Planning in Nature's Metropolis: Metabolic Municipalism and Ecological Planning in Barcelona

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Abstract

Democratic economic planning is emerging once again after decades of marginalization. This article contributes to the ecological turn in the new economic planning literature by attending to new municipalist approaches to repairing metabolic rifts opened by capitalist urbanization. It presents a qualitative study of the office of strategic planning for the Barcelona metropolitan region (PEMB) to examine how questions of social metabolism have informed its revaluation of planning, situating these changes within what we identify as an emergent 'metabolic municipalism'. By examining how PEMB has redefined 'the economic' in economic planning, and how it has worked around the challenges of distributed planning *without* power, through public-community partnerships, we aim to illuminate and critically assess the elements of an ecological planning for metabolic sovereignty in conditions of planetary urbanization.

Keywords: economic planning, urban political ecology, social metabolism, new municipalism, food sovereignty, foundational economy

Introduction

A growing body of scholarship is 'rethinking economic planning' for alternative organizational futures (see the recent special issue: Sorg and Groos, 2025). Much of this literature, whilst ambitiously reimagining planning for the twenty-first century, remains abstract and speculative, lacking the analytical and practical traction of historical and empirically grounded inquiry. What is needed now is research that identifies and develops "trajectories of how to actually move towards economies featuring elements of democratic planning" (Sorg, 2025: 18). This article thus critically investigates the role of economic planning in regaining control over social metabolism through a qualitative study of the 'food mission' of the office of strategic planning for the Barcelona metropolitan region (PEMB; Pla Estratègic Metropolità de Barcelona), an organization that had been enrolled within new municipalist politics in Barcelona (Roth et al., 2023; Thompson and Nishat-Botero, 2025). We focus on the urban-agrarian questions of economic planning to explore potential pathways towards healing the metabolic rift resulting from urbanization in the Capitalocene (Brenner and Katsikis, 2020; Ghosh and Meer, 2020).

Notions of economic planning are back on progressive political agendas – mobilised to tame and reform capitalism within a social democratic horizon (Krahé, 2022; Mazzucato, 2021) as well as for post-capitalist futures (Arboleda, 2021; Jones, 2020). The most compelling arguments for post-capitalist planning begin with a critique of capital's systemic destruction of lifeworlds, and the inadequacy and injustice of neo-colonial, state-productivist, and market-mediated mechanisms for mitigating climate catastrophe (Böhm et al., 2012; Durand and Keucheyan, 2024; Saito, 2024). If indeed the social metabolism of

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cities, and their unequal exchange with their peri-urban and rural peripheries, is a major contributor to climate change (Heynen et al., 2005; Saito, 2024), then transforming urban-rural relations is fundamental to mending the planetary metabolic rift. And yet democratic planning as a re-emerging field of praxis has tended to focus on the firm or corporation, on the nation-state, or on more localized 'counter-planning' from below (Federici and Jones, 2020), overlooking the *urban fabric* as a space of metabolic mediation (see Beverungen, 2024: 76-78); this despite recent social movements often under the rubric of new municipalism making efforts to harness the powers of the local/regional state and provisioning regimes to reconfigure landscapes of extended urbanization for translocal socio-ecological transition (Roth et al., 2023). This article is an attempt to explore the potential for such forms of economic planning at the city-regional scale.

The geographical political economy of food and farming is "a hatch which when opened up, allows us to see and manage an even larger element of social reproduction: the human relationship with the non-human world" (Ajl, 2021: 127; see also Patel, 2025). Agriculture is not only highly exposed to the threats of climate change; industrialization and the rise of 'Fossil Food' has made agriculture a major contributor to the climate crisis, exacerbating soil depletion, biodiversity loss, and greenhouse gas emissions (Arboleda et al., 2024). The alienation of people from the 'conditions of life' – not least food production – is also central to the reproduction of capitalism, subordinating life-making practices to forms of carbon- and market-dependency (Nishat-Botero and Thompson, 2025). By attending to food and farming, we may begin to deconstruct these damaging dependencies.

A metropolitan planning organization like PEMB is of special interest to such questions, given its attempts to incorporate aspects of food sustainability and metabolic urbanization into its renewed understanding of economy, society, and space. This article looks at PEMB's new strategic plan (Compromís Metropolità 2030; Metropolitan Commitment 2030), also referred to as Barcelona Demà (Barcelona Tomorrow), primarily through its relationship with Terra Pagesa (Peasant Land), a local agri-food distribution and exchange centre that is managed by the Catalan farmers union (Unió de Pagesos). Terra Pagesa, which was 'incubated' within PEMB, has been identified as an important actor for meeting the sustainability objectives of the metropolitan region's food economy and culture – a model for how PEMB would like to see a distributed and layered architecture of planning to emerge. Alongside this counter-logistical planning of food, the food mission seeks to institutionalize public procurement of local/regional produce while protecting agricultural land in the metropolitan region (see Figure 2). As we explore below, these are developments largely shaped by the incipient *metabolic municipalism* (*contra* hegemonic modes of metabolic urbanization) of the Barcelona metropolitan region's agricultural and food politics, as represented *inter alia* by Barcelona en Comú (Bcomú).

The analysis is based on the lead author's fieldwork in Barcelona, periodically pursued from mid-2022 to early-2024 as part of doctoral research. This involved analysis of secondary empirical materials such as plan-related documents; 36 semi-structured interviews with 28 participants (8 participants interviewed twice, mostly over a year apart), including PEMB's technical team and leadership, public administrators working on agriculture, food, and the social solidarity economy, and managers of Terra Pagesa; and observations from attending key events, visiting Terra Pagesa's distribution centre and visiting two associated agroecological farms located in the Agricultural Park of Baix Llobregat. Interviews were recorded and listened to several times, adopting a

hermeneutic approach that aimed to engage with the experiences and perspectives expressed by interviewees and in secondary material. The process of collecting, analysing, organising, and presenting the empirical material resembled what we might call *research-as-craft*, acknowledging the 'indeterminacies' inherent to the research process, and remaining reflexive about the ethico-political dimensions of producing knowledge about any given historical-empirical situation (Bell and Willmott, 2020). The resulting paper thus aims to reflect on praxis and to illuminate lessons learned and challenges ahead in planning within, against, and beyond capitalist metabolic regimes.

The article begins with a review of the contemporary literature on economic planning, followed by a brief history of PEMB that situates its revaluation of planning in the context of Bcomú's radical municipalist experiment in government. We then focus on PEMB's renewed approach to planning through the lens of social metabolism (Böhm et al., 2012: 1624-1629) and metabolic urbanization (Brenner and Katsikis, 2020; Gosh and Meer, 2020). This outline provides the relevant background to then examine PEMB, illuminating the concrete principles and elements of a democratic *ecological* planning (Durand and Keucheyan, 2024; Nishat-Botero, 2024), and how we might democratically plan against metabolic domination (Mau, 2023). The article thus seeks to contribute to our understanding not of conventional planning challenges for state enterprises or capitalist firms at the (inter-)national scale, but rather of the role and preconditions of ecological planning *with* and *for* the social solidarity economy at the *urban-regional* scale.

Economic planning and the right to metabolism

If the dominant strands of the new economic planning literature are focused on advances in the calculational and coordinative powers of algorithmic and computational technologies, drawing on developments in the digital and platform economy (Dyer-Witheford, 2013), alongside questions of strategic management of capitalist firms (Adler, 2022) – that is, focused on economic questions of organization – then another, emergent strand is beginning to reimagine planning from the standpoint of the planetary *oikos*, including humanity's household of social reproduction and the planetary household of the natural world (Nishat-Botero, 2024). This distinction is reflected in ongoing debates between eco-modernism and degrowth (see Saito, 2024), with the latter current especially strong amongst Barcelona's scholar-activist milieu. Importantly, this ecological turn in economic planning theory broaches the question of space – seeing capitalism as an entangled 'web of life' irreducible to an 'economic system' (see Moore, 2015), as an open 'totality' spatialised through neo-colonial 'planetary urbanization' (see Goonewardena, 2018). It begins with the premise that postcapitalist futures must reckon with the *longue-durée* reconfigurations of town, countryside, and wilderness (Bernes, 2018; Clegg and Lucas, 2020), and the metabolism of the spaces through which such futures might emerge (Beverungen, 2024: 76-78; Nishat-Botero and Thompson, 2025).

This spatial and totalising view onto capitalism as an open differentiated unity has been central to critical feminist and ecological Marxian thought. Nancy Fraser and Jason W Moore, for instance, each see capitalism as a socio-ecological totality dependent on disavowed and externalized non-capitalist others, notably including social reproduction, racial stratification and ecology – what Fraser (2022) calls its 'background conditions of possibility, or what Moore (2015) specifies differently as the 'cheap natures' of unpaid work/energy: labour-power, food, energy, and raw materials. We might suggest that all

forms of economic planning are, likewise, always already forms of ecological planning (Nishat-Botero, 2024).

Developing this eco-geographical approach to questions of economic planning, this article argues that the urban-agrarian dimensions of the capital-nature relation are central to the deepening or potential healing of planetary metabolic rifts (see Schneider and McMichael, 2010). Introduced most notably by agricultural chemist Justus Liebig in the mid-nineteenth century, metabolism (*stoffwechsel)* refers to the biophysical interchanges between humanity and nature that underpin any given mode of life. The concept of metabolic rift – elaborated by ecological Marxism and urban political ecology (see Heynen et al., 2005) – offers a framework to understand the *socially mediated* and *historically specific* ways that capitalism disrupts biophysical cycles, namely the nitrogen and carbon cycles, while robbing "whole regions of their natural conditions of (re)production" (Böhm et al., 2012).

Capitalism's metabolic *rift* acts both temporally and spatially, introducing forms of *separation* and *distancing* – between spaces of production, consumption, and waste – that deepen humanity's existential and epistemic alienation from nature (Schneider and McMichael, 2010). This eco-political process of severance constitutes, in Marx's (2024: 651) words, "the prehistory of both capital and the mode of production that goes with capital." Social metabolism under capitalism is inherently spatial, circulatory, and infrastructural (ie. exosomatic); the availability of food, for instance, is conditioned by the metabolic circuitry of roads, railways, pipelines, ports, digital platforms, markets, and more, "that link often distant places and ecosystems together" (Heynen et al., 2005: 11). The power relations that animate such metabolic spatial practices, including forms of logistical power and knowledge, shape access to and control over the means of social metabolic re/production.

In this context, economic planning for *the right to the city* – a notion used by municipalists, and by PEMB in more pragmatic-reformist terms (PEMB, 2021) – is implicitly to plan for *the right to metabolism* (Heynen et al., 2005: 12). Such a right to metabolism invokes dis-alienated democratic control over our metabolic relations with the rest of nature; a right to 'the city' understood in the expansive relational-dialectical terms of planetary urbanization (see Goonewardena, 2018). Indeed, the right to metabolism "takes place across cities, but also beyond cities", and this entails a relational understanding that "encompasses the interconnections between urban and non-urban struggles" (Serrano, 2021). If we thus take urbanization as extending into the 'non-urban', as "bound together in a metabolic symbiosis", then the causes and consequences of the planetary metabolic rift cannot be understood as "'rural' or 'urban' issues separately" (Bowness and Wittman, 2021: 1147). This makes a radical municipalist politics of *proximity* (Roth et al., 2023) both problematic and especially salient.

Stretching a radical municipalist politics of proximity

Radical municipalism refers to the contemporary revival in social movement strategies for building dual power against capital and the state at the municipal scale. Its 'wager' is to harness the municipal scale as the 'strategic entry-point' for counter-hegemonic, democratic transformation, notably including ecological interventions in urban metabolism (Roth et al, 2023). A 'politics of proximity' is central to municipalist praxis, understood as "the politicisation and socialisation of proximate relations of encounter and assembly"; not, however, to be confused with a fetishization of the local scale, uncritically assuming that localities are inherently more democratic or sustainable (Roth et al., 2023:

2015). On the contrary, radical municipalism is best understood as "a politics *of* place *beyond* place" (Doreen Massey quoted by Russell, 2019: 992).

Even if managing to avoid the pitfalls of the 'local trap' (Russell, 2019), however, a municipalist politics of proximity can nonetheless be critiqued for its spatial and institutional centrality – for foregrounding the coming together of bodies in the centre of settlements or municipal decision-making in the form of the assembly; and for overlooking intermediated relations with peripheral hinterlands and the operational landscapes of extended urbanization, bar some notable exceptions on municipalist counter-logistics in places such as Rosario (Minuchin and Maino, 2023). In short, the critical dimension of urban metabolism is largely missing from municipalist theory and practice. Yet in Barcelona – a leading exemplar of radical municipalism (Roth et al., 2023; Charnock et al, 2021) – efforts to connect a politics of proximity with these more stretched-out metabolic relations are also evident, albeit understudied. This raises interesting questions about what a municipalist politics of proximity would entail across geographically and politically distended – but nonetheless economically and ecologically proximate – relations. How, exactly, might the right to the city be rearticulated as the right to metabolism? What form might economic planning take in municipalist approaches to metabolic politics? Such questions frame an emergent approach to ecological planning in metropolitan Barcelona (see Figure 1) which foregrounds the 'foundational' supports of the economy that conventional economics makes invisible and takes for granted.

Paralleling debates in critical social theory (Moore, 2015; Fraser, 2022), foundational thinking offers a promising way "to reframe the economy and bring into focus those large parts which are invisible or only semi-visible in official economic policy" (FE Collective, 2022). In contrast to the widespread "fetishization of high-tech and knowledge-based sectors" (Russell et al., 2022), the foundational economy shifts 'the field of the visible' to the "mundane production of everyday necessities", to the goods and services that are necessary for the re/production of everyday life, notably including food, water, housing, transport, education and care (Calafati et al, 2023). Recent work in this register has begun to spatialise foundational thinking as potentially generative of a 'spatial contract' instituted around shared 'collective reliance systems' that support human agency (Schafran et al., 2020). Such a *spatial contract* presents great promise for municipalist coalition-building across socio-spatial differences. In what follows, we analyse attempts in Barcelona to make foundational provisioning a central concern of an incipient metabolic municipalism. After introducing the case, we explore Barcelona's mission-oriented approach to planning for food sovereignty, then interrogate the (limited) planning powers available for implementation.

Planting the seeds for a new generation of planning in Barcelona

With the electoral victories of the municipalist confluence Bcomú, Ada Colau became the first female mayor of Barcelona in 2015, leading the Barcelona City Council until 2023, with a broadly democratic socialist and eco-feminist political agenda. Bcomú's vision of social transformation pointed "toward the possibility of creating a new political subject" (Ehmsen and Scharenberg in Rubio-Pueyo, 2017: 5-6), against and beyond the city's prevailing neoliberal growth-model prior to 2015. Bcomú's agenda – supporting cooperatives and social enterprises, municipalizing public services and utilities, promoting political and social rights, and increasing citizen participation in decision-making –aligned

with PEMB's rethinking of planning as focused on maintaining and improving "the city's ability to meet everyone's vital needs, at all times and across the whole metropolis" (Estela, 2019: 37). This is no coincidence. Colau's electoral victory with Bcomú, which also placed her as the president of PEMB, led to the appointment of, notably, Bcomú's Janet Sanz as PEMB's executive president and Oriol Estela as its new general coordinator – two key policy proponents of a more socialised and foundational approach to planning social provisioning.

PEMB was founded in 1988 as a municipal office to promote deliberative planning between the main actors of the city, in response to the institutional vacuum left by the dissolution of the Metropolitan Corporation of Barcelona (CMB; Corporación Metropolitana de Barcelona) by the Catalan national government in 1987 (Colomé and Tomás, 2022). In 1994, it was institutionally formalized as a non-profit association by Barcelona City Council (Estela, 2018: 142). For Estela, PEMB's evolution can be understood in terms of three generations of planning (Estela, 2018: 142). The first two generations were broadly aligned with neoliberal planning paradigms of the 1990s and 2000s, associated with the entrepreneurial urbanism and Olympics-led regeneration of the Barcelona model, before coming under increasing scrutiny from the late 2000s (Rubio-Pueyo, 2017: 16). "The central objective of the first plans", Estela (2019) writes, "was to promote the internationalisation of the city, update infrastructure, attract investment and make companies more competitive. The knowledge economy, innovation and attracting talent have been the essential objectives of the second stage." This second stage boosted Barcelona as a pioneering tech-heavy 'smart city' (see Charnock et al, 2021). Yet the feasibility of such paradigms was thrown into doubt with the urban-capitalist crises of the 21st century (Estela, 2018: 142). These crises eventually led to the mass mobilizations and protests of the 15M movement (Estela, 2018: 142), out of which the municipalist confluences and Bcomú emerged (Rubio-Pueyo, 2017: 2) recasting Barcelona as a 'rebel city' (Charnock et al, 2021). One of the former executive presidents of PEMB reflected on the shift in thinking required:

> We had fallen off the horse, and we had realized that the promise of the Fukuyamas, the Thatchers, etc., had failed and a new politics had to be made: in housing, in the neighbourhoods, in reducing cars, in social policy, in strengthening the role of municipalities, etc. (interview, 2023).

For the former executive president, as for many interviewees, Bcomú opened a path for this new politics, expressed in PEMB's shift towards a new generation of planning. At the heart of these shifts is the question of climate breakdown – a feature of Bcomú's radical-transformative vision (see Saito, 2024: 215-219) and now echoed by PEMB in more pragmatic-reformist terms that nevertheless recognize issues of social metabolic control (PEMB, 2021, 2023). This third generation has reoriented planning towards notions of the right to the city, the reintegration of sovereignties, mission-oriented methodologies, foundational economic thinking, and distributed leadership (Estela, 2018: 144), aiming to reduce "inequality and spatial segregation in the metropolitan territory, in the context of the climate emergency and the post-pandemic world" (PEMB, 2020: 6). In the following sections, we explore this new generation of planning in Barcelona through the lens of the social metabolism of agriculture and food.

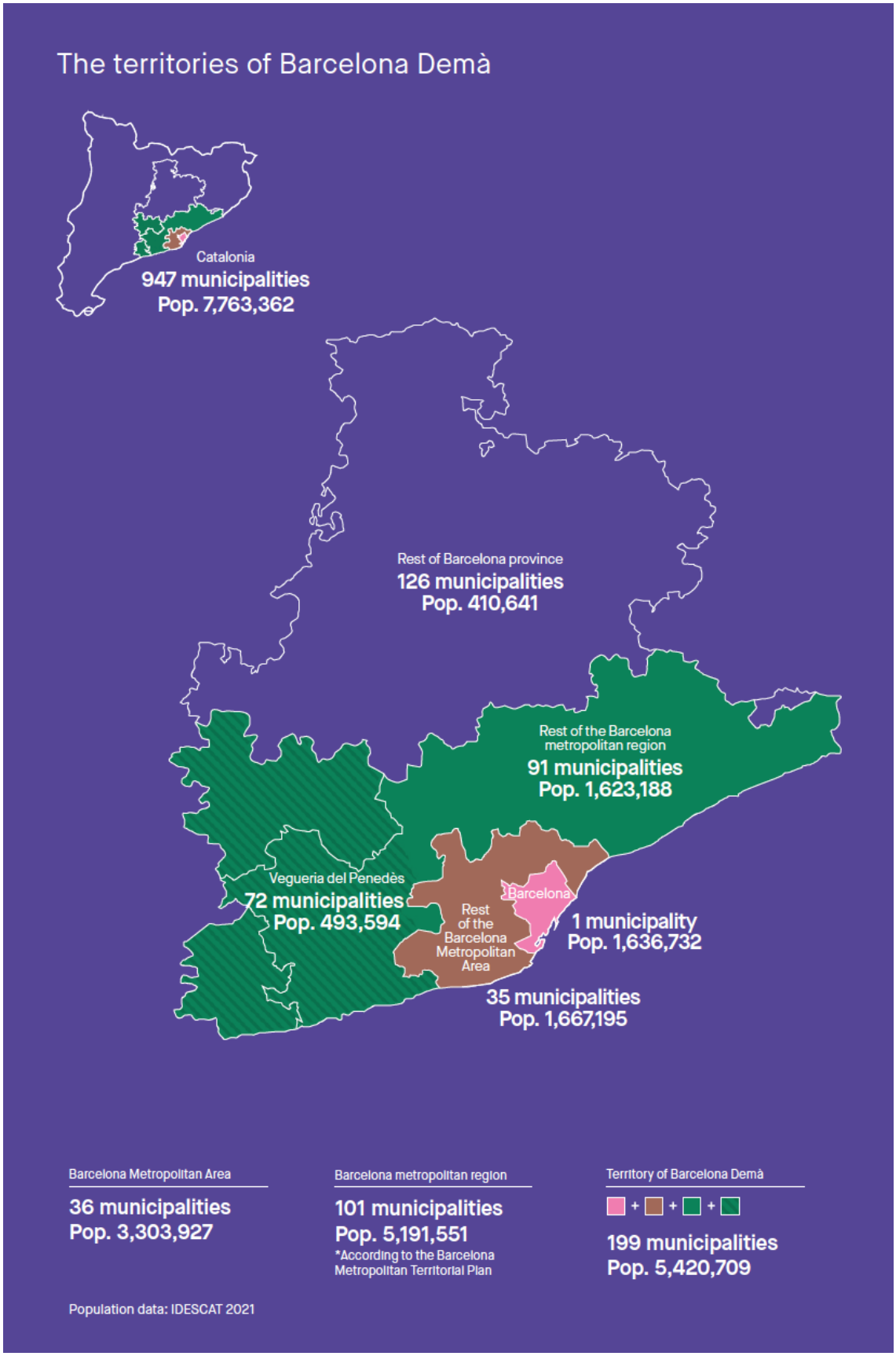

Figure 1: The territories of Barcelona Demà (Barcelona Tomorrow) extending beyond the city of Barcelona into the broader metropolitan (bio-)region (PEMB, 2023: 14)

Mission to feed the metropolis

One of the distinctive aspects of the new strategic plan is its adoption and adaptation of the mission-oriented methodology popularized by heterodox economist Mariana Mazzucato (2021). Ryan Bellinson (2023), honorary senior research fellow at the UCL institute founded by Mazzucato, described PEMB as a pioneer, "among the first globally to deliver the mission-oriented innovation approach on the ground". At the centre of a mission-oriented approach are deliberate *ex ante* forms of organizing – that is, decisions associated with conscious planning, as opposed to *ex post* forms of market mediation – for 'grand challenges' such as the climate crisis, that would, if addressed through specific missions and projects that bring together all stakeholders, have a major impact on the improvement of people's lives and livelihoods.

Each of PEMB's eight missions – Innovative and Inclusive Economy; Sufficient Income Levels; Territorial Cohesion; Adequate Housing; Sustainable and Safe Mobility; Cultural Vitality; Healthy Food; Environmental and Climate Emergency – defines specific strategic objectives that "are largely interrelated and require the capacity to act on the scale of the metropolitan region for their achievement" (PEMB, 2023). The strategic plan's mission for food is to "ensure access to healthier and more sustainable food for everyone everywhere"; that "by 2030, 60% of the diet of the population of the Barcelona metropolitan region will be based on local food." And it identifies the following 'levers' for achieving the food mission (PEMB, 2022: 7-8). First, 'sustainable production' takes proximity as important for reducing the environmental impact of transport, improving the management of resources (e.g. water and soil), developing more sustainable production techniques and local/regional produce. Second, 'distribution and marketing' involves creating channels for produce to reach markets beyond their immediate environment, while reducing the separation between producers and consumers. Third, 'responsible consumption' targets the consumption practices not primarily of individuals but, crucially, of 'collectives' such as schools and hospitals. Fourth, the notion of healthy food sees human and planetary health as interrelated, based on a *more* plant-based food economy and culture. Finally, equity in the food chain makes moves towards guaranteeing the right to food, and organizing agrarian counter-powers that make the labour of food production and provisioning a dignified and economically viable occupation.

Each mission is assigned a 'governance/reference space' (more on which below), which aims to monitor, coordinate, and support the various organizations that are aligned with the strategic plan. Accordingly, OCAS (Oficina Conjunta de l'Alimentació Sostenible) was selected as the food mission's governance/reference space, following the framework of the Food Charter of the Barcelona Metropolitan Region, given its capacities and relationships with the region's agricultural and food sector (PEMB, 2022). OCAS is a 'supramunicipal' office constituted by the government of Catalonia (Generalitat de Catalunya), the Barcelona City Council, and PEMB – and 'incubated' within PEMB, tasked initially with developing the Food Charter. The Food Charter has provided the food mission with a narrative framework, for "the transition to a model of greater *food sovereignty*, to strengthen the resilience of a fairer, safer, more sustainable and healthier food system, shaped by social, ecological and local criteria" (PEMB, 2020; *emphasis added*). The notion of sovereignty here refers to the articulation of practices to defend, recover, and transform social relations subordinated to market, corporate, and elite capture (see Egia-Olaizola et al, 2025: 1452). According to La Vía Campesina – the international organization representing peasant and eco-agrarian movements, recognized for coining the term 'food

sovereignty' – the food sovereignty paradigm "promotes transparent trade", "ensures that the rights to use and manage lands, territories, waters, seeds, livestock and biodiversity are in the hands of those of us who produce food", and "implies new social relations free of oppression and inequality between men and women, peoples, racial groups, social and economic classes and generations" (La Vía Campesina, 2025).

How might ecological planning help realize such a vision at the urban-regional scale? The new strategic plan identifies eighteen 'vectors' indicating how the Food Charter's mission for food sovereignty might be achieved, with thirteen concrete corresponding proposals (PEMB, 2022: 8-9). Three of these proposals have been prioritized by OCAS: first, protecting agricultural zones in the metropolitan region from urbanization, with a focus on sustainability and the economic viability of family farms and cooperatives; second, using public procurement for the gradual introduction of regional organic produce (a policy approach also recommended by foundational economy thinking); and, third, developing local agri-food exchange centres – together planning for *greater* food sovereignty, if not food sovereignty as such. This strategic plan presents several intersecting challenges. As a founding member of OCAS said:

> We have understood sustainable food as an issue […] that includes both the health of people and the climate emergency, the health of the planet. And, we have really worked on the link […] because, well, one third of greenhouse gas emissions are caused by the food system and how it works. So, if you want to develop policies that combat the climate emergency, you cannot forget about food. And, then, the third aspect is that we have seen food as a key aspect of the health of the 'territory'. We have said that the health of the people, the planet, and the territory, in terms of the economic system that you can promote through food sovereignty (interview, 2022)

The notion of food sovereignty has also shaped the new strategic plan's emphasis on proximity "as a key element in strengthening all other transformations in the food system to make it more sustainable, healthier and fairer… " (PEMB, 2023). Such a reintegration of sovereignties into proximate operational landscapes would seek to resist urban extractivism to ensure that wealth becomes more closely tied to the workers, communities, and ecologies that produce it. Reflecting on this, after the logistical disruptions of the pandemic, against the backdrop of accelerating climate catastrophe, PEMB's executive president Janet Sanz said:

> We have seen this in the pandemic too, no? That proximity is a key element. It cannot be that 80% of what we consume comes from other distant countries, making us so vulnerable to difficulties (interview, 2024).

Issues of *separation* and *proximity* – understood in metabolic and political relational terms, not as physical nearness – are seen by PEMB as central to the reintegration of *sovereignties* and to the healing of urban-rural metabolic rifts (PEMB, 2020; also see Wittman, 2009: 808). And nothing is more foundational to spatial practices of social metabolism than food.

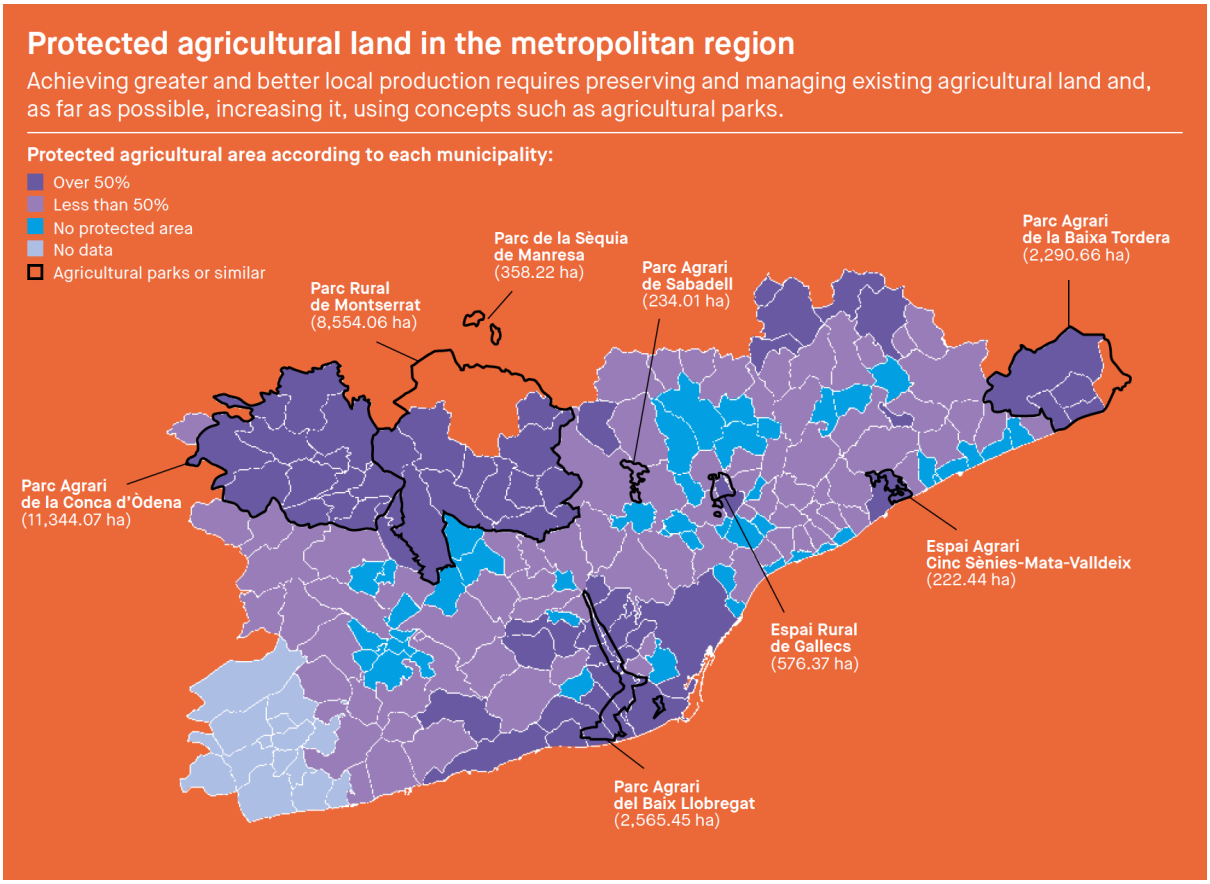

Figure 2: Protected agricultural land in the metropolitan region (PEMB, 2023: 67)

The foundations of social metabolism

Food plays a central role in recent work on the foundational economy (Russell et al, 2022) – a discourse that has influenced PEMB's strategic thinking. PEMB's new strategic plan is deeply influenced by this understanding of the economy as constituted by socio-ecologically embedded and institutionally differentiated modes of provisioning (see Estela, 2019). This makes PEMB's interpretation of missions-oriented organizing novel, given the overwhelming focus in mission-oriented methodologies on innovation in high-tech and knowledge-based sectors. Indeed, as Estela sees it, the metabolism of the metropolis and its hinterlands must be seen as integral to a *foundational strategy* for planning, which implies

> that the metabolism of the city and its functions are given primacy; that they become the priority in policies; that this has to be secured before anything else, to guarantee people's quality of life (interview, 2023).

This indicates that PEMB's heterodox reframing of planning contains important elements of *ecological* planning (Durand and Keucheyan, 2024; Nishat-Botero, 2024). Echoing PEMB's Executive Presidents (see above), Estela suggests that in existing understandings of the economy not only is the metabolism of the urban overlooked but

> control of the metabolism of the city is lost and the functions of the city [are subordinated] to […] the attraction of global capital flows, thus creating these tensions [between the metabolism of the metropolitan region and global capital] (interview, 2023).

When asked about this loss of social metabolic control, Estela replied that, "when we talked about the new strategic planning, about the third generation of plans, we were saying that the focus was broadly on recovering sovereignty" (interview, 2023) – that is, regaining sovereignties in food, energy, housing, and the other foundational goods and services. The co-constitutive relationship between urban centres and their hinterlands is central to theories of metabolic rift, and the associated loss of metabolic control. The food mission is deeply implicated in these urbanization dynamics; the new strategic plan's related emphasis on the need for a new urban-rural deal (PEMB, 2023: 89) is articulated by a PEMB technical team member:

> Cities have always been valued as spaces that generate wealth, cities that generate GDP, that generate productivity […] but rural areas generate other types of activities, other types of resources, that are not valued in the same way and on the same scale. So, I think it is an opportunity to value, in a different way, economically and environmentally, the contributions that the rural also makes – and […] in the related missions (interview, 2023).

This brings into view the metabolic dimensions of the metropolis and its hinterlands as embedded, as Estela suggested (interview, 2023), in a bioregion that cannot be governed by the logics of capital. The new strategic plan, as a representation of space, imagines a new urban-rural deal as aiming to establish fair and balanced socio-economic conditions for "issues such as energy transition, water management, food sovereignty and the distribution of economic activity and talent" (PEMB, 2023: 89). As stated in the Food Charter, it is indeed "not only a question of guaranteeing supply to the metropolis, but of balancing the relationship between the urban world and its surroundings" (PEMB, 2020: 2). While this recognition of metabolism is evident in the new strategic plan, it has not, however, incorporated the biophysical indicators needed to effectively account for metabolic value, nor questions of ecological limits (Durand et al., 2024). This is fundamental to organizing for food sovereignty, against and beyond the economic and ontological devaluation of the agricultural work of both human and extra-human natures (Moore, 2015).

What, then, should we make of the new strategic plan's redefinition of economic development and its new approach to food and other foundational sovereignties? Schneider and McMichael (2010) write that "just as the spatial consequences of the metabolic rift erase sensuous knowledge of ecological relations and processes, so its social and ideological consequences obscure recognition of the ecological dimensions of economic/material relations and processes." This insight is reflected in Estela's rendering of PEMB's strategy:

> The key is to reconnect the city with its rural surroundings […] to reconnect it mentally, because as physically reconnected, let's say, or metabolically [connected] that it is […] we have done a sort of 'mental decoupling' of this [relationship], and, we don't understand that all that gives us life, the most basic aspect of life, which is nourishing ourselves, calming our thirst, feeding ourselves, etc. requires these surroundings (interview, 2023).

If this 'mental decoupling' is the result of the severance wrought by the metabolic rift, then might a municipalist politics of proximity help reconnect the city to its rural surroundings – mentally and materially? In interviews with different actors involved in the food mission, each interviewee suggested that, indeed, the need for local and regional

food policies, emphasizing proximity, emerged as a response to the excesses of an increasingly marketized and globalized food model, as well as the shocks of COVID-19 and climate change. For instance, the head of the Barcelona Provincial Council's regional agricultural department, responsible for protecting and developing agricultural zones in the metropolitan region (see Figure 2), argued that:

> Conceptually, I think we understand sustainability with proximity [as] indissociable: Ultimately, one thing leads to the other. You have sovereignty, when you can decide how to feed yourself, and you have the option of doing so. Because if you can give your opinion on this, but you don't have the option of doing so, you are not sovereign. Therefore, we understand that proximity is [...] one of the guarantees for the food sovereignty of towns and cities (interview, 2023).

Here, we might read proximity as physical nearness, a problematic fetishised conception that overlooks more relational notions of translocal connectedness that underpin the kind of 'politics of place beyond place' articulated by Massey and municipalists (see Russell, 2019: 992). However, interviewees emphasised more than simply physical closeness, pointing towards the democratic decision-making and collective control dimensions of proximity – that is, to political and metabolic proximate relations to the means of subsistence, to overcome the alienations and metabolic rifts of the planetary agro-industrial complex. Moreover, interviewees recognised proximity as just *one* among many 'guarantees' for food sovereignty. Whilst interviewees did not express concerns over the limits of focusing on proximity, most linked proximity to the capacity to decide how to feed oneself and local farmers' capabilities to sustain livelihoods.

A founding member of OCAS described their pragmatic approach to food sovereignty as working imperfectly "towards a cooperative and social solidarity economy", rather than as pursuing the "pure idea" of food sovereignty, which by definition "cannot be fully implemented" within capitalism (interview, 2023). Reflecting widespread agreement amongst interviewees for such progressive incrementalism from below, the Food Charter advocates for "a greater diversity and plurality of actors in the food system" (PEMB, 2020). Such appeals dovetail with the foundational economy's Braudelian "zonal understanding of co-existing economies", running counter to "the idea of a unitary economy where all activity is or should be subject to one logic and set of principles" (Calafati et al., 2023). This is conditioned by the realities of uneven and combined development, requiring that any planning remain sensitive to the "complex amalgam in which modern and premodern, state and extra-state, liberal and socialist elements mix in a turbulent becoming" (Arboleda, 2021: 126, *our translation*).

The new strategic plan's heterodox revaluation of the economy – expressed especially in its food mission – has widened the range of actors relevant to social provisioning beyond capital and the state. A common view amongst interviewees is that large private corporations have not only failed to address current crises but are an obstacle to recovering and expanding metabolic sovereignties. The new strategic plan thereby places alternatives like Terra Pagesa at the centre of efforts to repair metabolic rifts. Such alternatives – if indeed constituting an incipient metabolic municipalism – would work on "*intensifying* [...] proximity to other people, places, and ecologies, and on a *becoming-social* of these proximities" (Roth et al., 2023: 2015). What, then, are the practical operational ways in which economic planning might mobilize the *becoming-social* of proximate relations and processes that include non-local *others*? How might, as the

member of OCAS proposed, planning within the constraints of capitalism work from the standpoint of non-capitalist organizations and economies?

Distributed planning, or planning without power?

The question remains what practical powers exist for implementation of PEMB's food mission. PEMB's resources and capacities – reflecting mission-oriented approaches in general – are significantly limited to those of 'elaborative' as opposed to 'executive' planning bodies. In Durand et al.'s (2024: 5-7) proposed architecture for planning, elaborative planning bodies would aim to integrate, aggregate, and represent pluralistic inputs about democratically determined social priorities and ecological limits primarily through deliberative institutions. City councils, enterprises, and popular organizations from associational civil society would work with the executive planning body to set *in-kind* objectives. Executive planning bodies would then be responsible for the governance and implementation of such objectives, with their efficacy ultimately hinging "on their effective control over respective resources and instruments" (Durand et al., 2024: 7).

PEMB's capacities are limited primarily to such elaborative functions, given the non-binding nature of its strategic planning process, its limited financial and material resources, and its institutional status as a non-governmental association mainly associated with the Barcelona City Council. As Álvaro Porro, the former commissioner for social economy, local development and food policy, said:

> PEMB has had a heterodox and somewhat forward-thinking view [but] by not having executive capacities, its impact is much more limited, and then [...] being so closely linked to the Barcelona City Council, and not so much to other areas [of the Barcelona region], means that the influence it can have in other places depends on political sensibilities (interview, 2023).

Indeed, as Durand et al. (2024: 7) argue, executive planning bodies need to have the legal authority to coordinate and implement plans, requiring capacities that are primarily held with legitimacy by state and public authorities. Beyond PEMB's *elaborative* planning capacities, it is ultimately governmental bodies and agencies that have the *executive* capacities to govern and implement strategic plans (interview, 2023). Establishing and expanding the scope of such executive planning capacities is, however, limited in capitalist economies and neoliberalized polities. Public control over global capital flows, for instance, would be opposed by various fractions of capital. When dealing with *public* enterprises, the process of setting and governing binding objectives should, *in principle*, be relatively less antagonistic. This requires a change in approach that is preconditioned, as Sanz said, by rebuilding public administrative capacities (interview, 2024).

By comparison, planning bodies for the cooperative and social solidarity economy could take on an 'indicative' nature, aiming to facilitate self-management at more local scales of organizing with coordination at higher scales (Durand et al., 2024: 6). This implies identifying and developing the spaces for planning-from-below, or, to paraphrase Silvia Federici (Federici and Jones, 2020), a counter-planning from the kitchens, workshops and farms of the metropolis. The new strategic plan offers some insights on the prospects and challenges of developing such a popular planning from below. PEMB's adaptation of mission-oriented methodologies has provided a framework for such a distributed and layered planning. Despite its significant limitations, particularly with the private sector, the new strategic plan might, therefore, present one way of working in and against the

constraints of planning *without* power, enabling a conditional, distributed planning animated by "capacities and socialities situated in urban space" (Beverungen, 2024: 78).

Implementing each mission "requires the existence of spaces to bring together the actors most involved in each and that serve as a reference point for coordinating and driving specific actions" (PEMB, 2022, 2023). These reference/governance spaces are key layers aiming to connect elaborative and executive planning capacities. Confirming this, a member of PEMB's technical team said:

> The idea is to look for reference institutions, which, in one case, may be an institution that is created ad hoc. In other cases, institutions that already exist, that have […] structure, resources, to be able to do things [...] and we try to find common interests. (interview, 2023).

These spaces are supposed "to oversee the development of the missions and serve as a platform for establishing new partnerships, developing new instruments and coordinating new, region-wide cooperative processes to promote joint projects" (PEMB, 2023: 96). The actors they aim to bring together include "government bodies, the business sector, civil society and citizen organisations, academia and research and the media" (PEMB, 2023: 99). As Estela put it:

> We have eight reference spaces, one for each mission, that are alliances that we make with these institutions, networks, organizations that are already multi-actor, and that already work on food, housing, etc. So, from that space, what is going to be promoted is monitoring, and the identification of projects that already exist in the territory that contribute to advancing the mission. (interview, 2023).

OCAS was thus identified as the governance space for the food mission; tasked with raising the visibility of the new strategic plan, to act as a metropolitan lobby, and to facilitate collaboration and innovation (PEMB, 2023: 99). OCAS is therefore aiming to co-articulate existing and new projects aligned with the food mission, overseeing their development, creating spaces for knowledge exchange, and facilitating agreements across the relevant actors in the food sector. The most notable project is Terra Pagesa, a flagship initiative incubated by PEMB and for which OCAS provides material and institutional support.

Currently managed by Unió de Pagesos, the Catalan agricultural union, the aim is to eventually turn Terra Pagesa into a producer cooperative, owned and managed by the farmers themselves. Unió de Pagesos represents a diversity of small- to medium-scale farmers, including cooperatives and family-owned farms, but this representation does not include agricultural workers themselves, highlighting the tensions and contradictions that arise in anti-capitalist and anti-racist forms of counter-planning, and the danger of flattening and obscuring, if not reproducing, classed, gendered, and racialised hierarchies when excluding the standpoint of agricultural labour. Terra Pagesa focuses on local and regional agri-food exchange and distribution, aiming to reduce the number of intermediaries between farmers and consumers in the Barcelona metropolitan region. The international political economy of agriculture and food is critically understood by members of Terra Pagesa, and OCAS, as favouring large agri-business, which tends to work with a smaller variety of produce at larger volumes, and able to compete in capitalist markets now integrated by planetary supply chains.

Logistical power operates as a form of capitalist metabolic domination, reconfiguring, as Mau (2023: 287) puts it, "the material conditions of social reproduction

in a manner which tightens its grip on society as a whole." It extends capitalist domination beyond the workplace, seizing "local, regional, or national economies by their roots", to appropriate, fragment, and scatter the means of social metabolic re/production across the planet (Mau, 2023: 288). The existing political economy of food has thus made it difficult for small- and medium-sized, and especially organic and agroecological, farmers to make ends meet. By cutting out intermediaries, Terra Pagesa aims to enable direct trade with Barcelona's municipal markets, grocery stores, and institutional food suppliers (e.g. schools, hospitals); it aims to gain metabolic sovereignty by localizing and shortening supply chains, while promoting a sustainable economy that prioritizes farmers' livelihoods and the wellbeing of the citizens of the metropolitan region. This politics of planning for proximity is an important element in any municipalist counter-logistics for metabolic sovereignty.

Terra Pagesa's offer is most interesting to organic and agro-ecological farmers (interviews, 2023). This is important for questions of ecological sustainability because, "[w]hile the distance that food moves from farm to mouth is part of its climate impact", write Edelman et al. (2014: 915), "it is important to recognize that the nature of production typically has a much greater impact on emissions." This underlines the point about social and political, over physical and geographical, proximity in metabolic relations. From Terra Pagesa's standpoint, public procurement for institutional food suppliers is also "fundamental", providing more stable and larger volume orders that arguably reduce the uncertainties of planning food production for markets and help "dynamize" food proximity (interview, 2023). Passing a law for public procurement – a priority of the food mission – is, however, a lengthy process, involving long negotiations, beyond Barcelona, at the level of the Catalan government, and constrained by EU regulations on state aid. Nevertheless, Terra Pagesa has started moving in this direction, working with 28 schools and the Hospital of Barcelona (interview, 2024) – each with high social impact in foundational sectors.

Terra Pagesa parallels movements for a popular 'counter-logistics' in cities such as Rosario, Argentina, where municipalist activists are working with cooperative farmers and public food suppliers to reconfigure, localize and socialize food production and distribution – prefiguring "other ways of generating surplus and distributing benefits" (Minuchin and Maino, 2023: 2076). PEMB's and OCAS's shared role in incubating and developing Terra Pagesa can be seen as public-community planning for just such a counter-logistics – involving the public sector and a variety of popular organizations in developing non-capitalist forms of logistical counter-power. Such counter-logistical arrangements of proximity show us a pathway towards mending the metabolic rifts resulting from capitalist urbanization. Moreover, the kind of urban-agrarian citizenship that is its basis – a potential *spatial contract* founded on foundational provisioning systems (see Schafran et al, 2020) – works towards de-centring the state from planning, à la municipalism, while contributing "to the development of new assemblages of social power across the fabric of society" (Russell et al., 2023: 2136). This serves to reconfigure not only the circulation of value but also regional metabolism, currently subordinated to capitalism's rift-making planetary logistical power.

Significantly, Terra Pagesa has become the model for how PEMB would like to see such projects develop – that is, through collaboration with the social solidarity economy, with PEMB as mere enabler of other actors through distributed planning. As Estela commented:

> It is almost the only example that we have of a project, for now […] that has worked this way, that we would like to work this way. We took on a challenge that was about how to create a space to commercialize food proximity, for producers that we have in the metropolitan region. And a working process was put in place […] with different actors, one of which was very sceptical was the agricultural union. And, now, Terra Pagesa is being led by the agricultural union. That is the role we would like to play, for things like that to happen, to follow through (interview, 2023).

Such initial scepticism was not confined to Unió de Pagesos: it was also expressed in interviews with other organizations in the social solidarity economy. For instance, at the presentation of the 2030 strategic plan, in December 2022, two activists from SOS Baix Llobregat i l'Hospitalet were distributing flyers with the slogan "Enough cement, more life!" (*Prou ciment, més vida!*). Challenging the perceived exclusion of the civil society of Baix Llobregat and l'Hospitalet from *real* participation, they called for the promotion of food sovereignty through agricultural parks (see Figure 2), more equitable relations with agricultural workers, and degrowth-oriented development strategies. While broadly aligning with PEMB's food mission, these calls also included opposition to the proposed expansion of the Josep Tarradellas Barcelona–El Prat Airport, which, in addition to undermining emissions reduction targets, would harm natural and agricultural zones (Environmental Justice Atlas, 2022). While these interventions target Barcelona's public administrations, rather than PEMB *per se*, the airport is in fact one of PEMB's promoting institutions; the contentious issue of airport expansion has been omitted from documents like the new strategic plan – even though the expansion of the airport directly implicates agricultural lands of the metropolitan region.

With the implementation process still in its early stages, PEMB and OCAS will need to maintain and expand democratic and pluralistic procedures to ensure participation, while also shielding "against capture through actors with adverse particular interests" (Durand et al, 2024: 6). This would require embracing a democratic 'planning for conflict' that rethinks, to quote Mandarini and Toscano (2020: 27), "the politics *of* and *in* the economy in terms of the persistence rather than the obliteration of antagonism". PEMB's revaluation of planning needs to be situated within the faltering municipalist moment in Barcelona; the creation of OCAS seen as representative of Barcelona's incipient form of metabolic municipalism. In this context, any meaningfully democratic and counter-logistical form of planning requires, as Sanz suggested:

> that we need to get used to PEMB being a space for debate, not just for agreements, you know? Because […] this whole thing that "no-one should speak over anyone, no-one should raise their voice. We all agree, we all have the same objectives." Well, this is not real. So, you have to give all this a little bit of life and dynamism […] There has to be a more open space where the sectors that are demanding a change of direction in political strategies can participate (interview, 2024).

Discussion: towards metabolic municipalism at the urban-regional scale?

Barcelona's new strategic plan took some meaningful steps in the direction of an ecological planning guided by a foundational perspective grounded in everyday needs such as water supply, sustainable energy and food sovereignty (Estela, 2019: 37-38). These

are all fundamental aspects of social metabolism and, therefore, also key to the potential healing of urban/rural metabolic rifts. The plan's overarching focus also meant that each of the missions, including the food mission, were, at least discursively, framed through the lens of planetary ecology, climate emergency and inequalities.

An oversight of the new strategic plan, however, is the question of ecological limits. Although interviewees suggested the plan understands the economy as existing within planetary boundaries, this is not explicitly addressed in the missions, and only hinted at in the Food Charter, which opens with the phrase that "we live on a finite planet with limited resources" (PEMB, 2020). While there are references that highlight the need to work towards circular economies in the Food Charter and new strategic plan, circular economy approaches do not address the problem of ecological limits as such, but tend to greenwash rising rates of accumulation and material throughput through circular product recycling that provides corporate cover for limited environmental action (Savini, 2023). One alternative is what Savini (2023) terms 'degrowth circularity', which involves collective coordination and community-based organizing for rescaling metabolic footprints, bioregionalist notions of territory, and forms of valuation that prioritize use-value and metabolic value.

The first involves the kind of public-community organizing prefigured by experiments like Terra Pagesa, in their interaction with public institutions like OCAS and planning institutions like PEMB. Politicized conceptions of bioregionalism might also problematize planning paradigms that overlook "cultural and ecological qualities of place", to stress "the importance of 'living in place,' co-evolving the living ecosystem with the economy, and dismantling artificial dichotomies like nature/culture" (Savini, 2023). This was recognized by interviewees and gestured at by the food mission's emphasis on proximity, on protecting and expanding agricultural parks (see Figure 2), institutionalizing public procurement of local/regional food, and scaling the popular counter-logistics of Terra Pagesa. Such a planning for proximity must, however, be understood in relational-dialectical terms, where the city-regional dimensions of any given bioregion are situated within "the global metropolitan network" of planetary urbanization (Brenner and Katsikis, 2020: 30). This points to a metabolic praxis of planning that understands place-based struggles not as local and isolated phenomena but as integral elements of resistance in the planetary 'web of life' (Moore, 2015), which is, as Stefania Barca (2020: 38) puts it, "always a more-than-human affair, involving the interaction of human with non-human forces." This is implied in the new strategic plan's metropolitan scope, and more directly recognized in its appeals to a new urban-rural deal (PEMB, 2023). This is also pivotal for the food mission, which suggests that the right to the city – as the right to metabolism – is part of an urban-rural dialectic obscured by static and reified understandings of the city and its hinterlands. As Sanz has said, "the city needs to be ruralized and the country urbanized with balance and respect for ecosystems" (quoted in PEMB, 2024, *our translation*).

How might planning effect the *becoming-social* of such urban-agrarian metabolic infrastructures like food supply chains (Minuchin and Maino, 2023)? What kinds of planning might intensify proximity between people, places, and ecologies (Roth et al., 2023) across urban-rural spaces and distended metabolic relations? As demonstrated through the foundational lens of the food mission, a planning derived from a praxis of *metabolic municipalism* – that is, extending into the 'non-city' fabric of *extended urbanization* (Ghosh and Meer, 2020) – might contribute to just such a becoming-social of the metabolic circuitry of roads, railways, pipelines, supply chains, as well as the various spaces of

industrial, public, and communal deliberation and contestation (see Thompson and Nishat-Botero, 2025). In terms of the foundational economy, this would involve socialising material infrastructure as well as providential services – all the collective reliance systems that support settlements (Schafran et al., 2020) – including their relations with metabolic hinterlands.

Incorporating such a foundational strategy into planning institutions (Estela, 2019) in ways that recognize ecological embeddedness would, however, have to openly interrogate the relationships between the foundational and the *non*-foundational economy. Ecological planning for metabolic sovereignties would have to identify and manage the non-foundational "economic zones which have either to shrink (if they hardly serve human needs) or be converted (if they enable provision by means of harmful need satisfiers)" (Bärnthaler et al., 2021). This highly contentious issue of degrowth of some sectors is inevitably shaped by the libidinal and political economy of various class fractions of capital, including petty-bourgeois and popular consumption desires. The challenge is to institute a politics of planning that does not, as Sanz suggested, evade conflict and antagonism in the service of a neutralization of the political (Mandarini and Toscano, 2020). Indeed, an ecological planning against metabolic domination would not only aim to reintegrate sovereignties in foundational spatial practices; it would also recognize and *politicize* ecological limits to constructively mobilize dissensus and disruption against hegemonic accommodation. This requires sensitivity to the specificities of place *and* to those juxtaposed non-linear temporalities characteristic of uneven and combined development.

Pluralistic forms of valuation are necessary for planning what needs building and unbuilding, growing and degrowing (Durand et al., 2024). The use values and metabolic values of the entangled labours of re/production and nature (Fraser, 2022) are, indeed, irreducible to the abstractions of any other single unit of measure. Such valuations can contribute to the setting of broad in-kind targets, such as PEMB's food mission's aim to increase consumption of local/regional food to 60% by 2030, and also to the monitoring and coordinating of progress at different organizational scales (Durand et al., 2024). The new strategic plan is still short of developing such socio-ecological indicators, without which it is not possible to effectively plan the re-scaling of metabolism. A first step in this direction could involve integrating existing initiatives across Barcelona, such as a municipal mapping exercise drawing on doughnut economics (see Cattaneo et al., 2024). This can contribute to politicizing social metabolism and recognizing the metropolitan region as a bioregion of socio-metabolic values obscured by the abstract space of capital (Thompson and Nishat-Botero, 2025).

While the production, interpretation, and use of such ecological planning indicators requires various kinds of specialized expertise, the labour of producing such representations of space need not be organized in a technocratic mode. Rather, associational civil society can play an important role in shaping and giving life to socio-ecological accounting and valuation; distributed and qualitative knowledge can be organized through producer and civic associations (Benanav, 2022: 198-202). Such associations, embedded in communities and the commons, are indeed important elements in organizational landscapes of democratic planning. Writing in PEMB's blog, scholar-architect and municipalist activist Ana Méndez de Andés (2023) argues that such planning might support "the practices of solidarity, mutualism, and collective care that really sustain life." Interviewees from the social solidarity economy also suggested that

PEMB needs to move further in this direction, given it remains tied to a public-private partnership model based on capitalist logics, despite efforts to open planning to more community- and commons-based organizing.

This is no easy task. One of the challenges of instituting an associational counter-planning involves "the creation of common projects between institutions and movements that have historically viewed each other with a level of mutual distrust" (Brown and Milburn, 2024: 22). In urban areas, "these experiences are normally deployed in social centers, community gardens or time banks, through processes of self-organization that seem alien to institutional spheres of planning" (Méndez de Andés, 2023, *our translation*). One way to collaborate between such spheres of organizing is through public-community or public-common partnerships (PCP), a democratic alternative to public-private partnerships (Russell et al., 2023). PCPs involve public institutions giving "preference to forms of resourcing and de-risking which result in commonly owned assets which are governed directly by the citizens of a territory, and where the surpluses accrued are not extracted but keep circulating in the local economy" (Brown and Milburn, 2024: 28). Channelling investment and material resources though PCPs, therefore, involves expanding the productive capacities of the social solidarity economy (Sorg, 2025). PCPs might be seen as a policy instrument of 'dual power': "taking (and transforming) existing state power by 'occupying institutions'; and building alternative counter-powers 'in the shell of the old', centred on the commune" (Roth et al., 2023: 2013). PCPs can, therefore, be seen as a means for regaining collective control over social metabolism, for reintegrating metabolic (e.g. food) sovereignties in the foundational economy.

Terra Pagesa's relationship with PEMB and OCAS contains elements of such a public-common planning, re-connecting the urban to its 'non-urban' surroundings, to "reframe the 'local' as a politics of proximity, decentre and reimagine the role of municipal institutions and foreground a politics of the common" (Russell et al., 2023: 2133). Transferring ownership and management of Terra Pagesa, from the agricultural union to the farmers themselves, would be a promising move in the direction of democratizing agriculture and food provisioning. However, it falls short of a thoroughly anti-capitalist or post-capitalist form of planning. The union represents a diversity of small--to-medium-scale farmers, including cooperatives and family-owned farms. While some farms are more democratically run than others, the union's representation excludes agricultural workers, often racialised migrant labour. This raises critical questions about the dynamics of race, gender, and class that are fused together in planetary processes of metabolic urbanization, and therefore about the new urban-agrarian subjectivities that might be co-articulated within a municipalist praxis of building metabolic counter-power (Roth et al., 2023).

Conclusion

One of the fundamental elements of economic planning thought and practice, writes Martín Arboleda (2021: 16-17), is its orientation towards the future; futurities materialized concretely by economic planning's deployment, as a deliberate and *ex ante* organization of institutions and resources – the state in particular – to give form to alternatives from below. This article aimed to delve deeper into these aspects of planning, focusing on what we might learn from actually existing experiments to reimagine planning in our age of climatic upheaval. We argued that planning organizations like Barcelona's PEMB should be

of special interest to research on economic planning, given 1) PEMB's metabolic revaluation of planning, and 2) the mode of distributed planning (without power) experimented in collaboration with the (urban-agrarian) social solidarity economy.

This is most evident in the nascent metabolic municipalism that shaped the new strategic plan's food mission, focusing on *proximity* while working towards the *becoming-social* of the metropolitan region's metabolic enmeshments (Minuchin and Maino, 2022; Roth et al., 2023). One of the main takeaways is that the quality and success of planning is conditioned by the organizational landscapes within which planning takes place. This means that planning must be understood and reconfigured within the broader material, institutional, and discursive contexts in which it is embedded; the organizational landscape within which planning takes place must be democratized, socialized, and pluralized across geographies of accumulation. Critical inspiration for such planning alternatives can be found in examples of municipalist praxis, where we see an opening up of pathways for planning alternatives that must continue to work within and against capitalist social forms. We argued for expanding the horizons of such examples to include, crucially, those rural and peri-urban spaces that constitute the other side of the urban-rural dialectic. Ecological planning, if it unfolds within current conjunctural conditions, will likely be based on public-common collaboration, ecological forms of valuation, and a praxis of metabolic municipalism oriented by struggles for agroecological food sovereignty against planetary regimes of 'fossil food' (see Arboleda et al., 2024).

In the case of PEMB's food mission, this has included re-centring and co-articulating experiments in popular counter-logistics, initiatives for the protection and expansion of agricultural parks, and reforms towards the public procurement of local/regional food; it has entailed seeing sustainable food from the standpoint of the cooperative and social solidarity economy, and endorsing agro-ecological principles that promote "biodiversity and local food production, while considering social justice and ecological sustainability" (Serrano, 2021: 239). Despite the struggles that remain, Barcelona's food mission has thereby taken important steps in addressing capital's *separation* and *distancing* of people from the conditions of life (see Schneider and McMichael, 2010). To this end, a *metabolic* municipalist praxis of planning for proximity would aim to overcome the "divide between agricultural labour and the consumption habits of most people" (Serrano, 2021: 239-240), understanding the social forms of *extended urbanization* as drivers of metabolic rifts (Ghosh and Meer, 2020), and also, therefore, as central to their healing (Bowness and Wittman, 2021: 1147). If, in other words, postcapitalist planning requires both an agricultural revolution (Clegg and Lucas, 2020) and an urban revolution (Thompson and Nishat-Botero, 2025), the task remains to bring together the two sides of the urban-rural dialectic through urban-agrarian counter-planning, bioregional counter-logistics and metabolic municipalist praxis.

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