system apply *pressure* on the regime and have a different take compared to countercoalitions of established and dominant actors that often oppose change (Leeuwis et al., 2021). Tensions between these coalitions are likely to lead to conflicts. Conflicts also emerge between people striving for change as there may be many visions of the ideal future. While a certain level of conflict can be a driver for change, there also needs to be a level of agreement to establish meaningful change (Leeuwis and Aarts, 2011). Including a representative group of citizens can be a way to work towards an agreement by reflecting on values and potential consequences (Renn and Schweizer, 2009), and by uncovering local resistance (Anderson and Leach, 2019). This can enlarge the acceptance of changes as citizens feel heard, and can lead to a more equitable, socially just and less polarised transition and society (Dryzek et al., 2019; Peuch and Osinski, 2020; Schmidt et al., 2020). This shows that **legitimate** and **substantive arguments** are crucial in these dynamics of a transition.

5.1.3. Normalising

In the normalising cluster, the 'new normal' becomes institutionalised and generally accepted. New norms and values are no longer seen as an exception to the rule but instead become more well-known and practised. The main structures of the new regime are established and all citizens have to find their place within this regime.

Not all citizens and organisations follow the same path in a transition, and not all adapt to a new regime at the same pace. **Substantive arguments** are relevant to show that including citizens allows for a vision of food systems transitions that is closer to the daily reality and perspectives of the citizens compared to solely top-down processes as "[i]t is in this co-construction of knowledge that we can most clearly see pathways to lasting social and political change" (Anderson and Leach, 2019, p. 141). The worries and barriers that citizens encounter or experience can be considered in the development of new policies. When citizens are included in the formulation of these policies, it increases the ease with which they are accepted (Bidwell and Schweizer, 2021; Olivadese et al., 2021; ter Haar et al., 2023) showing the relevance of **legitimate arguments**.

Also, the **social learning argument** is relevant in the normalising cluster as attention can be given to the development of new knowledge and new skills for citizens. When structures of a society change, it might be hard for people to keep up. They need to adopt new skills or new knowledge to participate in the new regime the way they prefer to, showing the relevance of **empowerment arguments**. Others might already possess the knowledge or skills required. Citizens can learn from each other and therewith strengthen their own position in the new regime.

5.1.4. Break-down

This cluster shows the last dynamics of a transition in which the once-established regime is broken down. This includes saying goodbye to what once were established practices and norms. New rules of the game are established, and it becomes apparent who is disadvantaged because of the transition. The main role of inclusive citizen participation is to make sure that these people can still find a place within the newly developed regime.

In transitions and policies, most attention is given to frontrunners. This provides a narrowed vision of the transition and thereby also endangers the transition potential of movements. Frankowski et al. (2021) therefore argue that the break-down dynamics and the actors who are likely to lose something need to be seen as an inherent and explicit part of transitions, not as side-effects. It is crucial to understand their situation and the impact decisions have on them. This can be established by including them in decision-making processes and providing a space to share their concerns and experiences (Renn and Schweizer, 2009). The ones who have lost something could have been the frontrunners in the previous regime. This new position is unknown to them and as a result they might feel misunderstood (Frankowski et al., 2021).

This again refers to the **normative** principle of citizen participation. Including the ones who experience loss in deliberative processes ensures that people have a say about their own future and can better adapt to the new situation. In this, there needs to be space for loss, pain, and acceptance. When providing the right structures for people to do this, it can make citizens feel more empowered

(Hunt, 2014). In these dynamics, **empowerment** arguments become crucial. There is not as much explicit attention for the transition dynamics of phasing-out. Examples of citizen participation specifically these dynamics are rare and not found in this integrative literature review.

6. Discussion

The previous section linked arguments for inclusive citizen participation to various clusters of food systems transition. There is a demand for more inclusivity in participation. But how does that work out in the context of food systems transitions in which power dynamics are ubiquitous and there are always people who experience loss? In this discussion, three key issues are discussed that can hinder inclusive citizen participation in food system transitions. These issues arose out of the literature study and the linkages we made between different realms of literature in the previous section.

6.1. Fundamental tensions between transitions and inclusive citizen participation

Based on the literature analysis, we argue that there is a fundamental tension between food systems transitions and inclusivity. Food systems transitions are inherently conflictive: there are people who feel like they have won, and people who experience loss (Frankowski et al., 2021). Power imbalances strengthen these tensions. Coalitions are formed between people who strive for change and countercoalitions of people who wish to maintain the status quo. Including people in a coalition for change means excluding people who belong to the countercoalition (Fischer and Newig, 2016; Goodin, 1996). This goes against principles of inclusivity in which everybody should have the opportunity and ability to participate in decision-making processes. To progress with a transition, decisions must be made, some that negatively affect part of the population. While there are examples of meaningful interactions between proponents and opponents of transitions in participatory processes, their interaction is not always benefitting the transition ambitions (Galgóczi, 2020). This can make it unattractive for organisers of decision-making processes to organise inclusive participatory processes.

Besides this, setting up participatory processes that respect principles of inclusivity requires time and careful consideration. When discussions about a transition are organised, there is often already tension, stress and pressure which makes the urgency for change high. The time required to set up inclusive processes can be a limiting factor, delaying progress (Ciplet and Harrison, 2019). Nevertheless, participatory processes are an investment for the long term, as they are likely to lead to more legitimate decisions from the perspectives of citizens. The time invested into organising these processes will be paid back in the long-term.

6.2. Inclusivity has multiple interpretations

The typical idea of inclusive participation processes is when a representative group of people sits together at a table, gets involved in rational discussions, and ends up with a democratically formulated answer. However, this does not align with ambitions for radical change and principles of equity. Instead, inclusive participation has different roles, effects, and dilemmas in various dynamics of food systems transitions. In the **build-up** cluster, inclusive participation means providing opportunities for everybody, both niche actors as well as established regime actors, to explore and address new options. The dilemma that arises here is how to ensure inclusive participation of all actors, while also accounting for power imbalances. Furthermore, a balance must be made between including a wide range of actors and acting when a momentum for change arises. In the **conversion** cluster, involving a representative group of people in decision-making processes can contribute to (widespread) support for newly developed practices. From a transition perspective, however, it is the question whether including a representative group of people is effective. It is likely that established regime actors keep their influential positions and hold back on the transition. Decisions on what alternatives are supported are made in the **normalisation** cluster. These are highly political decisions and supporting niches is likely to be paired with conflicts. Including a representative group of people can account for a more democratic process and to solutions that are in line with daily realities of citizens. In the **break-down** cluster, dust is settling and a new regime is taking shape. Specific attention must be given to those actors who experienced loss as they are likely to be forgotten and neglected by more powerful (newly) established actors.

This shows that at certain times, specific attention might need to be given to a specific group to promote a level of inclusiveness. In other instances, processes are inclusive when a representative group of people is included. This may create all sorts of questions and dilemmas. Where is the line between adhering democratic principles (by including all who are affected) and accounting for equitable processes (for example by providing more space for structurally excluded people)? Considering the inequalities that are omnipresent in food systems, we argue that especially in processes regarding food system transitions, creating spaces built on equity can be a way to overcome, or at least acknowledge, inequalities.

6.3. Challenge barriers for participation

As mentioned earlier in this paper, addressing barriers to participation is crucial for organising processes that are meaningful for citizens involved, as well as for the transition and society. When structural barriers are not addressed, it is highly likely that participatory processes become disempowering rather than empowering, and that the participatory process is mainly symbolic. Arnstein (2019) refers to this as 'tokenism'. When citizens can voice their perspectives and are heard, but there is no follow-up and the same powerful actors have the right to decide, the process does not allow citizens to challenge the status-quo. Smith-Carrier and Tuyl (2024) argue that tokenistic approaches are even worse than not including citizens at all. They give an example of people affected by poverty

who are only given the opportunity to share their perspectives but are not empowered to be involved in decision-making. This can be more damaging for people involved as these tokenistic processes are a perfect example of exclusion. Protocols can give guidance for developing participatory processes in which all participants have the opportunity to express themselves (e.g., Bell and Reed, 2022; OECD, 2022).

7. Conclusion

This paper has provided several arguments on why decision-making processes in food-system transitions should be participatory and inclusive. We aimed to answer the question: *what is the need for and role of citizen participation in various dynamics of food systems transitions?* Inclusive citizen participation can increase the level democratic values in decision-making processes, the quality of these process and solutions, the legitimacy of decisions, how much citizens learn from others, and it can create feelings of empowerment. While many calls are made to make participatory processes inclusive, as it would contribute to making food systems more equal and fairer, our integrative literature study shows that this is not as easy and straightforward as it sounds. In mentioning the benefits of inclusive citizen participation, limitations and dilemmas are often left unaddressed. There is a fundamental tension between food system transitions and inclusive citizen participation. There is no transition without conflict and when deciding to include certain people, other people are excluded. Taking on an inclusive approach could hold back a transition, which can make it unattractive for people or organisations to set-up inclusive participatory processes. This tension plays out differently in different dynamics of food systems transitions. Based on our literature study, we propose that the most meaningful form of inclusive citizen participation differs for each cluster of food systems transitions. Power imbalances and structural barriers that are left unaddressed restrain participatory processes to be truly inclusive from an equity-based perspective. This can lead to tokenistic approaches that do more harm than good. As this is a study based on literature, future research could assess how these findings are reflected upon in settings in which citizens are involved in food systems transitions, what structural barriers are experienced in participatory processes and how they influence inclusivity.

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CRediT authorship contribution statement

Else Giesbers: Writing – review & editing, Writing – original draft, Methodology, Formal analysis, Data curation, Conceptualization. **Thomas J.M. Mattijssen:** Writing – review & editing, Writing – original draft, Supervision, Methodology, Conceptualization. **Cees Leeuwis:** Writing – review & editing, Supervision, Methodology, Conceptualization.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Data availability

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