

From volunteering to civic ecological labour: An institutional design framework for civic ecological labour infrastructures

Abstract | Sustainability transitions are increasingly characterised by the need for public engagement in ecological care, such as urban greening, biodiversity observation, habitat restoration, and environmental maintenance. However, under most policy frameworks, such a task is either provided through diminishing public services or through voluntary work. The paper contends that the present overdependence on voluntary ecological work is a failure within the political economy of sustainability transitions. A new institutional form, "Civic Ecological Labour," is proposed, understood as paid, part-time, locally rooted ecological work that falls between employment, voluntary work, and the welfare system.

Based on the theories of ecological economics, institutional economics, and public value theory, this paper proposes a conceptual and methodological framework for what we call Civic Ecological Labour Infrastructures: the governance, legal, financial, and organisational systems necessary to integrate ecological care into the heart of local economies. We examine the ideological assumptions implicit in contemporary regimes of labour and environmental governance, demonstrate how they necessarily externalise ecological care, and outline the institutional design principles necessary to facilitate scalable, inclusive, and just ecological work.

This article makes a contribution to ecological economics in that it redefines labour, care, and stewardship as prime economic functions in the transition to sustainability rather than mere moral actions. This article introduces a new analytical term that describes the provision of public ecological goods and outlines some design options that can be applied on the municipal, community, or hybrid levels.

Keywords | Ecological labour; Sustainability transitions; Public goods; Institutional design; Volunteering; Political economy; Civic work; Care economy

Introduction | The role of sustainability transitions is increasingly dependent on active human engagement in socio-ecological systems. Tasks such as habitat restoration, biodiversity observation, urban forestry, watershed management, and maintenance of public green spaces are increasingly understood to be essential to ecological resilience and quality (Fahrig, 2003; Bennett *et al.*, 2006; Westerink *et al.*, 2017). In Europe and elsewhere, the institutional settings in which this work is conducted are highly fragmented. Ecological management is conducted in part through public institutions, part service delivery contracts for profit, and in significant part through volunteering organised through civil society institutions. Over the past thirty years, fiscal consolidation, public sector shrinkage, and the contracting out of environmental work have weakened the role of public institutions in the maintenance of ecological assets and public spaces (Franks, 2011; Prager, 2022). In parallel the discourse on policy has increasingly posited that citizen engagement, community participation, and volunteering can serve as substitutes rather than complements to public provision (Westerink *et al.*, 2017; Bodin, 2017). This has led to a situation where the core maintenance of ecological systems is systematically underfunded.

In the view of ecological economics, this is paradoxical. Ecological services, biodiversity, and ecological resilience are the basis of societal well-being, but the labour involved in maintaining such services must be viewed more as the essential function of the economy rather than the discretionary or residual one (Baumgärtner *et al.*, 2008). However, similar to the concept of care work in feminist economics, Ecological Citizenship is systematically undervalued, underpaid, or unpaid in full, often falling within the moral economy of citizenship rather than the productive one (Fraser, 2016; Bauhardt, 2014). The increasing use of volunteering in sustainability policies is more than just the manifestation of the goodwill of society. The working space acknowledges these subsidy services do not replace governments or municipalities responsibilities, due diligence or requirements. I.e., this is not a replacement of funding nor should be framed as such. Rather, it is also the structural imperative in the face of institutional and financial limitations. While volunteering has immense social and cultural value, it is not intended to serve as the delivery system for ecological transition, either in the long term or on a large scale (Riley *et al.*, 2018; Prager, 2022). Volunteering is highly dependent on income, education, health, and time, perpetuating the structural inequalities in the accessibility of the environment (Riley *et al.*, 2018; Prager, 2022). Furthermore, volunteer-based systems are not only less stable and continuous, but they also lack the accountability necessary for the maintenance of complex socio-ecological systems. In this regard, the current state of Ecological Citizenship reflects the patterns that are evident in the care economy, where the necessary maintenance work is systematically moved out of the realm of economic activity and taken up by households, communities, or voluntary sectors (Bauhardt, 2014; Fraser, 2016). The externalisation of such work has long been argued to result in structural unsustainability, as it undermines the foundations of economic systems (Daly, 1996; Baumgärtner *et al.*, 2008). The under-institutionalisation of ecological labour can thus be seen as a particular instance of this problem.

This paper contends the present over-reliance on unpaid ecological labour represents a systemic vulnerability in the political economy of sustainability transitions (Göpel, 2016). It introduces a new conceptual framework, of *Civic Ecological Labour*, defined as paid, part-time, and locally rooted labour that directly supports the preservation and restoration and monitoring of ecological systems and public environmental goods and which takes place outside the conventional framework of full-time employment. In this sense *Civic Ecological Labour* acts as a new type of traditional Saturday Jobs

for instance. The paper introduces the notion of *Civic Ecological Labour* Infrastructures that refer to the governance, financial, and organisational frameworks that would be necessary to enable this labour. The aim of the paper is not to promote a particular policy instrument or program but to conceptualise a design framework that enables the integration of Ecological Citizenship into local economies and public value creation systems. In this regard, the paper makes three contributions to the field of ecological economics. Firstly, it moves the debate on care, commons, and public goods by conceptualising ecological stewarding as a form of labour rather than a residual moral or civic activity. Secondly, it introduces a new institutional form that conceptually fills the analytical gap between employment, welfare, and volunteering. Thirdly, it provides a design framework for rethinking the operationalisation of sustainability transitions.

Ecological citizenship as an economic function | One of the key findings of ecological economics is that economies are embedded within, and rely on, biophysical and social cycles which are only imperfectly reflected within markets and economic accounting (Daly, 1996; Baumgärtner *et al.*, 2008). While there has been great interest in valuing ecosystem services and natural capital, comparatively little interest has been shown for the corresponding labour of monitoring and sustaining these services. However, it is clear that many of the ecological services on which societies are based are not automatically sustained under present land use patterns and practices of urbanisation and climate change. These services are instead dependent on constant human effort through monitoring, sustaining, repairing, and caring for them. This observation locates Ecological Citizenship firmly within what might be described as an 'economy of maintenance' or 'economy of care' (Bauhardt, 2014; Fraser, 2016). Such work will normally be characterised by its ongoing and repetitive nature, which may be specific to a certain context. It does not produce new goods or infrastructure but enables the continued possibility of social and economic life. Work in conventional economic thinking would be considered invisible or treated as a cost and not as a productive process in its own right. Examples of this work would be the upkeep of green spaces in urban areas, habitat restoration, managing invasive species, or monitoring levels of biodiversity. Exemplar work would be labour-intensive and would require local knowledge and would produce benefits that are largely non-exclusive and long-term in nature and would be poorly suited to conventional market provision mechanisms and project-based short-term financial arrangements.

Volunteering and the institutional externalisation of ecological labour | In many contemporary governance systems, the divide between typologies of ecological work that needs to be done and the type of resources that public institutions are prepared to dedicate to it is increasingly being bridged by the actions of the third sector and voluntary organisations (Westerink *et al.*, 2017; Bodin, 2017). Although it has in many ways facilitated the emergence of a whole host of innovative and place-specific initiatives, it indicates a more profound process of institutional externalisation.

Volunteering can enhance social capital, build local knowledge, and contribute to democratic engagement. However, as a principal solution to the provision of basic ecological work, it presents three structural weaknesses. First, it is socially selective, highly dependent on income, education, health, and the availability of free time (Riley *et al.*, 2018). Second, it is institutionally unstable, dependent on motivation, leadership, and finance that is in constant flux. Third, it may well provide a justification for further public disinvestment, thus locking in the very conditions that require the input of unpaid labor. In terms of political economy, this can be likened to the coined "the crisis of care" (Fraser, 2016), as it applies to social reproduction theory: Essential maintenance work is pushed out of the realm of recognised economic activity and undertaken instead by the household, community, and voluntary sectors, until these spheres reach capacity. The lack of services is then perceived as a problem of civic engagement rather than a problem of institutional design.

Civic Ecological Labour as an institutional category | In order to fill this systemic gap, this paper proposes the term '*Civic Ecological Labour*'. *Civic Ecological Labour* can be described as paid work which is socially valued and organised on a part-time or flexible scale and which is specifically focused on the maintenance and monitoring of ecological resources. This term is specifically hybrid. It neither belongs to public employment nor to market-provided services but falls within an 'in-between' space of public employment and volunteering. In the past, societies have utilised 'in-between' forms of employment for their necessary but irregular or locally unique tasks, perhaps previously called Saturday jobs for instance. This includes part-time employment within the public sector or community-based forms of employment. The decline of 'in-between' forms of employment towards a bipolar system of either employment or volunteering has reduced the 'repertoire' of available 'governance instruments' for Ecological Citizenship. The analytical aim in positing the concept of *Civic Ecological Labour* is not to identify one specific contract type, but rather to construct a conceptual field that brings into view what is, currently, a rather opaque area of economic practice. Here, the concept has a similar function to the concept of 'care work' in feminist economics, where the concept has been influential in expanding the definition of the economy to encompass very large areas of socially necessary but undervalued labour that had hitherto been treated as marginal rather than central (Bauhardt, 2014; Fraser, 2016).

Civic Ecological Labour Infrastructures | The idea of *Civic Ecological Labour* can only be properly understood as a subject of analysis if coupled with a reflection on the institutional frameworks which would make such a type of labour possible. One-off projects or temporary schemes, or even special funding allocations, are not sufficient to provide a foundation for embedding Ecological Citizenship in local economies. What would be required in this case would be a conceptualisation of what can be referred to as *Civic Ecological Labour* Infrastructures. We refer to a series of governance, legal, financial, and organisational frameworks which would make Ecological Citizenship labour visible, prioritise it, coordinate it, compensate it, and finally, evaluate it. Such a framework would have a similar purpose to a labour market infrastructure or a welfare infrastructure, but would refer to a type of labour which does not fall neatly into either camp.

Plus the framework would have a mediating function between ecological needs, public goals, and individual engagement, which would not only define the quantity of labour provided but would define its social meaning as well.

In an institutional economics framework, the fact that such infrastructure is not in place is one of the reasons why there is structurally inadequate provision of ecological labour. When an activity is situated in the middle of pre-existing institutional categories, this activity is normally characterised by informalised rules and procedures, and not formalised ones. This, in turn, is responsible for the creation of transaction costs, inadequate investment in skill and capacity, and moral motivation, instead of rights and duties (North, 1990; Franks, 2011). Thus, in the modern environmental management context, most of the work that should be performed through such infrastructures is instead distributed among the various city agencies, NGOs, voluntary coordinators, temporary funding schemes, and for-profit service providers. This is a problem in terms of being able to formulate consistent agendas, providing for institutional continuity, and providing inclusive access patterns for ecological work. It also conceals the political character of the underlying decision, framing the structuring of ecological labor as a matter of technique, philanthropy, rather than a fundamental question of public value creation. In terms of the implications for ecological economics, the institutional deficit is particularly troublesome, since it perpetuates the idea of ecological maintenance work being a residual activity. As long as the labour necessary for the maintenance of ecological systems and public environmental assets is not institutionalised, the work itself remains subject to the budget cycle, the shifting priorities of the political order, and the patterns of inequality within the larger society.

The *Civic Ecological Labour* Infrastructures may be understood as a means to address this structural gap by providing a specific institutional arena for carrying out work in Ecological Citizenship. This is not intended to supplant already existing forms of work in the public sector, in the private sector, or in volunteering, but rather to complement these through providing a stable institutional setting for types of work which are at present either outsourced or marginalised. The *Civic Ecological Labour* Infrastructures can be understood to represent a specific type of work within a more general transformation of political economy to what has been termed 'economies of care and maintenance' (Bauhardt, 2014; Fraser, 2016). This view holds that sustainability transitions are not primarily a question of strategic investments in 'green technology', but rather of transforming work in maintenance and adaptation of socio-ecological systems.

Institutional design models | Although the exact shape of *Civic Ecological Labour* Infrastructures will necessarily differ from one country to another, it is possible to distinguish a number of broad institutional arrangements which could serve as a basis for the implementation of such infrastructures. These arrangements should not be considered as mutually exclusive options, but rather as ideal-type models which can be combined or hybridised in practice.

The first and perhaps most obvious model is one that is centered on the municipal or local authority level. Municipalities already have a number of legal obligations related to various aspects of environmental governance, such as parks and green spaces, water management, and biodiversity conservation. They also have administrative capabilities and democratic legitimacy. The integration of *Civic Ecological Labour* Infrastructures into a municipal framework would thus capitalise on existing institutional strengths. In this way, local governments would be able to prioritise and undertake tasks of ecological maintenance, and fund and coordinate these efforts themselves. The positions for *Civic Ecological Labour* would not necessarily be full-time public employment, but organised as part-time, task-based, and/or rotation positions, reflecting the changing patterns of ecological work. By doing so, cities could increase their ecological governance capacity without being bound by fixed staffing patterns that are ill-suited for ecological work patterns that are highly variable and dynamic.

A second model focuses on community-based, cooperative, or third-sector organisations. Many environments already have local environmental groups, land trusts, and social enterprises playing a critical role in organising and facilitating governance activities (Bodin, 2017; Westerink *et al.*, 2017). These organisations are often more trusted and context-sensitive compared with more centralised public institutions but are generally operating under conditions of financial precarity and project-based funding. Within this approach, *Civic Ecological Labour* Infrastructures would be conceived as stable funding and enabling frameworks for these organisations to support salaried positions for governance activities on a long-term basis. A strategic and coordinating function for public institutions is maintained, but a decentralised organisation of work is adopted. This approach is highly compatible with literature on collaborative and polycentric governance of social-ecological systems, which local embedded institutions and horizontal coordination play a critical role (Ostrom, 2010; Bodin, 2017).

A third, more contemporary, configuration takes advantage of digital and platform coordination tools. A number of Ecological Citizenship work tasks, monitoring, reporting, or light maintenance work, to name a few, are geographically scattered and irregular in nature. Digital platforms can reduce transaction costs in matching individuals to tasks, monitoring their work, and facilitating their input in a broad geographic space. Nevertheless, in the absence of a public or communal governance framework, digital platforms may perpetuate the precarisation and commodification that can be seen in other realms of the digital platform economy. From the point of view of *Civic Ecological Labour*, digital infrastructure ought to be conceptualised as infrastructure in the public or commons tradition, and not as a market intermediary.

Through all these different models, there is one institutional logic that emerges. *Civic Ecological Labour* Infrastructures need to create conditions for the identification of priorities in ecology, for the allocation of responsibilities, for training and quality, and for funding. They require enough flexibility to adapt to the different conditions of each specific ecology and life

situation. These institutional arrangements are not only technical; there are normative elements regarding who should take responsibility for the practice of Ecological Citizenship, how it should be divided between the state, market, and civil society, and who should benefit from the sustainability transition.

Governance, legal and welfare constraints | The establishment of *Civic Ecological Labour* Infrastructures is confronted with various important governance and policy difficulties. These difficulties can account for why *Civic Ecological Labour* Infrastructures have been at the margins for such a long time in spite of the increasing acknowledgment of the role of Ecological Citizenship. A first important set of difficulties comes from labour law and employment policy. Many countries have a system of law centered on a dichotomy between standard employment and non-employment, along with their corresponding regimes of taxation and liability. *Civic Ecological Labour* is situated in a middle area which is difficult to categorise within this model. This may result in this type of work being obliged to adopt inappropriate forms of employment, thereby threatening their flexibility, or in their being quasi-voluntary.

A further set of constraints relates to welfare entitlements and benefit regimes. In certain countries, engagement in paid activities, even on a small or irregular scale, may result in the loss or diminution of welfare entitlements. This gives rise to what is sometimes described as the ‘benefits trap’, which will act to discourage exactly the sort of part-time and flexible engagement which *Civic Ecological Labour* might aim to encourage. Such problems have been extensively analysed within the context of welfare activation policies and social economy projects.

A third concern is associated with the substitution risks. There is an understandable concern that developing the concept of *Civic Ecological Labour* Infrastructures could lead to pressures to reduce standard employment positions even further, and that traditional and established professional labour could simply be replaced by cheaper alternatives of marginal quality and security. From the political economy viewpoint, these substitution risks should not automatically be discounted as an unforeseen consequence; rather, they need to be understood within the context of various trends associated with labour flexibilisation and the increasing drive for economies of scale within public sector service provision. As a consequence, any consequently developing proposal for *Civic Ecological Labour* Infrastructures needs to operate within an unequivocal normative basis that defines the purpose of these Infrastructures, not to provide an additional tier of labour to address environmental management, but to address an established gap between labour and unpaid volunteering.

Collectively, these tensions suggest that there is a more general structural issue at play. Specifically, that *Civic Ecological Labour* is caught within a series of institutional “in-between spaces” (Evers and Lavielle, 2004) between employment and volunteering, between income and welfare, between service provision and civic participation, and between technocratic management and democratic governance. It is these multi-dimensional tensions with existing policy and regulatory architectures that help to explain why this labour is both socially necessary and institutionally precarious, and why it has been marginalised within contemporary political-economic arrangements.

Finally, there are the issues of governance capacity and democratic accountability. Who determines the ecological tasks to prioritise, the allocation of resources for this work, and the assessment of effectiveness are always political choices. In order for *Civic Ecological Labour* Infrastructures to make any contribution to just and legitimate processes of sustainability transition, it must be recognised that they cannot simply be left to any kind of managerial or even technocratic processes. Such barriers should not be seen to question the advisability of this concept, but rather to highlight the depth of change called for by processes of sustainability transition. The challenge of fitting ecological labour into regimes of governance also underscores the depth to which the work of maintenance and care are marginalised by current political economies.

Our role | The role of designers and social entrepreneurs in this context cannot be conceptualised in traditional terms, such as providers of services, employers, or implementers of projects. The diagnosis that was developed in the above text suggests that the primary challenge is not so much a matter of providing additional programmes or facilitating new forms of employment, but rather of creating the institutional, organisational, and socio-technical foundation upon which the idea of *Civic Ecological Labour* might become thinkable, legitimate, and sustainable. In this sense, our role is perhaps best conceptualised in terms of infrastructuring, rather than in terms of operating, such as the position of employer or facilitator of ecological labour. Instead, we conceptualise our role in relation to the development of a foundation upon which others, such as public bodies, civil society organisations, and communities, might begin to adapt these forms within their own organisational contexts. This is a role that is oriented towards enabling others, rather than directly delivering services or programmes.

More specifically, this entails three interrelated activities. First, it entails conceptual work – making the field of activity, which is currently scattered between volunteering, short-term projects, and less recognised public employment, visible as a whole and giving it a name, a story, and political intelligibility. Second, it entails design work in a strict sense – developing and testing concrete formats of organization, roles, contracts, etc. that can function within, or strategically at the edges of, existing institutional frameworks. Third, it entails coalition-building and translation work – developing spaces in which policy, administration, civil society, and practice can come together to collectively think about how this might be assembled and governed.

This positioning also entails a refusal of a number of problematic positions. We do not see ourselves as substituting for the state, nor as developing a new labour market. We also do not see Civic Ecological Labour as something that can be rolled out via the entrepreneurial logic of replication. The entwining of this field with welfare systems, labour law, and local governance traditions makes it difficult to imagine a viable implementation that is not highly context-dependent.

In short, our contribution lies in providing the conditions of possibility in which such negotiations can take place in a more informed, imaginative, and structured manner. This entails making visible the institutional voids in which ecological labour is situated, revealing that these voids are not merely technical but, in fact, a matter of structure in contemporary political economies, and making visible that other forms of configuration are not only conceivable but also practicable.

Discussion | The argument suggested in this present paper begins with the obvious, although rather profound, point that sustainability transitions involve not merely the development of different technologies, policies, and consumption styles, but also involve changing how we conduct our day-to-day work that helps maintain, modify, and adapt socio-ecological systems. Ecological economics has, long highlighted the biophysical embeddedness of economic systems, as well as the need to account for care and maintenance activities (Daly, 1996; Baumgärtner *et al.*, 2008), although the ecological labour component of transitions governance has, to date, been rather under-theorised. Through the development of the notion of *Civic Ecological Labour* and that of *Civic Ecological Labour Infrastructures*, this paper hopes to bring into visibility an area of the economy that is currently spread out among public employment, small-scale projects, and forms of volunteering. Thus, it is not merely an administrative challenge; it is, instead, a key characteristic of the political economies that are now in place, where reproduction and maintenance are systematically exteriorised or rendered marginal (Bauhardt, 2014; Fraser, 2016). Thus, the issue of Ecological Citizenship parallels that of care work within social reproduction in its invisibility and its political weakness.

In view of ecological economics, what are the implications of the resulting diagnosis? Firstly, it flags that to solve the persistent problem of underinvestment in ecological constitution, it is not merely the evaluation and incentivisation that is problematic, but potentially also the manner in which such things are being institutionally classified. As long as Ecological Citizenship as such is not clearly situated in any of these conceptually mapped arenas of the economy, it will be subsequently exposed to budgetary retrenchment and moralisation. In addition, it flags the limits to policy strategies that focus primarily upon behavioural change, volunteering, or funding for specific projects. As such, it flags that such strategies, however beneficial for local innovation, cannot be relied upon to offer long-term foundations for large-scale ecological change. Furthermore, the concept of *Civic Ecological Labour* for sustainability policy potentially raises issues with the manner in which both work, productivity, and especially value are conceived. Notably, these are ecological practices that cannot easily be incorporated into any particular productivity matrix. Their value does not derive from providing marketable outputs, but rather, through preventing degradation, reducing potential risks, and sustaining possibility; to view this work as a valid and rewarded economic endeavor stretches to incorporating an understanding of this work that shifts our focus from notions of efficiency to an appreciation of public value in the form of socio-ecological resiliency (Mazzucato, 2018). Further, the proposal represented discusses some relevant political economic concerns, perhaps one of the clearest of these is that this type of work could perhaps lead to an acceleration of the casualisation of work within the public sector, where, given the long-standing pressures to reduce costs, these opportunities to conduct *civic ecological labour* could be leveraged to displace secure work at a level of professionalism to support these innovations, rather than serving to complement these roles that currently exist.

The next danger is associated with what might be called the "moralisation of participation" (Ilcan and Basok, 2004). Ecological Citizenship, defined fundamentally along lines of civic duty, despite its being partly compensated, risks further entrenching discursive formations that enforce differential contributions from different social groups in society. This danger is reminiscent of core problems associated with the purportedly gender-differentiated distribution of care and caring activities, as identified in feminist approaches in political economy (Fraser 2016; Bauhardt 2014). How such danger is avoided will partly depend on how issues of access, rights, and social protection are addressed in the development of *Civic Ecological Labour Infrastructures*.

As a conceptual and design-focused framework, the one developed within the present paper does not have the ambition to provide a policy blueprint. Nor does it start with the assumption that a single model could or should serve all environments. Instead, the ambition here has been to create a space for a new discussion on the organisation of ecological labour that would not be marginal but central to the emerging discussion on the transition and sustainability. Among the areas that should be explored in the course of further research are the following: the need for exploring the field through a specific form of research on the existing programmes that build on the elements of the already existing form of political mobilisation. Another relates to political feasibility and institutional change: how are infrastructures of this kind to be constructed, especially under different welfare regimes, labour market institutions, and traditions of local governance that differ sharply between countries of the EU and beyond? Plus, there is a need to make this argument more explicitly relevant to some debates within macroeconomics of ecological economics, especially if sustainability transitions require large-scale shifts of labour to maintain, care for, and repair the built environment and natural ecosystems. This would be valuable so that this type of labour could underpin a transformation of employment, work, and economic restructuring beyond ecological parameters alone, towards a civic ecological labour that is integral to an economic system focused on care, sufficiency, and sustainability rather than on growth and growth alone.

Conclusion | This paper argued that, from the point of view of the maintenance of a viable political economy of sustainability transitions, the present configuration of Ecological Citizenship represents a significant structural weakness, given its reliance on underfunded public provision, short-termism, and unpaid volunteering, as well as its reproduction of existing inequalities between actors. The response to this structural challenge has been the development of the ideas of 'Civic Ecological Labour' and 'Civic Ecological Labour Infrastructures'. At the heart of this argument is a deliberate

provocation: that Ecological Citizenship is not to be understood as a residual domain of activity, to be addressed only when resources permit, nor as a matter to be left to individual altruism, moral commitment, and ethical appeal. Rather, it is understood as constituting one of the foundational functions of economic activity itself. This does not imply that such activity is to be fully absorbed into markets, nor that it is to be understood as another branch of conventional public sector employment. Rather, it is to point to the need to recognise and institutionalise a space that is in between: between the market and the state, between employment and volunteering, and between private consumption and public service.

In terms of ecological economic analysis, this reinforces a well-known, yet perhaps less commonly acted upon, conclusion: that sustainability transitions are as much, or more, about institutional and social change as they are about technological change or price effects. The work of upkeep, care, and maintenance will no longer be able to be structurally invisible without progressively undermining the foundations of ecological security itself. To continue to do so is not merely an oversight, it is a structural risk. Whether *Civic Ecological Labour* Infrastructures are possible will, of course, be determined by a variety of factors, including political decisions, fiscal policies, cultural understandings of work and value, and the outcomes of social and political contestation. This paper's ambition is not to seek to answer these questions, nor to suggest solutions, but to help clarify, articulate, and put into the open these issues as explicit areas of contestation. If sustainability transitions are to be socially and economically sustained, then the labour upon which they are based must be moved from the periphery to the core of economic and political concern.

he paper positions itself not only with respect to ecological economics and policy, but also with respect to traditions of design futures and speculative institutional thought. In such traditions, what if questions are not predictive or prescriptive, but rather a means of opening up space. What if anyone were able to monitor local green space and be remunerated for contributing their observations of seasonal biodiversity and data? What if knowledge of intergenerational food growing were at least as valuable as elite sport achievement? What if the maintenance and care of green space were a recognised route into skilled youth employment? What if households able to reduce their energy consumption were able to earn income through providing advice to their neighbours and communities on how to do the same? What if employers were able to provide support for their workers to spend a portion of their work time contributing their skills to local ecological commons? And what if workers whose labour consists of maintaining, repairing, and caring for conditions of collective life were culturally recognised and valued in a similar way to elite technological or sporting heroes? These are not intended as blueprints, but as provocations that seek to reveal the narrowness of current categories of work, value, and productivity, as well as the scope of institutional imagination that will be necessary to properly integrate ecological maintenance, care, and repair into the very core of current political economies. Hence, *Civic Ecological Labour* Infrastructures should be understood as a field of institutional experimentation, focusing on re-centring the work that sustains the conditions of life itself.

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