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# Consumption Corridors and the Case of Meat

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## Abstract

Consumer policy must address the unsustainability of consumption which now threatens consumer safety in the form of the climate and ecological crises. Arguably, only strong sustainable consumption governance methods can bring about changes at the scale and speed required. This article discusses one emerging policy tool within strong governance, namely consumption corridors which could bring about absolute reductions in the negative impacts of consumption in a just manner and using deliberative democracy. Consumption corridors are applied in the context of the current meat system, a common driver for the twin crises, and an issue central to achieving the sustainable development, biodiversity, and Paris climate goals. The recently developed planetary health diet offers a useful plan for the transformation of global food systems, and could be combined with sustainable consumption corridors for meat. Systems thinking identifies change in societal paradigms as most effective. To support such change, this article suggests two metaphors as discourse tools, whereby individual and societal transformation in meat consumption occurs as a journey along a continuum of different meatways. The article also suggests specific actions for bringing about meat consumption corridors, and argues that this context could also serve as a bridge for increased societal acceptance of recomposed consumption.

**Keywords** Climate crisis · Ecological crisis · Strong sustainable consumption governance · Planetary health diet · Consumption corridors · New meatways

Consumption—and in particular, affluent consumption—is increasingly named as the root cause of unsustainability,<sup>1</sup> especially in terms of the twin global crises of climate and ecology (Bradshaw et al., 2021; Fuchs, 2020; Martin et al., 2021; Wiedmann et al., 2020). The field of consumer policy must also address unsustainability, not only in how consumers are affected, but also regarding the critical question of how to move societies towards

<sup>1</sup> The terms sustainability and unsustainability in this article refer to not only the environmental but also the social dimension of sustainability, both of which are seen here as essential for sustainable consumption corridors. See Scott Cato (2009; 2012) for understanding sustainability dimensions as nested circles whereby environmental sustainability—as the outermost circle—is fundamental to social sustainability as well as economic sustainability.

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sustainability and sustainable consumption. Consumer policy necessitates the realignment of consumer law and consumer rights with sustainability (Mathios et al., 2020), extending to sustainable consumption policies and governance. Sustainability must be at the centre of most, if not all policy-related discussions.

A useful distinction can be made between weak sustainable consumption governance and strong sustainable consumption governance (Lorek & Fuchs, 2013; 2019). The weak approach, also called the *efficiency approach*, aims to achieve relative improvements of product performance, through technological improvements, by providing information to consumers, subsidizing environmentally superior products, and taxing inferior ones. This approach, however, does not consider absolute ecological limits. Until recently, the efficiency approach has been the dominant paradigm for policy action, “despite ample evidence of its limited efficacy,” whereas the *systemic* (strong) sustainable consumption governance approach has had “very limited policy traction” (Bengtsson et al., 2018, p. 5). The strong approach recognizes the important benefits of the weak approach in terms of increased efficiency, recognizing the need for technological changes and the value of well-informed consumers, but it stresses the need for additional measures to achieve sustainable consumption and production (idem). Similarly, others argue that the efficiency approach will not suffice for a sustainability transformation (Fuchs, 2020; Gough, 2020; McPhearson et al., 2021; Rosenbloom et al., 2020; Schroeder & Anantharaman, 2017). In fact, not addressing fundamental patterns and levels of consumption may legitimize unsustainable practices (Blühdorn, 2013; Fuchs, 2020). In short, the efficiency approach aims to allow consumers to maintain current practices and lifestyles, while the systemic approach argues that changing consumer practices and lifestyles is necessary for societies to reach sustainability.

Recently, a new promising concept has emerged within strong sustainable consumption governance: *consumption corridors* (Blättel-Mink et al., 2013; Di Giulio & Fuchs, 2014; Fuchs et al., 2021a). Based on the empirical results of Defila and Di Giulio (2020), the concept of consumption corridors may provide common ground for policy-making. Employed through participative democracy, consumption corridors can enable systemic change and absolute reductions in the negative impacts of consumption and associated production in a just manner.

The idea of a “corridor” implies that particular consumption takes place above a certain “floor,” or minimum level, and below a specific “ceiling,” or maximum level. In the case of sustainable consumption corridors, the minimum and maximum consumption levels are identified so that the corridors provide for both human and planetary well-being. Researchers have explored the concept in participatory settings at a general concept level (Defila & Di Giulio, 2020), and in specific areas of consumption (e.g., Godin et al., 2020; Guillen-Royo, 2020; Sahakian & Anantharaman, 2020; Vladimirova, 2021). These findings indicate that the concept can be acceptable, and that, at least provisionally, limits can be negotiated.

One of the many challenges societies face with respect to unsustainable consumption is the *meat system*, i.e., the system that includes the massive industrial production and high-level consumption of inexpensive meat.<sup>2</sup> Neither the 1.5-degree nor the 2-degree climate scenarios outlined by the Intergovernmental Panel on Climate Change (e.g., IPCC, 2018) can accommodate global business-as-usual levels of meat production (Clark et al., 2020; Harwatt et al., 2020; Springmann et al., 2018). Similarly, the meat system is the single biggest contributor to global biodiversity loss (e.g., Machovina et al., 2015). All forms of animal agriculture

<sup>2</sup> Similar to food systems more generally, the meat system also includes elements related to processing, distribution, and preparation of meat.

together account for 83% of global farmland (Poore & Nemecek, 2018). A recent, first-ever bilateral report produced by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services and the IPCC examines the climate and biodiversity crises together (Pörtner et al., 2021). The report emphasizes the need for a major dietary shift towards plant-based diets to tackle both the climate and ecological crises successfully.<sup>3</sup>

The current global meat system also undermines many global policy goals, such as those presented in United Nations Sustainable Development Goals, the Paris Agreement climate goals, and the Convention on Biological Diversity goals (Oliver et al., 2018; Rust et al., 2020; UNEP, 2021; Vermeulen et al., 2020; Willett et al., 2019).<sup>4</sup> Our ability to achieve these goals is severely limited unless meat consumption (and production) declines substantially and meat production moves towards environmental sustainability.

Scientists concerned with sustainability and planetary boundaries largely agree that countries in the global North must urgently move away from current meat consumption patterns. For example, Harwatt et al. (2020) call for an agricultural transformation in high- and middle-income countries, recommending them to reduce their domestic demand for livestock products, rather than outsource production elsewhere. Many scholars also agree that meat production has to be made sustainable at the global level by cutting meat production, focusing on more quality than quantity, and shifting towards more plant-based protein production. In particular, countries with increasing or already high-level meat consumption<sup>5</sup> must curb national trends (Campbell et al., 2017; Garnett, 2011; Pörtner et al., 2021; Springmann et al., 2018; Tilman & Clark, 2014; UNEP, 2021; Willett et al., 2019). In 2019, the EAT–Lancet Commission presented the *planetary health diet*, calling for a *great food transformation* in both food production and consumption and coupling consumption patterns with associated requirements for sustainable agriculture (Willett et al., 2019). The *flexitarian* reference diet<sup>6</sup> presented in the report includes low amounts of meat, compatible with human health, and also with planetary health (as long as the production is environmentally sustainable). Scholars argue that, given the remaining global carbon budget, the world could gain significantly more time to decrease carbon emissions if the planetary health diet were adopted globally. Additionally, with less land in food production, and more land available for rewilding, significantly more carbon sequestration could occur (Hayek et al., 2021; Poore & Nemecek, 2018; 2019; see also Sun et al., 2022). However, a 2018 FAO business-as-usual projection (FAO, 2018) estimates that meat production and consumption would increase by more than 50% until 2050 (up from 2012). Transforming the meat system will be extremely important, and also enormously challenging, due to the significance meat has gained at various levels.

Societal change can occur through changing values and paradigms (e.g., Sage et al., 2022), generally visible through societal discourses which also help to “shape the practical ways that people and institutions define and respond to given problems” (Tonkiss, 2004, p. 375). In transformational systems thinking, interventions at the paradigm level are

<sup>3</sup> A comprehensive report on the numerous negative impacts of the industrial meat system can be found in the Meat Atlas (Heinrich Böll Foundation, 2014; 2021), and a peer-reviewed overview is provided, for example, by Godfray et al. (2018).

<sup>4</sup> See <https://sdgs.un.org/goals>, <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>, and <https://www.cbd.int> (accessed 8 September 2022).

<sup>5</sup> The definition of “high-level meat consumption” depends on the specific context and differs within the literature. For this article, it refers to consumption levels that are well above what is considered sustainable for the planet, for example, according to Willett et al., (2019).

<sup>6</sup> The word “flexitarian” is short for “flexible vegetarian,” a vegetarian who occasionally eats meat. However, the term is often extended to cover somewhat more frequent meat eating.

most effective for societal change (Meadows, 2008).<sup>7</sup> Regarding the issue of meat, Jallinoja et al. (2016) argue that seeing meat eating and vegetarianism not as opposites—as in the current paradigm—but as a continuum could allow for a more casual and relaxed attitude towards more plant-based diets. Through such a paradigm shift, more plant-based diets could eventually become part of routinized and embodied everyday practices. Kanerva's (2021) discourse analysis examines such paradigm level issues and employs the conceptual metaphor of a *journey*. When combined with the idea of a *continuum of meatways* (idem), the journey metaphor offers a way to expand discourses away from the conventional dichotomy of meat versus no-meat, and away from the normality of meat consumption, especially at an unsustainable level. These two metaphors illustrate how paradigm level shifts through changing discourse of individuals and societies could facilitate the transformation towards sustainable meat consumption. When framing meat consumption and its transformation using such metaphors, and describing different meatways—from strict veganism to everyday heavy meat consumption—as points on the continuum, many journeys become possible. These efforts may enable more profound changes towards low consumption of meat, possibly also taking advantage of emerging new meat replacements, or *new meats* (Kanerva, 2021). A sustainable consumption corridor for meat defines a range of meatways which are socially and culturally acceptable, while being nutritionally adequate and environmentally sustainable. These meatways would mainly include various flexitarian diets.

The goal of this article is to explore the concept of consumption corridors in the global meat consumption context. Furthermore, the article argues for more research in this area, public discourses on, and policy experimentation with meat consumption corridors. Three related concepts will be discussed in this article: the governance innovation of consumption corridors; the planetary health diet at an operational level for consumption corridors in the context of meat; and the paradigm-shifting conceptual metaphor of a journey along a continuum of meatways which can make the transformation towards a planetary health diet more palatable. All combined, these three notions offer a powerful policy opportunity within strong sustainable consumption governance.

The article will proceed as follows. In the second section, the notion of consumption corridors, its theoretical background, characteristics, and implementation will be explored in some more detail. Subsequently, in the third section, the relevance of this concept for the context of meat consumption will be argued, using the planetary health diet as a guide for potential meat corridors. Furthermore, in the fourth section, the case for the importance of discourses will be made, and meat consumption corridors will be related to the journey and continuum metaphors which hold potential *discursive power* (Fuchs, 2005) for transformative change. Finally, the last section will conclude.

## The Significance of Consumption Corridors

This section provides a detailed overview of consumption corridors, their basis on meeting human needs, and a short discussion on why there might not be a conflict between freedom of choice and limits based on sustainability. This section will go on to explain how to

<sup>7</sup> Meadows (2008) refers to “the mindset or paradigm out of which the system—its goals, structure, rules, delays, parameters—arises.” Paradigms are systems of thought, worldviews, and models that define and frame the world, and generally exist at a societal level, from where they have an impact on individuals. One example of a societal paradigm is the current growth paradigm.

develop consumption corridors, concluding with the role of societal discourses in transformational societal change.

The floor of a consumption corridor is defined by a socially shared idea of what constitutes enough consumption for human well-being. The literature is, however, not entirely in agreement on how the ceiling should be primarily determined. Especially the scholarship from where the consumption corridor concept originates emphasizes the human need satisfaction and good-life basis of the maximum consumption levels which, nonetheless, must take ecological limits into account (Blätzel-Mink et al., 2013; Defila & Di Giulio, 2020; Di Giulio & Defila, 2021; Di Giulio & Fuchs, 2014). Other scholarship argues that the maximum consumption levels should be primarily based on planetary limits (e.g., Brand-Correa et al., 2020; Gough, 2020), or that the existing planetary boundaries necessitate the corridor ceilings (Fuchs, 2020). This latter way of conceptualizing the maxima translates into everyone's needs being met sustainably. This article follows the argument that, while the end goal of consumption corridors is to enable human well-being and quality of life now and in the future, the means to this end must respect ecological limits. Therefore, ecological limits must be the primary determinant of the corridor ceilings.

Still, aspects of human and planetary well-being regarding setting limits are likely to mix. For example, Gough (2020) argues that restricting excessive consumption can enhance certain features of well-being, and minimum consumption levels necessary for well-being must be as environmentally undemanding as possible. Additionally, if the impacts of consumption (e.g., noise, air pollution, or lack of communal space due to car traffic) undermine well-being at a consumption level that is lower than the ecological limit, then that lower level should arguably determine the ceiling.<sup>8</sup>

There are several advantages to *recomposing consumption* (Gough, 2017) by using the consumption corridor concept.<sup>9</sup> Firstly, the corridors place the focus on (biophysical, resource-intensive) consumption as a core driver of unsustainability. In particular, they can draw attention to the hidden global impacts of consumption in high-income countries (Gough, 2020). Secondly, consumption corridors are a needs-based approach; and sustainability has at its core the aim to meet “the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987, p. 16). Thirdly, consumption corridors emphasize well-being: The concept's starting point is the idea of a *good life* for people living now, and in the future. Indeed, the purpose of consumption as such is to “allow individuals to secure what they need to live a good life, in other words to meet their fundamental needs” (Fuchs, 2020, p. 298). By their definition, consumption corridors, therefore, focus on the positive, rather than on restrictions. Fourthly, by invoking future generations, as well as all current global populations, the concept also strongly incorporates distributive justice, and the *two kinds of enough* which Spengler (2016) discusses: enough as the sufficient minimum for everyone (e.g., the floor of a corridor), and enough as the sufficient maximum that stays within the planetary boundaries (e.g., the ceiling of a corridor). Lastly, the development of corridors builds on participatory justice.

<sup>8</sup> Also, see O'Mahony (2022) for a transdisciplinary review on integrating the concepts of sustainability and well-being, i.e. on *sustainable well-being*.

<sup>9</sup> Ideas similar or related to consumption corridors include Kate Raworth's (2012; 2017) *doughnut economy*, and the concepts of *environmental space* (Hille, 1997) and *safe and just operating space* (Dearing et al., 2014; Rockström et al., 2009; Rockström et al., 2021). For a brief discussion of these, see Fuchs et al., (2021a, Box 3.2).

## Needs and Desires, Necessities, and Luxuries

The issue of *objective needs* versus *subjective desires* (Di Giulio & Fuchs, 2014) is central to the debate on which consumption would fall within a consumption corridor framework, and which consumption can be considered unnecessary, and thus not worthy of protection. Needs are limited and un-substitutable, and meeting them is a necessary condition for human flourishing; whereas desires are potentially endless and substitutable, and meeting them is not necessary to human flourishing (Fuchs et al., 2021a). From the point of view of sustainability, needs are ranked above desires. In terms of what is actually consumed, i.e., the *satisfiers* (concept from Max-Neef et al., 1991), a distinction must be made between *necessities* (satisfying needs) and *luxuries* (satisfying either needs or desires). Di Giulio and Defila (2020) suggest that satisfying some desires may be legitimate, as long as other individuals, now and in the future, are not prevented from satisfying their needs.<sup>10</sup> Fuchs et al. (2021a) note that it is important to distinguish between needs and satisfiers because this distinction shows that sustainability is not about limiting genuine needs, but rather about questioning certain satisfiers used to satisfy these needs. For example, one particular need—say, the need to make one’s own life choices—can be satisfied by many different satisfiers, some of which are healthier and more sustainable than others. On the other hand, one particular satisfier—for instance, a public park—can satisfy several different needs (as in the research by Sahakian et al., 2020).

Many needs, such as meaningful relationships and work; identity; and opportunities to shape community life and politics, are possible to satisfy with low resource inputs (Büchs & Koch, 2019). However, a particular sustainability challenge is that many desires requiring biophysical resource intensive satisfiers, such as owning a car or eating large amounts of meat, are often perceived as needs.<sup>11</sup> There are numerous examples on both individual and societal levels, whereby a former “luxury” has become a present “necessity.” When such satisfiers become part of the dominant social paradigms which shape societies in certain ways, they risk becoming objective necessities. One example are private cars in densely populated communities with poor public transport, despite viable resources to build an efficient public transport system. Until such a situation—one kind of a lock-in to path-dependent structures—changes with new policy priorities, private cars may be legitimate necessities (Gough, 2017). A reverse process may occur, whereby biophysical resource intensive satisfiers, once perceived as necessities, will transit to luxuries. However, for this reverse process not to increase inequality or create social exclusion, it needs to involve purposive transformation and be supported by relevant policies.

Human needs theories have a long history, going back to ancient Greek philosophy.<sup>12</sup> These theories generally aspire to universality. Using expert consultations, Di Giulio and Defila (2020) define nine universal *protected needs* which operationalize the good life,

<sup>10</sup> Gough (2020) adds a third category of *comfort goods* between necessities and luxuries. According to Gough, some comfort goods may be compatible with sustainability, whereas many luxuries would likely not be. Another interesting concept is *everyday luxury* (Potavanich, 2015). Everyday luxuries are similar to comfort goods.

<sup>11</sup> In their study in Ireland, Lavelle and Fahy (2021) found that 89% of people see their cars as necessity items. Among urban study participants, 84% of people had this perception. Further, perceiving meat as a necessity is part of the commonplace ideology of carnism (Joy, 2010).

<sup>12</sup> Some of the well-known approaches in human needs theories from the last several decades include Doyal & Gough (1991); Maslow (1943; 1971); Max-Neef et al. (1991); Nussbaum (2000); and Ryan and Deci (2001). For a more general discussion of human needs theories, see, for example, Dover (2016) or Gough (2017).



including making one's own life choices, having material necessities and a liveable environment, and participating in the shaping of society. Table 1 shows these nine universal protected needs deserving special protection within and across societies. Defila and di Giulio (2020) and Fuchs (2020) argue for using the concept of the good life and the list of nine protected needs for creating a system of sustainable consumption corridors.

In a qualitative interview study, Sahakian and Anantharaman (2020) tested this list of protected needs regarding access to green open space in Chennai, India. The authors conclude that access to green public places in cities is a synergistic need satisfier that can

**Table 1** Nine universal protected needs

<i>Need (what individuals must be allowed to want)</i>	<i>Specific description: Individuals should have the possibility</i>
<i>Group I. Focusing upon tangibles, material things</i>	
1. To be provided with the material necessities for life	<ul style="list-style-type: none"> <li>• to feed themselves sufficiently, with variety, and with food that is not detrimental to health.</li> <li>• to live in a suitably protected and equipped accommodation, offering privacy and sufficient space, and allowing them to realize their idea of living.</li> <li>• to care for their bodies with dignity and dress suitably.</li> </ul>
2. To realize their own conception of daily life	<ul style="list-style-type: none"> <li>• to shape their daily life according to their own ideas.</li> <li>• to procure and use the material necessities for life from a diverse range of supply, and to have sufficient means to do so.</li> <li>• to move freely in public space.</li> </ul>
3. To live in a liveable environment	<ul style="list-style-type: none"> <li>• to live in an environment (built and natural) that is not harmful to health and is aesthetically pleasing.</li> <li>• to develop a sensorial and emotional relationship with nature.</li> <li>• to have access to and be able to move about in diverse natural and cultural landscapes.</li> </ul>
<i>Group II. Focusing upon the person</i>	
4. To develop as a person	<ul style="list-style-type: none"> <li>• to develop their potential (knowledge, skills, attitudes, feelings, etc.) and thus their individual identity.</li> <li>• to face the challenges of their choice.</li> <li>• to freely access reliable information and thus form their own opinion.</li> </ul>
5. To make their own life choices	<ul style="list-style-type: none"> <li>• to freely decide and act upon the value-orientations they choose to adopt or reject (spirituality, religiosity, ideology, etc.).</li> <li>• to set their own life goals and pursue them.</li> <li>• to determine how they want to lead their life in terms of intimate relationships, family planning, where to live, etc.</li> </ul>
6. To perform activities valuable to them	<ul style="list-style-type: none"> <li>• to carry out activities that they consider to be fulfilling (in work and leisure; paid and unpaid).</li> <li>• to carry out activities that match their personality and in which they can unfold their potential (in work and leisure; paid and unpaid).</li> <li>• to allocate their time for their different activities according to their own preferences and to have time for idleness.</li> </ul>



**Table 1** (continued)

<i>Need (what individuals must be allowed to want)</i>	<i>Specific description: Individuals should have the possibility</i>
<i>Group III. Focusing upon community</i>	
7. To be part of a community	<ul style="list-style-type: none"> <li>• to maintain social relationships with other people (private, professional, during training, etc.).</li> <li>• to take part in cultural activities and celebrations and to participate in associations.</li> <li>• to access the cultural and historical heritage of their community.</li> </ul>
8. To have a say in the shaping of society	<ul style="list-style-type: none"> <li>• to co-determine the affairs of the society in which they live.</li> <li>• to take an active stand for concerns and problems (local, national, international) they hold dear.</li> <li>• to voice their opinion, by themselves and with others.</li> </ul>
9. To be granted protection by society	<ul style="list-style-type: none"> <li>• to be protected from public and private violence, from infringements on physical and mental integrity, and from natural hazards.</li> <li>• to pursue their goals without discrimination and with equal opportunity, to live in legal certainty, and to be treated with dignity and respect.</li> <li>• to be supported in the event of physical or mental impairment, unemployment, poverty, and other impairing conditions.</li> </ul>

Adapted from Di Giulio and Defila (2020)

satisfy six different protected needs in Table 1. Using a different list of basic needs (by Doyal & Gough, 1991), Godin et al. (2020) explore setting minimum and maximum standards for cleanliness and limits to laundry-related energy consumption in a participatory process. Furthermore, Guillen-Royo (2020) uses Max-Neef et al.'s (1991) perspective on human needs and the consumption corridor concept in a participatory setting on the use of information and communication technologies.<sup>13</sup> Fuchs et al. (2021a, p. 52) conclude that such “transdisciplinary research document the ability of citizens, through participatory processes, to reach agreement on human needs and productively address questions of resource use and allocation.” Particularly important is that a societal agreement is made on which needs are truly “basic” or “fundamental,” so that the number of needs that ought to be satisfied in a society is not excessive with respect to sustainability goals. Finally, the idea of protection as such is central, and the *theory of protected needs* provided by Di Giulio and Defila (2020; 2021) can be a good starting point for developing socially agreed frameworks of needs and their satisfiers.

## Freedom and Justice, Rights, and Responsibilities

Perhaps most importantly from the point of view of its applicability, the concept of consumption corridors allows for freedom within a social justice frame (Defila & Di Giulio, 2020).

<sup>13</sup> With various other approaches, Cohen (2021), and Lorek and Spangenberg (2019) explore what lower and upper limits in living space would entail, and Jaeger-Erben et al. (2020) look at what consumption corridors could mean for different life stages of individuals.

In other words, consumer–citizens can choose from necessities, comfort goods (Gough, 2020) or occasionally even luxuries, as long as this does not affect others' rights to meet their own needs now, and in the future. More frequently, luxuries do not fulfil this requirement, although it is possible. Necessities must be by definition both sustainable and attainable. In other words, corridor ceilings should always remain above (or at least at the level of) the floors. In this context, the concept of freedom itself may require redefinition, or at least reframing. As Karp (2020) notes, consumption in consumer societies has played an outsized role in the understanding of freedom. This framing is driving unsustainable consumption, and therefore, achieving sustainability requires a cultural paradigm shift (Hamilton, 2010). One way to reframe freedom in this context is to move away from thinking of freedom as “freedom from” external management of consumption, and towards “freedom to” participate in societal decision-making to build the sustainable societies we want to live in (Fuchs, 2020).

Gumbert and Bohn (2021) propose the concept of *green liberal freedom* which rests on three specific building blocks: (1) Functional nature is necessary for realizing the good life in a just manner; (2) Limits must be publicly deliberated and agreed upon by citizens capable of balancing conflicting values; and (3) Due to the balancing of conflicting values, these self-chosen limits restrict our choices in certain, less valuable spheres, for the sake of guaranteeing freedom in more valuable spheres.

In the above discussion, the concept of freedom evolves from the freedom to consume within personal limits (of finance, space, time, physical abilities, etc.) to freedom to consume within planetary limits (as expressed in, for example, consumption corridors). Limiting individual freedom externally is not a new idea. For example, societies uphold speed limits and control gun rights. Also within consumption, people are familiar with certain limits: lower consumption limits, such as minimum salaries or public education, and upper consumption limits, such as blood alcohol levels while driving, in medication, building restrictions, or environmental laws. As Fuchs et al. (2021a) point out, what may be new is thinking of these upper and lower limits together, and building new policies and social norms within socially accepted corridors. Acceptance of limits seems to be more feasible when the limits are applied to all, and are, therefore, considered fair and just (Gärling & Friman, 2015).

Justice is at the core of the consumption corridor approach. This notion also calls for the organization and institutionalization of global *collective responsibility* which, together with justice, are important normative foundations for societies where freedoms can be restricted when necessary (Fuchs, 2020; Fuchs et al., 2021a). Furthermore, consumption corridors align well with the concept of *right* (as an expression of individual freedom) and collective responsibility. The lower limit denotes the right of every individual to access certain need satisfier, while the upper limit depicts the co-responsibility of every individual for others' rights to satisfy their needs. This co-responsibility (see also Eckersley, 2021; Evans et al., 2017; Kanerva, 2021; Lamb et al., 2020) may translate as a cultural value, particularly evident in more egalitarian societies (Schwartz, 2006). This obligation may hold for citizens, as well as organizations and institutions.

Alternative ways to see co-responsibility include seeing it as *precaution*, *sacrifice*, or *care*. To give an example, an individual can take precaution regarding her/his health. Regarding problems mainly beyond an individual, such as negative impacts from the industrial meat system, precaution should be taken primarily at the state level, for example, in the form of strong consumption governance. Concerning the concepts of sacrifice and care, while the consumption corridor concept specifically stays away from a (negative) sacrifice frame, sacrifice can also be seen (positively) as care. For example, individuals do not need to feel that they sacrifice their preferred high-level meat eating for the common good. Instead, by consuming low (or no) amounts of meat they care for the well-being of animals, the planet, and future generations (see also discussion in Koskinen, 2022).

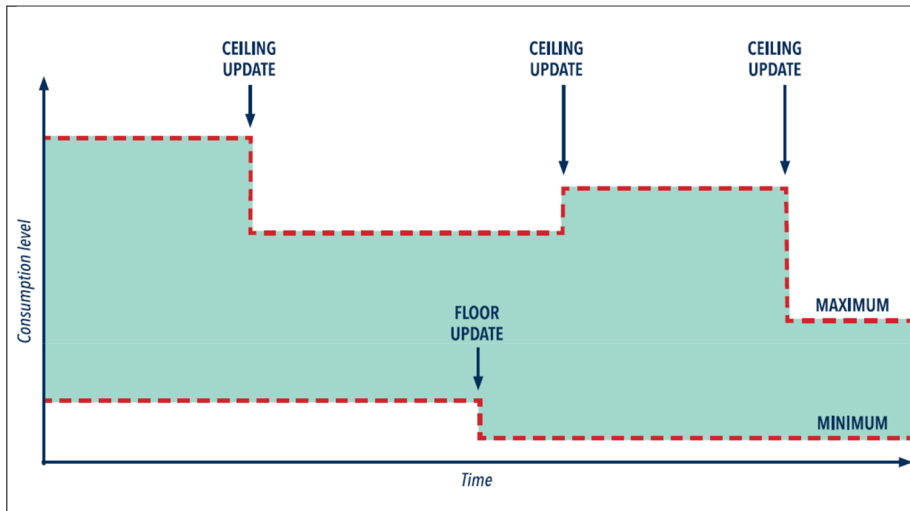
Governmental policy action as well as new societal discourses can create public acceptance of co-responsibility (Hoff-Elimari et al., 2014; Kasser, 2011; Kasser et al., 2004; Lakoff, 2010). However, making individual consumers primarily responsible for change is ill-advised, as practice theories, among others, argue (Welch & Warde, 2015). Lamb et al. (2020) consider placing responsibility on consumers a rather dangerous excuse for delaying collective societal action towards sustainability. Nevertheless, a certain level of agency is necessary for consumer–citizens to be able to act upon co-responsibilities. This invokes the *ought implies can* -principle (Voget-Kleschin et al., 2015).

## Building Corridors

As mentioned, before building consumption corridors, the relevant, protected needs, and their satisfiers must be societally debated and decided (Fuchs et al., 2021a). Gough (2020) calls for a *dual strategy* of policy formation, combining codified expert knowledge and the experientially grounded (practical) knowledge. According to Gough, ignoring experientially grounded knowledge can lead to policies that are “irrelevant, inefficient, stupid, or oppressive” (p. 212). One aim of participatory approaches is to place the sustainability journey “on a broad social base and to mobilize hitherto unused supporters and knowledge repositories” (Jänicke & Jörgens, 2009, p. 192). Involving consumer–citizens and the civil society more broadly thus “offers untapped potential” (ibid.) for sustainability governance. Furthermore, such processes, when deemed fair and transparent, help to generate consensus on the protected needs, their corresponding satisfiers, and the minimum standards, and can facilitate acceptance of the corridors (Fuchs et al., 2021a).

Fuchs (2020) and Gough (2020), among others, suggest using deliberative participatory processes to define and operationalize corridor limits, particularly the lower bounds. The multipart processes should involve diverse societal groups, such as environmental, human rights, and consumer rights organizations, policy actors, and scientific experts (Fuchs et al., 2021a; see also discussion in Lorek & Spangenberg, 2019). In comparison, many agree that upper corridor limits would benefit from expert knowledge, even if they are also deliberated in a participatory setting to gain societal acceptance and legitimacy (Fuchs, 2020; Wiedmann et al., 2020). Especially in order for the negative effects of consumption to remain within globally viewed planetary limits, corridor ceilings must draw from scientific expertise.

Deliberative democracy is vital for societal responses to circumstances involving uncertainty, urgency, and high stakes (Funtowicz & Ravetz, 1993). A great deal of research is therefore currently done on transdisciplinary methods of integrating science and practice, and bringing scholars and citizens together to design and implement effective responses to societal problems (Fuchs et al., 2021a). “Doing inclusion” by using transdisciplinary methods is challenging (Kok et al., 2021); however, such methods are necessary for tackling sustainability challenges in both research and policy (Lang et al., 2012). Indeed, system-challenging research (Pirgmaier, 2020) on consumption corridors has largely followed such approaches. A limited number of empirical studies on setting limits within consumption corridors indicate the following: (1) Limits must emerge from a societal process to be acceptable; (2) Corridors must be rooted in everyday dynamics, developed according to specific cultural and social contexts where diversity and power differences are accounted for; and (3) Emphasizing well-being over justice concerns might be beneficial (Godin et al., 2020; Lavelle & Fahy, 2021; Vladimirova, 2021). Similarly, focusing directly on the end goal of human need satisfaction and quality of life, rather than ecological limits as the means to that end, might be advantageous.



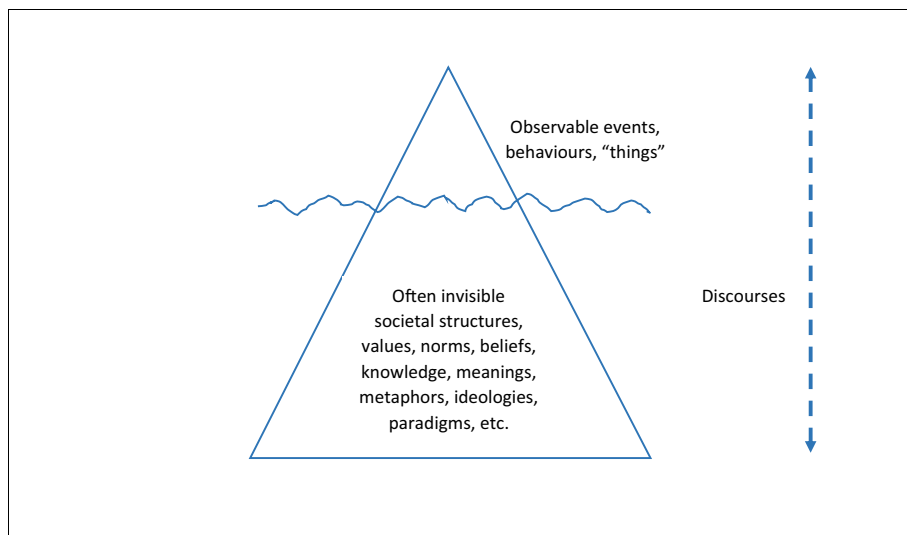
**Fig. 1** A sketch of a consumption corridor whereby the floors and ceilings are redefined over time. Source: Cué et al. (2022), adapted from Di Giulio and Fuchs (2014)

Finally, it is necessary to reconsider the upper and lower consumption limits periodically to account for cultural, technological, or biophysical shifts (Defila & di Giulio, 2020), as sketched in Fig. 1. This reflects the necessary dynamic nature of the corridors. Additionally, occasional re-evaluating of need satisfiers will allow for improved representation and social relevance. In these processes, certain corridors may cease to be justified while new ones might be born. However, the need for costly participatory processes may reduce over time once the idea of consumption corridors becomes well established (Fuchs, 2020).

## Relevance of Discourses

Societal discourses define boundaries to what issues and problems exist (within societal awareness) and what solutions are acceptable or possible. They are therefore crucial for purposive societal change. An illuminating image used in several different social science disciplines for different purposes is the image of an iceberg (see Fig. 2) which emphasizes the difference between what is easily observable (here, e.g., behaviours), and what is less visible, but still essential (here, e.g., societal structures, values, paradigms). Discourses reflect both parts, and both parts are necessary to address in societal transformations.

According to consumption corridor literature, participatory processes should play an important role in the development of consumption corridors. Ultimately, participatory processes are not only largely based on managed dialogue, but also take place in the context of prior, larger societal discourses, and are followed by further discourses, all of which can either facilitate or impede challenging societal transformations. Moreover, the concept of *sufficiency* (especially when involving upper limits to consumption, but see also Spengler, 2016) invites major change in societal paradigms, and paradigms—often invisible frames behind dominant discourses—only change through changing discourses. Discourse dynamics is, therefore, a key element in thinking through and expanding on the consumption corridor literature.



**Fig. 2** The iceberg model. Sources: Inspired by iceberg models in cultural theory (Hall, 1976), systems thinking (Goodman, 2002; Senge, 1992), and practice theories (Spurling et al., 2013)

One challenge in building consumption corridors is when the lower limit surpasses the upper limit leaving no corridor at all. In such a case, specific regulation might be necessary to avoid unsustainability. However, the situation could be addressed proactively within participatory processes and in wider society to avoid societal backlash from imposing unpopular regulations. Broader societal debates on the idea of limits in relation to well-being, existing and emerging values, norms, and expectations, as well as constructed meanings, should precede the setting of limits (Godin et al., 2020).

Radical change in some cultural values, norms, and paradigms is likely required to achieve sustainable societies. Woiwode et al. (2021) consider the necessity of an inner, individual level paradigm change. As a first step towards change, Büchs and Koch (2019) suggest regular deliberative forums for debating universal needs satisfaction. Indeed, such forums could facilitate formal deliberation on consumption corridors. Fuchs et al. (2021a) suggest three stages to set up corridors. Firstly, there should be general discussions about perceived problems, visions for the future, and ideas about what is the good life. This is then followed by specific discussions on linking human needs to available biophysical and social resources. The third phase focuses on how to implement, evaluate, and periodically re-adjust the corridors.

Contesting social norms, for example, can result in acceptance of change, but as Sahakian et al. (2021) note, it can also lead to the reinforcement of the existing, unsustainable norms, values, and meanings. In the case of polarizing and emotional issues, cognitive dissonance may keep the associated behaviours and practices (for example, meat eating) closed and therefore rigid to change, and reinforce the existing norms (see Kanerva, 2021, for a discussion).<sup>14</sup> Godin et al. (2020) included a deliberation phase in their research whereby existing social

<sup>14</sup> In connection with meat eating, cognitive dissonance relates to the *meat paradox* (Loughnan et al., 2010; 2014), whereby people simultaneously want to eat meat, but do not want to hurt animals.

norms and symbolic meanings were discussed and contested in relation to agreeing upper and lower limits of consumption. The authors conclude that underlying norms may be more rigid; however, the performance of norms changed during the study. It is also possible that norms and values change as a result of changed behaviour, for example, through the phenomenon of *social labelling* (Cornelissen et al., 2007; Lacasse, 2016; see also Hoff-Elimari et al., 2014). One solution to the floors-above-ceilings corridor dilemma may be to encourage people to accept lower floors as an experimentation, while still allowing the freedom to hold perceived needs at a higher level. Over time, these perceived needs, relating to possibly shifting values and norms, may also transform.

Discourses influence the evolving of societies, especially by shaping the practical ways that people and institutions define and respond to problems (Tonkiss, 2004); or alternatively, ignore them through *discourses of delay* (Lamb et al., 2020). Delay discourses may identify consumers as primarily responsible for sustainability, or declare consumption restrictions as destined to fail, or insist that disruptive change is dangerous. These delay discourses can lead to inaction, disempowerment, and worsening climate and ecological crises. To resist such trends, awareness about these discourses should be increased, and debates in society, research, and policy about collective responsibility, social justice, and collective solutions to limiting unsustainable consumption strengthened (Fuchs, 2020; Lamb et al., 2020; Wiedmann et al., 2020). Whoever holds discursive power can drive change towards, or away from sustainable systems (Fuchs et al., 2021b).

Getting consumption levels into sustainable ranges requires government intervention to overcome system lock-in, resistance from the industries, and inherent challenges in changing behaviour (Gough, 2017). Similarly, it requires changing societal priorities and paradigms through broad public discourses. Strong sustainable consumption governance aims to tackle such issues; and the concept of consumption corridors may be particularly powerful as a transformative approach, involving participative democracy, and integrating notions of freedom within limits, justice, co-responsibility, and planetary boundaries. The concept focuses firmly on consumption, linking it, on the one side, to the underpinnings of a good life, and on the other side, to the use of biophysical and social resources (Fuchs, 2020).

## Why Sustainable Meat Consumption Corridors?

This section presents consumption corridors within the context of transforming the current meat system. Firstly, the challenge that transforming the meat system presents will be explored, before moving on to looking at how consumption corridors could offer a solution. Subsequently, the question of how meat fits into the context of needs and desires will be investigated. Next, the planetary health diet defined by Willett et al. (2019) will be discussed in the context of consumption corridors for meat. After this, some more discussion will follow on issues such as consumer sovereignty and justice in relation to meat consumption corridors. Finally, various likely oppositions to meat consumption corridors will be reflected upon.

To start with though, a few words on the definition of meat consumption corridors. As said, a sustainable consumption corridor for meat defines a range, or a continuum of meat-ways which are socially and culturally acceptable, while being nutritionally adequate and environmentally sustainable. From a nutritional point of view, all humans need protein,

whereas meat is only one of the many possible satisfiers for such nutritional needs; thus, the need for a meat consumption corridor, and not a *protein* consumption corridor.

However, the new meats—such as cultivated meat, new generation plant-based and fermented meat, or even insects—have started to change and expand the meaning of meat (see also the section “[The Journey Towards Meat Consumption Corridors](#)” of this article). To the extent that they have low negative impact intensities, these meat alternatives, coupled with familiar alternatives such as tofu or tempeh, can be part of the continuum (Kanerva, 2021). Additionally, pulses (beans and lentils) are usually widely available and inexpensive, low-tech protein foods with generally far fewer negative impacts than other, more processed alternatives. Pulses have many positive impacts on both human and planetary health (see, e.g., FAO-FSN Forum, 2016; Mudryj et al., 2014) and could also play a role in developing meat consumption corridors.

## The Meat Challenge

In spite of the urgent need to transform the meat system, such a transformation remains challenging. Beyond the discursive and financial power exercised by the meat system to continue business as usual (Béné, 2022; Fuchs et al., 2016; Lazarus et al., 2021; Wellesley et al., 2015), social transformation is rarely straightforward. Meat has gained vast cultural, ideological, and emotional significance over time (Adams, 1991; Fiddes, 1991; Joy, 2010; Monteiro et al., 2017; Palmer, 1997; Piazza et al., 2015; Ruby & Heine, 2011; Swatland, 2010; Zaraska, 2016; see also Weenink & Spaargaren, 2016), and meat eating is still a particularly *sticky practice* (Maller & Strengers, 2013), in other words, persistent, and with a strong grip on most people. To capture the essence of the challenge, Wellesley et al. (2015) discuss a *cycle of inertia* describing the negative feedback loop between low public awareness (or perhaps, acceptance) of the negative impacts of industrial meat production and high meat consumption; low policy priority; and general inaction among governments, industry, media, and civil society. Oliver et al. (2018, p. 5) focus on the relationship between governments and citizens to argue that consumers tend to assume that “government oversight ensures food system sustainability, while governments assume that consumers act rationally on the basis of their value sets and adequate information, so that market choices should deliver the best for society.” Such shifting of responsibility acts as a further barrier for change and minimizes the responsibility of the meat industry (Lazarus et al., 2021). As Fuchs et al. (2021a) note, although consumer-citizens do bear responsibility, the primary responsibility for transformation lies with institutions.

There are some recent developments, nonetheless. The emerging industry of new plant-based and cultivated meat alternatives continues to grow rapidly and gain media attention. Many global climate and environmental movements, such as Animal Rebellion (associated with Extinction Rebellion) and Fridays for Future have taken on the issue of meat (Haunss & Sommer, 2020; Krauß, 2021). There is evidence of shifts in societal discourse. For example, some recent governmental dietary recommendations address environmental sustainability, and several IPCC reports (2018; 2019; 2022) include diet change as a way to fight climate change. Considering the urgency of the issue, governments must take a proactive approach to break the cycle of inertia. Most, if not all considered policy actions to-date involve the efficiency approach to sustainable meat consumption, mainly information,



taxes, technological fixes (e.g., to reduce GHG emissions), and subsidies to support plant-based proteins (see also Moran & Blair, 2021). Such policy actions may be necessary, but they do not provide the urgent and systemic changes required, nor are they often specific enough. As an example, the European Union's new Farm to Fork strategy for sustainable European food systems is criticized as vague and inadequate (Heinrich Böll Foundation, 2021; König & Araújo-Soares, 2021).

As Oliver et al. (2018, p. 5) say, “reframing the social contract between governments and citizens is needed to prevent this simultaneous abdication of responsibility” in moving into sustainable food systems. Wellesley et al. (2015) argue that governmental intervention at national and international levels is necessary to motivate both consumers and corporations to change behaviour. Indeed, their empirical research indicates that populations in otherwise diverse societies feel that governments must take the lead in this issue. Conversely, when governments do not act in decisive and effective ways, it can suggest the issue lacks importance.

Addressing meat consumption within strong sustainable consumption governance—achieving major cuts in global carbon emissions and other major negative impacts by radically reducing meat production and consumption and moving into sustainable meat production systems—could accelerate the necessary transformation considerably. Any limits to consumption can be challenging. Moreover, the meat system is particularly difficult to transform. However, suitable policies applied to meat production and managed with international and transnational cooperation<sup>15</sup> would quickly result in positive effects on the climate, and environment more generally. Additionally, most consumers in industrialized and industrializing countries do have some agency regarding their food choices (as *political agency*, see Halkier & Holm, 2008). Thus, the meat consumption corridor approach could enable governments and individual consumers to act together to reframe the social contract.

## Meat—Meeting Needs and Desires

Meat is a satisfier. However, it is not the only satisfier for Need 1 (Table 1) in relation to nutritional needs such as protein. Additionally, meat may also be a *desire satisfier*. While for some, especially in the global South, meat is still often beyond reach as a satisfier, for many, especially in the global North, meat has shifted from a perceived luxury to a perceived necessity. Society must undergo the reverse process—from necessity back to luxury—to reach sustainability goals.

With the help of the corridor approach, meat could eventually also go through a process whereby it will one day be seen as both subjectively and objectively unnecessary, being that it is not a nutritionally necessary component in healthy human diets (e.g., Willett et al., 2019). Over time, with changing societal values, increasing availability and acceptance of various alternatives, growing recognition of what industrial animal agriculture entails, and with action to transform the system, meat consumption corridors may contract, as society comes to rely on mainly plant-based food systems. With further paradigm changes (e.g., related to human/non-human animal relations, with discussion in the modern context started largely by Singer, 1975) and improvements in global food justice, a full

<sup>15</sup> For possible strategies, see Poore and Nemecek (2018; 2019); Pörtner et al. (2021); WBGU (2021); Willett et al. (2019).

reliance on a plant-based food system might be possible in the future.<sup>16</sup> This especially, since other, non-food materials conventionally often derived from animals can increasingly be manufactured without animals. Yet, relatively low-impact, extensive, smallholder farming especially in the less industrialized countries in the global South may offer benefits to people beyond nutrition, even though such farming is particularly vulnerable to climate change (Houzer & Scoones, 2021; Mbow et al., 2019). Similarly, some small-scale grazing in selected locations globally may offer biodiversity benefits (e.g., Eriksson, 2021). By no means, however, would such schemes need to involve industrial meat production.

The process discussed above would have to start by considering meat as a need satisfier in a context where it is produced and consumed sustainably. Meat could therefore be a satisfier for some of Di Giulio and Defila's (2020) nine universal protected needs, as shown in Table 1.

In the global North, there are usually many inexpensive alternatives available for protein foods, and so, excluding rare allergies, access to meat is not necessary there for nutritional reasons. In other regions of the world, the situation may be different. Certain areas lack access to sufficient protein (e.g., sub-Saharan Africa, see Medek et al., 2017; Willett et al., 2019). In these cases, meat consumption may be necessary, at least as a transitory solution. The trend towards overconsumption of meat in the global South must be resisted (Tilman & Clark, 2014), however, and plant-based meat replacements and proteins can play a critical role in the global South context as well (Atuna et al., 2022; Szejda et al., 2021). It is worth noting that although pulses are generally inexpensive, their prices can be highly income elastic in some locations in the global South (FAO-FSN Forum, 2016). For example in India, food and agricultural policies have reduced the price of some meats below traditional plant proteins, such as pulses (MacDonald & Iyer, 2012). While reflecting the power of the meat industry to create demand (Fuchs et al., 2016; Weis, 2017), this is a social justice issue. For the time being, some populations may depend more on consuming moderate amounts of meat. However, access to adequate amounts of plant-based proteins, even in these instances, is mainly a question of policy.

Food is obviously much more to humans than just nutrition or material necessity (Need 1 in Table 1). Meat, in particular, has acquired a significant role in human lives over thousands of years (Foer, 2009; Swatland, 2010; Zaraska, 2016), well before the industrial meat system gained its power and expanded globally in the last half a century or so. In its historical role, meat has satisfied needs well beyond nutrition across cultures (see Table 1): Need 6, *to perform activities valuable to oneself* (e.g., cooking meals containing meat for the family); and Need 7, *to be part of a community*, (e.g., involving social food traditions or social eating where meat plays a central role). Meat has, therefore, been a synergistic need satisfier for a long time, satisfying nutritional needs, while contributing to the satisfaction of other needs.

With the rise of the industrial meat system, societal perceptions of meat have radically changed. Increasingly, people across the globe perceive meat as a satisfier for Need 2, *to realize one's own conception of life* (e.g., as a meat eater). In the global North, we mostly live in a *meat culture* (Potts, 2016) where meat permeates food practices and cultural identities (DeLessio-Parson, 2017), and the *meatification* of global diets—the shift of meat from a peripheral to a central element of modern diets—still continues (Hansen & Jakobsen, 2020; Weis, 2013; 2017).

<sup>16</sup> To give an example of the impact on production quantities of a shift away from animal agriculture, Stehfest et al. (2009) calculate that a globally adopted wholly plant-based diet could halve the necessary global cereal production by the year 2050.

Cultural change is required in the meat context to help enable the reversal of the meatification trend and to bring down the levels of consumption (and production) in a radical way. Elements in the cultural change process include the new meats, and the discourses around negative environmental and health impacts of especially red meat. Consumption corridors can support a cultural transformation that gives people a right to eat low, sustainable amounts of meat. Being able to eat some meat is still for many an important part of being able to make one's own choices and connecting with others socially and culturally. Therefore, meat eating can be argued to contribute to operationalizing the good life—the basis for defining satisfiers for protected needs. Mean consumption corridors qualify and bound eating meat, so that low, sustainable levels of meat can function as a synergistic need satisfier contributing to sustainable well-being.<sup>17</sup>

## Planetary Health Diet and Meat

As said, the EAT-Lancet Commission recently defined a global reference diet (Willett et al., 2019)—the planetary health diet—which, while adhering to both human health needs and environmental sustainability, allows for relatively small amounts of meat consumption at a global level (see Table 2). According to the Commission, these amounts of consumed meat, including different meat animals, could be environmentally sustainable at the global level, expecting a global population of 10 billion by 2050. The suggested maximum amounts for meat consumption (the higher ends of possible ranges in Table 2) could offer a reference point for the consumption corridor ceiling. However, while the ceiling could be more definable from early on, being limited by the planetary boundaries relevant to meat consumption, the corridor's floor level could not be as clearly defined before the process of societal negotiation occurs. Willett et al. (2019) suggest zero consumption of meat as the lower end, yet, it is unlikely the floor would currently be determined as zero through a social, participatory negotiation process. In fact, setting the floor at zero would go against the idea of a right to eat sustainably low amounts of meat. Therefore, it would also go against the basic principle of consumption corridors.

Importantly, even the ceiling of a sustainable meat corridor would mean a radical cut in current consumption in the global North and other regions with high meat consumption rates. According to the FAO, the average European currently eats at least three times as much meat as the average value in the planetary health diet suggests for combined human health and sustainability.<sup>18</sup> Therefore, in the context of meat consumption, any corridor floor determined through a participatory process in the present context risks surpassing the ceiling (see the section “[The Significance of Consumption Corridors](#)” of this article for a brief discussion).

Willett et al. (2019, p. 459) emphasize that the reference diet is “compatible with a wide variety of foods, agricultural systems, cultural traditions, and individual dietary

<sup>17</sup> Rao and Min (2018) suggest a way to define need satisfiers in the context of *decent living standards* (DLS). Elements of a DLS must either be “necessary and indispensable, or globally desired [by] overwhelming majority populations in all countries where they are available and affordable” (idem:232). It cannot be said that meat is generally indispensable. However, it can be said that meat is globally desired wherever it is broadly available and affordable. Even in India, often used as an example of more out-of-choice vegetarian societies, meat is desired by a majority of the population. In 2015–2016, around 68% of Indian women and 77% of Indian men consumed meat at least sometimes (IIPS & ICF, 2017).

<sup>18</sup> The average for European meat consumers is for 2019 (FAOSTAT). The average value for the PHD is taken as the mean value between zero and the maximum in the PHD range for daily total meat consumption as shown in Table 2.

**Table 2** Suggested amounts of daily meat consumption in the flexitarian healthy reference diet by Willett et al. (2019) respecting planetary boundaries (total food intake of 2500 kcal/day)

Type of meat	Suggested daily intake (including possible ranges)
Beef and lamb	7 g (0–14 g)
Pork	7 g (0–14 g)
Chicken and other poultry	29 g (0–58 g)
<i>Total</i>	<i>43 g (0–86 g)</i>

Extract from a table in Willett et al. (2019). Notes: When the whole ranges are considered, the suggested daily intakes are averages. It would likely be important to ensure that these theoretical averages stay as true averages, so that the consumption levels do not exceed sustainability limits. Furthermore, other than the above ranges for meat, this reference diet largely consists of vegetables, fruits, whole grains, legumes, nuts, and oils; and includes no to moderate quantities of seafood, dairy, eggs, and starchy vegetables, as well as no to low quantities of refined grains and added sugars.

preferences,” and that the diet elements can be combined in various types of (low meat) omnivore, vegetarian, and vegan diets. The reception among the scientific community, many policymakers, and major established media outlets has been largely positive. For example, Béné et al. (2020, p. 457) call the report a “landmark publication in the debate on why food systems must transform, and why human and planetary health must be conjoined objectives,” while themselves exploring the operationalizing of the great food transformation in line with Willett and colleagues.<sup>19</sup> Despite that, the suggestion of limiting meat consumption has created a backlash, including highly polarized debates online, “misinformation, conspiracy theories, and personal attacks,” among other things, around a hashtag #yes2meat (Garcia et al., 2020, p. 2154). Although this “counter movement” may have been partly organized or encouraged by industry incumbents rather than coming solely from individual consumers, it demonstrates the political nature of meat (see also Emel & Neo, 2015).

Transformation of meat consumption must accompany transformation in meat production. Willett et al. (2019, p. 471) emphasize that “a combination of dietary changes and production and management-related measures are required.” They make detailed recommendations for sustainable agriculture, arguing for a number of radical changes in food production: regarding land use, water and fertilizer use, safeguarding biodiversity, cutting pollution, and turning agriculture from a carbon source to a carbon sink. Furthermore, Willett and colleagues call for a fundamental shift in agricultural priorities from producing high quantities of food to producing healthy food.

The Commission identifies six environmental systems and processes affected most by food production (all very relevant to meat production): climate change, biodiversity loss, land system change, freshwater use, and nitrogen and phosphorus flow. Willett et al. (2019, p. 452) suggest that the safe operating space for these should be viewed “as guides for decision makers on acceptable levels of risk for human health and environmentally sustainable

<sup>19</sup> To get a further idea of some of the initial positive reception of the EAT-Lancet report in different spheres of society, see <https://eatforum.org/learn-and-discover/can-a-scientific-commission-change-the-world/> (accessed 8 September 2022).

food production.” The authors argue that science must continue refining global targets while “business and policy makers begin translating these definitions into operational science-based targets for various sectors, regions, and countries” (ibid.).<sup>20</sup>

## Meat Consumption Corridors Versus Freedom and Justice

Fuchs et al. (2016) argue that, currently, the discursive power of the idea of consumer sovereignty prevents change towards less meat consumption. According to the *meat demand paradigm* (Garnett et al., 2018), independent consumers drive the demand for meat. Furthermore, the consumption and non-consumption of meat are emotionally charged practices (Weenink & Spaargaren, 2016); the more emotionally charged a practice is, the more likely people are to want to continue engaging in it, and maintain their freedoms regarding it.<sup>21</sup> Consumption corridors can be effective in a polarized policy area as they preserve some degree of consumer sovereignty. Such partial freedom is a familiar concept in many societal spheres, as discussed earlier. Furthermore, when consumers view a meat consumption corridor as a continuum of different meatways, the dichotomy of meat versus no-meat may diminish, allowing for various socially accepted choices for meat consumption (Kanerva, 2021).

As discussed earlier, social justice is another issue inherent to consumption corridors, either within a society, at a global level, or intergenerationally. Consumption corridors work well in the context of consumption of a limited resource that should, however, be accessible to all. Meat can be seen as a prime example of such a “resource.” It can be argued that as long as meat is societally conceived to be a need satisfier—and it is so for most people for the time being—sustainably low amounts of meat should be available to all who wish to eat it.

The global food system is unjust (as explored from many angles in Gilson & Kenenhan, 2018), and employing meat consumption corridors, as part of strong sustainable consumption governance in food systems, would go a long way towards greater equity within the global food system. In addition, such corridors could greatly support the SDGs and other global goals aiming for a just and sustainable future. Specifically, cutting meat overconsumption would enable the use of limited resources, such as fertile land, for other purposes, such as growing plant-based protein or other food for humans. Such a transformation could also greatly reduce feed imports, especially from the global South where they tend to cause major environmental damage.

In addition to the opposition already considered in this article concerning issues such as industry power, the cycle of inertia, perceived consumer sovereignty, and the general challenge of sustainability transformation in a capitalist system (Eckersley, 2021; Mathai et al., 2020), also discussed briefly in the last section “Discussion and Conclusions” of this article, various less powerful actors in the meat supply chain would be likely to oppose changes to their livelihoods. This is, however, more a question of a *just transition* which involves the meat system as much as other systems in need of transforming, and clear guidelines for just transitions are already been developed (ILO, 2015).

<sup>20</sup> Based on the first EAT-Lancet Commission’s work, a new global project has been launched, EAT-Lancet 2.0, which aims to generate further knowledge and guidance for the great food transformation, focusing, in particular, on diversity, adaptation, and food justice. See <https://eatforum.org/eat-lancet-commission/eat-lancet-commission-2-0/about-eat-lancet-commission-2-0/> (accessed 8 September 2022).

<sup>21</sup> Here is an example of unpopular policy efforts in Europe: <https://www.theguardian.com/environment/2022/jan/21/the-greens-want-to-take-our-meat-away-europeans-go-to-war-over-their-dinner> (accessed 8 September 2022).

Finally, there are likely to be two further contrasting, paradigm level types of opposition to the idea of developing meat consumption corridors, reflecting the no-meat versus meat dichotomy. To explain, at one end would be the argument that meat consumption is not necessary under any circumstances. Therefore, meat cannot be included as a (protected) need satisfier. At the other end would be a societal consensus that meat consumption cannot be limited, this being often still a taboo subject. Both positions are, however, unrealistic. The first position is too narrow in its focus, and ignores, in particular, the significance meat and its consumption currently have in societies, beyond nutrition. The second position ignores the vast detrimental impact of the industrial meat system, in particular, on both the climate and ecological crises. Realistically speaking, societies cannot ignore the issue any longer, and finding the best, most impactful options to tackle the *meat crisis* (D'Silva & Webster, 2010) is of great importance.

This section has discussed the challenge of transforming the meat system, while also presenting meat in the current cultural paradigm as a synergistic satisfier for certain needs and/or desires. Dynamic consumption corridors can offer a way out of this dilemma, channelling meat consumption into a just and sustainable range, guided by a planetary health diet, while questioning the perceived necessity of meat as everyday, ordinary food. However, the section has also pointed out that a system of meat corridors would give individuals a right to eat sustainably low amounts of meat. Considering both how polarized the issue of meat is in much of the global North, and how in some areas of the global South, many would benefit from adding some meat into their diets currently inadequate in protein, the idea of a right to meat is likely to be welcomed. Finally, the section has also explored the signs of change already visible, such as new discourses partially brought on by the new meats. The relevance of societal discourses and paradigms will be further explored in the following section.

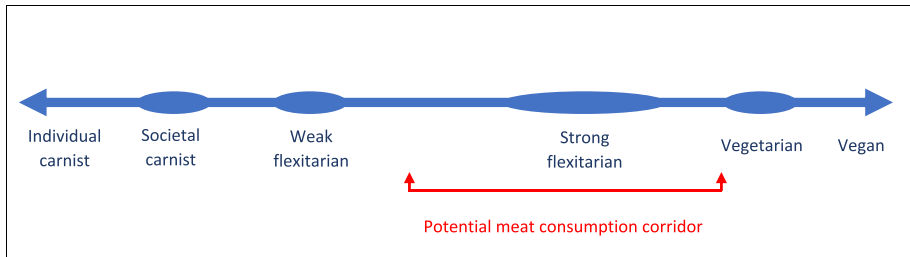
## The Journey Towards Meat Consumption Corridors

This section draws partly from the conclusions made in Kanerva (2021) which explores discourses on new meatways. The journey at both individual and societal levels towards meat consumption corridors will be discussed, and suggestions made for an outline of this process at the societal level.

### The Journey and Continuum Metaphors

Some consumers perceive a transformation in their personal meat consumption as a journey (Kanerva, 2021). The idea of a journey can be extended to the societal level; the journey metaphor suggests seeing meat eating as a continuum of different meatways, a multi-directional path (see Fig. 3), rather than a dichotomy of eating, or not eating meat. The discursive power of conceptual metaphors (such as a “journey” or a “continuum” here) lies, firstly, in their ability to communicate more efficiently than typical argumentative structures can. Concurrently, metaphors can play a key role in framing perceptions, and in framing action. Originally a concept from Lakoff and Johnson (1980), a conceptual metaphor is a “way of knowing the world” (Foss, 2009, p. 270).<sup>22</sup> Foss argues that one way to

<sup>22</sup> To give an example, in the conceptual metaphor “time is money,” one idea (so called target domain, here “time”) is understood in terms of another (source domain, here “money”). People’s knowledge of the source domain (e.g., “money is valuable, not to be wasted”) carries over to explain the target domain.



**Fig. 3** The continuum of different meatways and a sustainable meat consumption corridor. Source: Modified from Kanerva (2021). The idea of a continuum is from Jallinoja et al. (2016). Notes: A sustainable consumption corridor would likely include a part of the right side of the continuum, as marked in red. Visually speaking, the corridor is an upright continuum, but here the continuum is presented horizontally, rather than vertically, as a “journey” is usually understood to be horizontal. *Carnism* (Joy, 2010; see also Piazza et al., 2015) is the largely invisible belief system of meat eating (in particular that meat is normal, natural, necessary, and nice) and the discursive hegemony that the culture of meat enjoys. Kanerva (2021) suggests that an *individual carnist* is likely to identify with carnism, and be mostly indifferent to the fate of meat animals, whereas a *societal carnist* tends to prefer to eat meat on a daily basis out of a habit, as a social convention, or as part of everyday social eating. At the same time, a *societal carnist* is likely to be uneasy about eating animals, and, therefore, employ coping strategies (see also Monteiro et al., 2017). A *weak flexitarian* eats meat on most days of the week, whereas a *strong flexitarian* eats meat only infrequently

generate change in society is by changing metaphors. With changing metaphors, perceptions change. Furthermore, metaphors also connect to policy. They contribute to the discursive construction of an issue—such as, consuming meat—and thereby, to the policies that are seen as relevant to that issue (Spencer, 2010). Metaphors can have power when they are present in societal discourses. One way for policy to effect change is by strengthening certain discourses, for example, with the help of new metaphors.

New solutions can generate new discourses. In public discourses, the new meats are presented as solutions. The perception that the individual or societal transformation towards sustainable consumption of meat is a journey has been facilitated by new technological innovations, such as cultivated meat, as well as by identifying eating less or only a little meat as flexitarianism. To draw from the discourse data in Kanerva (2021), cultivated meat can be seen as a “great halfway-house” on that journey, plant-based meat as “transitional food” when on a transit (journey towards vegetarianism), and flexitarianism as “going as far as you possibly can” on the path towards less meat. The transformation is often challenging at the individual level (e.g., Asher et al., 2014), potentially also making it more difficult to fit in in one’s social environment, and the new meats and meatways can be of some assistance in this.

Kanerva (2021) concludes that framing the process as a journey along a continuum of different meatways carries some distinct benefits. A journey may take place initially at the individual level, but can be reflected at the societal level through discourses and shifting values and norms. When seeing different meatways as stops along the same, shared, mostly flexitarian path, people may have more tolerance and understanding towards each other. The more relaxed approach inherent in flexitarianism also supports this. Greater tolerance can reduce the polarization around meat, as well as reduce the need for various maladaptive coping strategies for dealing with the cognitive dissonance related to the *meat paradox* (Loughnan et al., 2010; 2014). Moving away from strict to more relaxed thinking can assist in the change itself (de Boer et al., 2014; Jallinoja et al., 2016). Embracing the journey



metaphor also allows for a slower change in eating habits that may be more manageable and more durable than a quicker switch (see also Zaraska, 2016). Finally, as many journeys are not linear, but include movement backwards as well as forwards, there is less need to identify as a “failed vegetarian” when sometimes eating some meat: A person can simply continue on the journey. A vegetarian or vegan diet is often seen as part of one’s identity (e.g., Asher et al., 2014), and so, not being able to follow such a diet strictly may be felt as a breach of identity, and may even lead to giving up the diet. The study by Asher et al. (2014) suggests that there may be five times as many former vegetarians and vegans in the USA as there are current ones. The flexibility of a continuum can facilitate following a mainly vegetarian diet without compromising identity. In practice, such a diet would be a strong flexitarian diet.

### Journey Towards Sustainable Meat Consumption Corridors

For the societal transformation towards sustainability to occur, a societal journey is necessary. Similar questions arise in discussing meat consumption as for other consumption corridors: What are the corridors’ bounds, how will society agree them, how to transform production and adjust current consumption to the chosen limits, and how to maintain the dynamism of the corridors over time? The transformation will take some time, and in fact, the process itself—the various journeys—are key to the success of the transformation. If the wrong actions are attempted, or the right actions attempted in the wrong order, the backlash may increase resistance to change, breaking the *glass ceiling* on the sustainability transformation (Hausknot, 2020; see also Eckersley, 2021). Willett et al. (2019, p. 478) present the aims for transforming food production, as well as policy suggestions for steering and managing the process of change. More particular to the meat context and to the framework in this article, Box 1 suggests an outline for the process of implementing corridors, in other words, the journey towards a system of meat consumption corridors.<sup>23</sup> These actions fall within strong sustainable consumption governance, as they would use not only the methods in the efficiency approach, but also, very importantly, they would involve institutional change with new forms of decision-making, changing paradigms, and ultimately, changing fundamental patterns of meat production and consumption.

During this societal journey, the meanings of what meat is, as well as the societal norms and values around meat consumption, or even human—non-human animal relations are likely to change. This journey has already started, especially due to the emergence of the new meats. Pörtner et al. (2021) argue that shifting values are necessary for the dietary transformation, including those related to the human–nature relationship. The relationship between meanings, norms, and values on the one hand, and social practices, on the other hand, is bidirectional. In other words, new meanings, norms, and values present in discourses affect practices, and changing practices will in turn transform meanings, norms, and values (e.g., Hoff-Elimari et al., 2014; Sunstein, 2019). Such processes might lead to differing results. For example, in the global North, meat might lose its necessity status

<sup>23</sup> More concrete suggestions for implementing meat consumption corridors would require more research, including empirical research, and are therefore beyond this article. However, FOLU (2021: see Table 3 on page 35 of the report) offers somewhat similar suggestions for bringing about a *positive tipping point* in change towards more plant-based diets. See also Cué et al. (2022) exploring the European Union policy context for meat consumption corridors.

altogether, and be again seen as a luxury, rather than a staple food. Or, another result could be that the majority of people would begin to see eating animals as unnatural, or immoral.

The new meats and meatways have already expanded the literal meaning of meat (Broad, 2020; Jönsson et al., 2019; Kanerva, 2021), as evidenced by the legal battles led by the traditional meat and dairy industry over the use of terms such as “meat” or “milk” (Tai, 2020). Traditionally, the symbolic meaning of meat relates to masculinity, strength, higher socioeconomic status, and human dominion over nature (Ruby & Heine, 2011). This may, however, be changing (e.g., de Bakker & Dagevos, 2012).<sup>24</sup> New meanings emerge and spread in society through new discourses and new consumer products. The most immediate and perhaps most enduring impact of the new meats is at the level of discourses. Often highly processed, the new meats may not all be particularly healthy. However, they can contribute to sustainable food systems of the near future, assuming that their impacts on, for example, greenhouse gases and their energy, water, and land use are within sustainable limits.

As a result of new discourses around the vast negative impacts of the meat system as well as the solutions offered by the new meats, the practices around meat consumption have opened up discursively. Such *discursively open practices* (Kanerva, 2021) may no longer be stable and may, therefore, be more susceptible for purposive change. New governance innovations such as consumption corridors at this particular point in time can further enable the transformation of the meat system. The continuum of meatways, and the journey it allows, reflect how consumption practices can change, and how dynamic consumption corridors can work at the societal level.

According to Rööös et al. (2021), a key policy question is:

How the very substantial changes required to achieve a sustainable food system can be achieved. In order to begin answering this question [...] it is necessary for public actors to start developing and implementing a variety of policy instruments in practice and to systematically evaluate them. This is where the real need for research lies: in the scientific analysis of large-scale strategies and policy instruments for achieving sustainable food consumption.

(Rööös et al., 2021, p. 50)

In conclusion, meat consumption corridor is one potential novel governance instrument for a large-scale transformation towards sustainable food systems. Using the conceptual metaphors of a *journey* along a *continuum* of meatways could enable a swifter and smoother transformation of meat consumption. This section has suggested (see Box 1) an outline of actions that could help societies move towards a system of meat consumption corridors. As discussed in Box 1, it is critical that various actors first take action at the discourse level—questioning existing and dominant values and paradigms related to meat consumption—before stronger policy action, especially in the context of a polarizing issue such as meat consumption. However, the urgency of the issue must be kept in mind at all times.

<sup>24</sup> Also the symbolic meaning of *not* eating meat has gone through vast changes over time, as explored by Shprintzen (2011).

## Box 1 How to do meat consumption corridors — Some suggestions for the journey

### I. Carry out research at all levels:

- Short participatory research projects with consumer-citizens and other relevant stakeholders (e.g., various civil society organizations [CSOs], policymakers, farmers, even industry actors) around the idea of meat consumption corridors. Important would be to deliberate the social re-framing related to the corridor concept, taking discourse dynamics, and the power of metaphors such as the continuum of meatways into account. Hopefully, such projects demonstrate that consumption corridors can be acceptable and even positive. Due to the urgency of the transformation, however, this research phase needs to be succinct.

- Dissemination of research results as widely as possible, and using them for Steps II to IV.

### II. Bring the idea into broader recognition in public discourses, while attempting to change values, meanings, and paradigms with the help of:

- Campaigns and actions by CSOs (informed by the participatory research in Step I) on developing and increasing public discourses on the nature of meat consumption corridors, and the reasons for having them. The main objectives of these campaigns are to:
  - (a) Question the dominant ways in which people think about freedom;
  - (b) Question and challenge current values and paradigms around meat consumption (e.g., the normalization of meat as necessary or everyday food; or the naturalness of humans eating non-human animals);
  - (c) Increase awareness of strategic ignorance related to cognitive dissonance and challenged practices, such as meat eating;
  - (d) Bring in the journey metaphor and the concept of new meatways as enablers, and to decrease polarization; and
  - (e) Improve the image and associations of healthy low-tech plant-based options such as beans and lentils, i.e., pulses (see Jallinoja et al., 2016, for suggestions).

- State level action on public discourses, informed by Step I, and with similar goals and methods as above.

- Engagements with the emerging new meat industries to further increase and widen discourses.

### III. Conduct trials and projects at local and national levels:

- Local level projects on participatory processes to set up consumption corridors for meat (taking results from Step I into account and including ideas discussed in Step II).
- Local level application of the corridors in public food procurement (e.g., similar to veggie day projects in cities such as Ghent in Belgium), while increasing competencies in vegetarian cooking within existing food system structures.
- National level trials of participatory processes, designed to justify near future policies on the production, trade, and consumption of meat. This could partly also be justified as responding to demands from CSOs and citizens.

### VI. Implement state level policy action including:

- Initiation of additional actions to develop national meat consumption corridors, considering lessons learned from Steps I to III.
- Renewal of national food guidelines strictly in line with a planetary health diet, such as the one developed by Willett and colleagues (2019), and the incorporation of these guidelines to education and other information.
- Application of meat consumption corridors in public procurement (also relevant for changing norms, Swensson et al., 2021), with increased competencies related to pulses.
- Use of other state level instruments — such as taxes, subsidies, and regulating advertising — aimed at sufficiency and at recomposing meat consumption (see Nyfors et al., 2020; Reisch et al., 2021; and Rööß et al., 2021, for reviews of methods), while removing harmful instruments, such as subsidies that artificially lower the price of meat.
- Application of actions across all sectors; specifically taking implications from the corridors to agricultural, and industrial policies at the national, regional, and transnational levels. Important is to ensure support for transitioning farmers and other vulnerable actors in the relevant supply chains (see ILO, 2015, guidelines for a just transition), while avoiding outsourcing production to other countries.

Transition to consumption corridors should ideally take place in smaller steps, rather than immediate larger change, as an incremental approach offers “greater sensitivity to the perspectives, historical trajectories, and socio-cultural distinctions of specific regions and communities” (Fuchs et al., 2021a, p. 49). Given how polarizing and emotional the topic of meat consumption is, as well as the level of industry power (Béné, 2022; Fuchs et al., 2016), regulatory and economic instruments, or any comprehensive state level action, may be met with the most resistance. Tackling related values, norms, and paradigms first will reduce political inertia and severe societal backlash. In other words, state level policy action is more feasible when societies are primed for the harder measures through local actions and broader public discourses. Eckersley (2021) argues for the relevance of local level experimentation to build commitment and enable learning. In conclusion, research results from Step I could inform the later steps on the journey, but the first three steps are likely to be a necessary prerequisite before state level policy action (Step IV).

The main goal of meat consumption corridors is to shift protein food production to a more plant-based basis using sustainable agricultural methods with radically reduced negative impacts on human and planetary health. The discussion on how the global nature of the meat system (see Heinrich Böll Foundation, 2017) complicates the necessary transformation, and how the global market economy in the meat context could be adjusted and challenged, goes beyond this article. Briefly, however, Béné (2022, p. 9) argues that “a normative, purposive transformation would imply a foundational shift in the current governance of food systems with the ambition of dis-empowering the incumbent Big Food actors and destabilizing the status quo.” Consumption corridors align well with such a foundational shift in food governance.

Some of the challenges in global sustainability governance in food are similar to the challenges in many other areas of consumption in the current global context. Pörtner et al. (2021) discuss suggestions for transnational governance approaches to transformative change in the context of both climate and biodiversity crises.

## Discussion and Conclusions

This article has focused on the idea of using the novel governance innovation of consumption corridors to restructure unsustainable meat consumption, starting with the planetary health diet (Willett et al., 2019), and using certain discourse tools to help with the transition. Consumption corridors are about need satisfiers for those needs deemed worthy of societal protection. The satisfiers and the corridors themselves are dynamic, so that new contexts (environmental, cultural, technological, health related, etc.) can change the corridors (their floors and ceilings), and their contents, i.e., the satisfiers. Participatory processes and broad public discourses are central to the gradual acceptance of consumption corridors in societies. Societal discourses reflect visible events and behaviours as well as invisible societal structures, values, norms, meanings, and paradigms which are powerful *leverage points* (Meadows, 2008) for societal change.

The industrial meat system is unsustainable; however, within the current cultural framework, meat is a synergistic need satisfier for many people: not only a satisfier for nutritional needs, but for other needs as well (as defined by Di Giulio & Defila, 2020, in Table 1). It is essential that societies seriously question meat as an everyday need satisfier. Yet, for the time being at least, it is relevant to include it in a system of dynamic consumption corridors. Moreover, the notion of a “right” to a low, sustainable level of meat will resonate with many in the high-consuming regions in the world, and have significance in other regions as well.

The planetary health diet is an important starting point for negotiating corridors for meat. This diet offers the basis for a new global food policy that recognizes cultural differences, and includes suggested strategies for governing the transformation on the production side.

While challenges to the idea and implementation of meat consumption corridors exist, they are not insurmountable. The meat industry holds substantial discursive power to keep the status quo (Fuchs et al., 2016). Therefore, it is important to act first on the discursive level to counter the two likely, but polarized arguments against meat consumption corridors: that meat is unnecessary and, therefore, has no place in sustainable food systems; or that meat (production and) consumption cannot be limited in a free society. Considering the financial and political power of the current industrial meat system, even the first of these arguments may work in maintaining the status quo, as this view could then be rendered idealistic, and omitted from discussions in the corridors of power.

Conceptual metaphors, such as a journey along a continuum of meatways (Kanerva, 2021), can transform societal paradigms. The influence of the new meats (e.g., cultivated meat and the new generation plant-based meats) on societal discourses has begun to destabilize meat-eating-related practices.

To begin applying consumption corridors in meat consumption, there are two important issues to consider. To avoid backlashes and enable more practical action, it is vital that various actors first address and question dominant values and paradigms in society, and introduce the consumption corridor concept on the discursive level. Secondly, larger practical measures should be taken initially at a local level, and only subsequently at a national level. The outline (in Box 1) is grounded in systemic (strong) sustainable consumption governance which, importantly, encompasses the efficiency approach (such as implementing/removing certain taxes and subsidies), as well as other state level policy measures. Finally, of central importance in a transition to meat consumption corridors is that the transition is just, especially considering vulnerable actors in the meat supply chain.

## Discussion

Transforming the meat system is pivotal in facilitating an effective response to the climate and ecological crises. There are further enabling factors that apply, in particular, to the meat consumption context.

Firstly, meat consumption, and food choices more generally, are a commonly shared and straightforward area where citizen–consumers can have some political agency, compared to many other areas of life more confined by societal structures. Secondly, meat corridors can be translated into the current market system, whereby consumption as a whole may not necessarily be reduced when one food item (e.g., meat) is exchanged for another (e.g., plant-based protein foods). Effective change in this context need not be about absolute “less” in terms of consumption, but it does need to be about absolute “less” in terms of the negative impacts of the meat system. This point is not easy on the meat industry itself, but it may be important at the societal paradigm level. Therefore, thirdly, while meat consumption corridors do not, on their own, propose less food consumption, they can prepare society to consume differently, by exchanging unsustainable consumption for more sustainable consumption.

Lastly, meat-related practices at several levels have arguably started to destabilize in recent years. At the production side, this is in the form of emerging industries producing the new meats, such as cultivated and new generation plant-based meats, or other alternative proteins. At the consumption side, this is in the form of new discourses increasingly creating tensions with the status quo of meat consumption, and creating opportunities for transforming these discursively open practices. There are signs that an increasing number of citizen–consumers exhibit awareness of the broken meat system, and may therefore accept, or even demand strong sustainable consumption in connection with unsustainable diets (Cherry, 2015; Lorek & Fuchs, 2019). Additionally, while global per capita meat consumption is still rising, some high-consuming countries may be on a (slow) downward trend in per capita consumption.<sup>25</sup> Certain change is being manifested at the political level as well. Vermeulen et al. (2020, p. 12) refer to the “emergence of political spaces in which governments, social movements, and businesses [...] are able to open new conversations on what societies might demand of today’s food systems.”

Considering all the above, the meat consumption corridor approach, even as a “pilot project” in new consumer policy, could effectively address the meat crisis, and simultaneously, assist in priming societies for the extremely challenging larger sustainability transformation outside the meat system. Resistance (for example, from corporate actors), is to be expected, and gaining government support may be challenging. However, meat consumption corridors could be the *next best* transition policy step (concept from Eckersley, 2021)—one that has great transformational potential, and that is also feasible, even considering the constraints of current capitalist state systems.<sup>26</sup> One significant benefit that the consumption corridor approach has within strong sustainable consumption governance is that it actively engages citizen–consumers from the beginning, while reforming democratic

<sup>25</sup> Such countries notably include Germany, for 2021 see <https://www.bmel-statistik.de/ernaehrung-fischerei/versorgungsbilanzen/fleisch> (accessed 8 September 2022).

<sup>26</sup> See also this discussion on the relationship between the concept of consumption corridors and certain recent sustainability focused economic models: [https://www.uni-muenster.de/imperia/md/content/fuchs/kanerva\\_2022\\_the\\_relationship\\_between\\_consumption\\_corridors\\_and\\_recent\\_sustainability-focused\\_economic\\_models.pdf](https://www.uni-muenster.de/imperia/md/content/fuchs/kanerva_2022_the_relationship_between_consumption_corridors_and_recent_sustainability-focused_economic_models.pdf) (accessed 8 September 2022).

decision-making institutions to include more participative democracy. Therefore, electorates may be more likely to accept the concept, providing an opportunity to reframe the social contract between governments and citizens Oliver et al. (2018) argue for.

Societal transformation towards sustainability may require civil society and social movements to strongly demand change before democratic governments take sufficient action (Smith et al., 2020). The increasingly obvious conflict between the current system and societal well-being in the presence of multiple crises may be a sign of hope, as it could facilitate social change (Koch, 2020; Pirgmaier, 2020). Although the recent growth in the climate and environmental movements demanding rapid societal transformation towards sustainability might not yet have reached a social tipping point, it is nonetheless a clear sign that change is desired. Europe could currently be particularly fertile ground for a purposeful societal transformation of the meat system, as “there is evidence to suggest that targeted interventions in the near-term could trigger a [positive] systemic tipping point towards increasingly plant-rich diets” in Europe (FOLU, 2021, p. 26).

While denial of climate science is getting more difficult to uphold, denial of the brokenness of the global meat system has been called the “last respectable form of science denial” (Kymlicka, 2021). As perspectives change, awareness of the need for action is growing, and the cycle of inertia could be broken. Reducing meat consumption may no longer be a taboo. Vermeulen et al. (2020, p. 12) argue that “dietary change in the interests of human and planetary health cannot be considered too difficult to achieve when it has not yet been seriously attempted.” In order to have a chance of achieving the SDGs, the biodiversity goals, and the Paris climate goals, the meat system must be addressed and the production and consumption of meat transformed. To follow the green revolution of the past, and to correct its mistakes, we need the great food transformation (Willett et al., 2019) towards sustainable diets and food systems. As Béné (2022) argues, however, we do not only need a transformation of the actual food systems, but also a transformation of food governance. Meat consumption corridors can provide a key element for such a transformation.

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