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# From tyranny to hope: Harnessing the power of small decisions to achieve urban sustainability goals

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ABSTRACT

Policy makers and planners aim to overcome the "tyranny of small decisions" to address the triple planetary threats of climate change, biodiversity loss, and pollution. However, top-down policies intended to prevent the accumulation of small decisions from undermining collective goods and public infrastructure have removed agency from individuals and caused unintended negative impacts on society. Urban areas are a critical context to examine the role of small decisions because of the extreme diversity and density of decisions and decision-makers within them, their increasing growth worldwide, and their outsized ecological footprint on the world. We bring the economic concept of the tyranny of small decisions to the context of urban nature-based solutions, specifically, urban forestry initiatives, to show how under certain conditions small site-level decisions can support critical long-term social and environmental goals—as opposed to the current tendency to see only their potential to derail such goals. We argue that when social and ecological contexts vary at fine scales in ways that require place-based nuance in environmental management, policy makers and planners should seek to understand and support these small decisions, and promote solutions which harness the knowledge of ecological stewards in service of strategic goals. Failing to do so overlooks the power of human-nature relationships and specialized knowledge, missing opportunities to catalyze self-organization and creativity needed to propel cities towards sustainable futures.

## 1. Introduction

Human society continues to struggle to manage Earth's ecosystems to meet current and future societal needs and to mitigate the "triple planetary crisis" of climate change, biodiversity loss, and pollution (United Nations Environment Programme, 2021). In many cases, these massive, system-wide threats have been attributed to the cumulative effects of independent actors taking uncoordinated actions for their individual benefit—the so-called "tyranny of small decisions," a concept articulated by economist Alfred E. Kahn in his essay of the same name (Kahn, 1966). In environmental policy, this logic can lead to top-down solutions intended to control the decisions at the root of the identified tyranny, which though successful in certain cases at preventing specific outcomes, can also cause unforeseen negative impacts—effectively trampling small decision-makers. Policy makers and researchers have struggled with this tension while seeking solutions to entrenched problems in diverse areas of environmental policy, from climate change to public health (Jacobs et al., 2007; Laitos and Okulski, 2017; Patterson, 2023). We propose contexts in which to uplift and support small decision-makers who are already dedicated to achieving broad sustainability objectives and have critical knowledge on their local social and ecological systems (i.e. employed or volunteer ecological stewards) in policy and governance arrangements. This approach could avoid both the tyranny and the trampling of small decisions, and in doing so, harness the small decisions they make in service of sustainability. Such a strategy could also prevent the loss of critical local and expert knowledge that is essential to effective implementation of environmental management strategies. We situate our perspective within the context of

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managing trees in urban areas, which are typically primarily governed by municipal and regional policies, and offer characteristics of contexts where the approach we advocate for may be widely applicable. We link and contribute to diverse bodies of literature on urban forests, social-ecological systems, economics, and environmental policy and governance. In doing so we offer a new perspective on environmental decision-making and decision-makers.

Overcoming the tyranny of small decisions with top-down prescriptions risks replacing one source of tyranny with another by minimizing individual agency and forcing decisions which may seem appropriate at first glance, yet themselves have unintended consequences. In ecosystem management, in implementation of nature-based solutions more broadly, and in the case we use in this perspective, urban forestry initiatives, making the correct management decision at the site-level can define the success of initiatives and must be made with hyperlocal information (McMillen et al., 2020; Roy et al., 2017). Urban forests are complex systems which consist of the trees and associated vegetation where people live, work, and play; they are the result of incredibly varied social and ecological interactions between the people who manage and interact with trees across the urban-rural gradient (Konijnendijk et al., 2006; Vogt, 2024). In this article, we offer a new perspective on the tyranny of small decisions and argue that a more effective policy response to mitigate this tyranny is to harness the power of place-based, fine-scale knowledge of local decision-makers in service of sustainability goals. We use the case of implementing urban forestry initiatives, to illustrate an approach to planning and policy making for cases where social and ecological contexts vary at fine scales, as they do in urban areas, that may also be broadly applicable to global environmental problems.

To support our argument, we acknowledge and draw from diverse bodies of literature celebrating the knowledge and capacity of individuals and communities to take action towards conservation and sustainability where they live and beyond. This recognition has been particularly evidenced by inclusion of individuals (or "resource-users") as a core subsystem of Elinor Ostrom's general framework for social-ecological systems, and the highlighting of characteristics of individuals such as "knowledge of the social-ecological system" and "importance of resource to users" as key variables influencing the capacity for them to self-organize to sustain the resource in question (Ostrom, 2009). Local ecological knowledge (including traditional and indigenous ecological knowledge) has long been known to be critical to effective ecosystem stewardship, yet often remains poorly integrated into policy and planning (Aswani et al., 2018; Yumagulova and Vertinsky, 2019). Advocates of the concept of planetary stewardship, which emphasizes the global responsibility of humanity toward the Earth's systems, show the need to connect individual stewardship with global goals (Steffen et al., 2011). There is established and growing understanding that positive, even transformational, change requires individuals and communities as critical partners (Chausson et al., 2023). Importantly, approaches which involve and empower individuals and communities in decision-making are as much about ethical and rights-based concerns as they are practical and pragmatic ways to achieve social-environmental goals intended to serve society at large (Jax et al., 2013).

Though there is considerable evidence on the benefits of co-management and co-production, environmental policy and governance research unfortunately still finds there are struggles in scaling up such arrangements in practice (Lemos et al., 2018; Razzaghi Asl and Pearsall, 2022). Concepts such as multi-scalar governance (Lemos and Agrawal, 2006) and mosaic governance (Buijs et al., 2019) have been developed in part as a response to recognizing that many environmental challenges encompass social and ecological processes which occur across multiple scales (e.g. spatial, temporal, institutional). Assessing whether governance institutions fit the social-ecological systems they are intended to impact is a key question in addressing the tyranny of small decisions i.e., do measures of success and associated policy levers match the scales of both the decision-making, and subsequent impacts, in question? (Epstein et al., 2015). Improving the integration of small decisions into environmental policy is an urgent and practical necessity because (i) history and experience show there are decisions which cannot be made effectively at higher levels and must be made with local context and knowledge (Andersson et al., 2021), (ii) there are foundational relational and cultural processes which occur on the scale of individuals (Jax et al., 2018) and are broken down if the power to make them is stripped away, and (iii) top-down approaches prevent opportunities for the immense creativity and self-organization of communities which can arise at lower scales (Ostrom, 2009). In this article, we argue that small decisions present a key inflection point to influence critical sustainability goals, and offer three conditions for contexts in which already motivated ecological stewards could be empowered and supported in service of these goals instead of trampled and overlooked. Additionally, the autonomy to make such decisions is key to unleashing creativity and fostering people-nature relationships (Chan et al., 2017; Chapman et al., 2019; Stoneham et al., 2003), allowing for unforeseen, positive, impacts. As leaders around the world are turning to nature-based solutions such as urban forests to serve as multi-functional tools to address goals as urgent and diverse as climate regulation, biodiversity conservation, public health and social cohesion (Croeser et al., 2021), and, as in urban forestry, new funding sources become available (Government of Canada, 2020; USDA, 2023), we believe it is timely and essential to examine the role of small decisions, and those who make them.

## 2. The example of urban nature-based solutions and urban forestry initiatives

In urban policy, urban nature-based solutions encompass a diverse array of blue-green systems and interventions including, but not limited to, urban forestry initiatives (i.e. tree-centered work in urban and peri-urban settings, from street and yard trees to woodlands and forested parks) and many other types of urban ecosystem management (e.g. urban prairies, constructed wetlands, and others) (Castellar et al., 2021). Urban forestry initiatives like tree planting, preservation, and similar activities, are increasingly promoted as strategies which can accumulate to have positive system-wide effects such as mitigating stormwater flooding and supporting biodiversity (Hoover et al., 2023). Though researchers have called for nature-based solutions to be "scaled-up" with models and tools (Croeser et al., 2021; Pearsall et al., 2022), policy and management geared towards doing so must contend with many challenges related to the complexity of urban systems. Successful large-scale urban forestry interventions all require myriad individual tree management decisions to be replicated at large spatial scales, which, as we will demonstrate, threaten the viability of each project and the potential to reach intended solutions if made incorrectly. In addition, top-down nature-based policy solutions often still view small-scale environmental management decisions and those who make them as, at best, situations to be controlled and harmonized in order to achieve wide-scale objectives, and at worst, a potential source of threatening tyranny to overcome.

The scope of small decisions in Kahn's original concept are those made at the same spatial scale and repeated many times over by many decision-makers. As such, the tyranny of small decisions can manifest in unique ways in urban systems because of the sheer number of individuals making decisions at small-scales across a mosaic of properties under a diversity of governance arrangements (Colding et al., 2013; Ordóñez-Barona et al., 2021). In these contexts, decisions that can be easily pointed to as causes of widespread negative consequences, such as tree removals or development of individually-held parcels, are a clear target for policy makers to assert influence in the name of achieving a strategic-level goal (Aronson et al., 2017; Colding et al., 2013; Grose, 2010). However, in dense urban areas, even the decision to remove or plant a single tree occurs within a complex web of social-ecological processes which can vary at fine scales (Mincey et al., 2013). If local

factors are not understood and acted upon, significant ramifications can occur, such as wasted resources (Nguyen et al., 2017), social and political backlash (Koeser et al., 2021), and missed opportunities.

It is important to understand that in urban systems, there are many types of small yet influential decisions, made at the same spatial scale (e.g. planting a tree or developing a small land parcel), that are not only made by individuals with particular authority for that land, like private landowners and residents (the "resource-users" per Ostrom's framework for social-ecological system (Ostrom, 2009; Vogt, 2020)). Such decisions are also made and influenced by two groups of urban ecological stewards: (1) the array of professionals charged with managing public and institutional resources, such as land managers, horticulturalists, landscape architects, facilities personnel, and many more, and (2) volunteers and stakeholders who are dedicated to stewarding urban natural resources (Eisenman et al., 2024; Shandas and Messer, 2008). Importantly, both these types of urban ecological stewards have higher levels of knowledge about the site-level ecosystem management decisions and are motivated to make choices which will result in pro-social and pro-environmental outcomes and more likely to self-organize in alignment with city sustainability goals, or at least more likely than any given private urban landowner or land developer. Specifically for urban forestry initiatives, urban foresters, who specialize in managing tree communities, and arborists, who focus on the management of individual trees (similar to the distinction between public health professionals and doctors) bring highly specialized expertise that is likely valuable for connecting local and high-level objectives (O'Herrin et al., 2023). As we will demonstrate through two types of small-scale decisions in urban forestry initiatives, the assumption that uncontrolled local decision-making will lead to tyrannical outcomes overlooks the fact that the urban ecological stewards who make and/or influence these decisions are capable of seeing and acting beyond their scale.

An example of the tyranny of small decisions in the urban forestry context is when widespread tree removals across the mosaic of properties and land ownerships results in overall decline in urban tree canopy—'death by a thousand cuts' (Fig. 1). Common solutions to this scenario of widespread tree loss (i.e. a manifestation of the tyranny of small decisions) are cases of municipal policies or programs to influence such decisions, typically either (i) restricting tree removals, or (ii) initiating mass tree planting efforts (Chojnacky et al., 2020; Pike et al., 2021) (Fig. 1). To an individual landowner, the decision to remove a tree on their property is perceived as well within their rights, and even duties, as property owners. Reasons for removal include mitigating risk of the tree damaging property, perceived nuisances, a desire to use that space for building renovation or construction, and a preference to proactively remove unhealthy trees (Guo et al., 2019; Roman et al., 2022). Individual decisions by landholders to remove trees have slowed progress towards municipal goals to increase tree canopy cover. Such goals are often set because of the ecosystem services associated with canopy, which convey both local, regional, and global benefits, like urban cooling, reducing stormwater flooding, and mitigating climate change (Clark et al., 2020; Kronenberg et al., 2021). There are tensions in scale between resident and property owner decisions about tree management on private land, which may be rooted in specific concerns and desires, and municipal leaders' goals for the public good (Nguyen et al., 2017; Pearsall et al., 2022). Ignoring such tensions can result in the unintended consequences of disgruntled residents and developers on one hand, and failed tree planting initiatives on the other.

In the case of tree policies that regulate tree removals by individuals, these typically function by restricting the removal of trees based on size and/or species (Grant, 2024; Ordóñez-Barona et al., 2021). They have been found to be unpopular and can seem arbitrary when implemented at the site-level (Jones et al., 2013; Koeser et al., 2021; Zhang et al., 2007), as they often fail to understand and respect the contexts in which the small decisions were made in the first place (Clark et al., 2020). Despite studies repeatedly showing broad public support and affinity for urban green spaces (Miller and Montalto, 2019; Shackleton et al., 2018), residents and communities tend to have more place-based and nuanced views on their desires for their land or neighborhood (Riedman et al., 2022). There is a difference between wanting to preserve trees in general, and wanting to preserve a specific tree that may be causing considerable negative impacts, i.e., disservices (Roman et al., 2021). Additionally, there are many instances where tradeoffs must be made between tree retention and urban development activities which stand to advance other sustainability goals, such as rooftop solar panels (Zhao

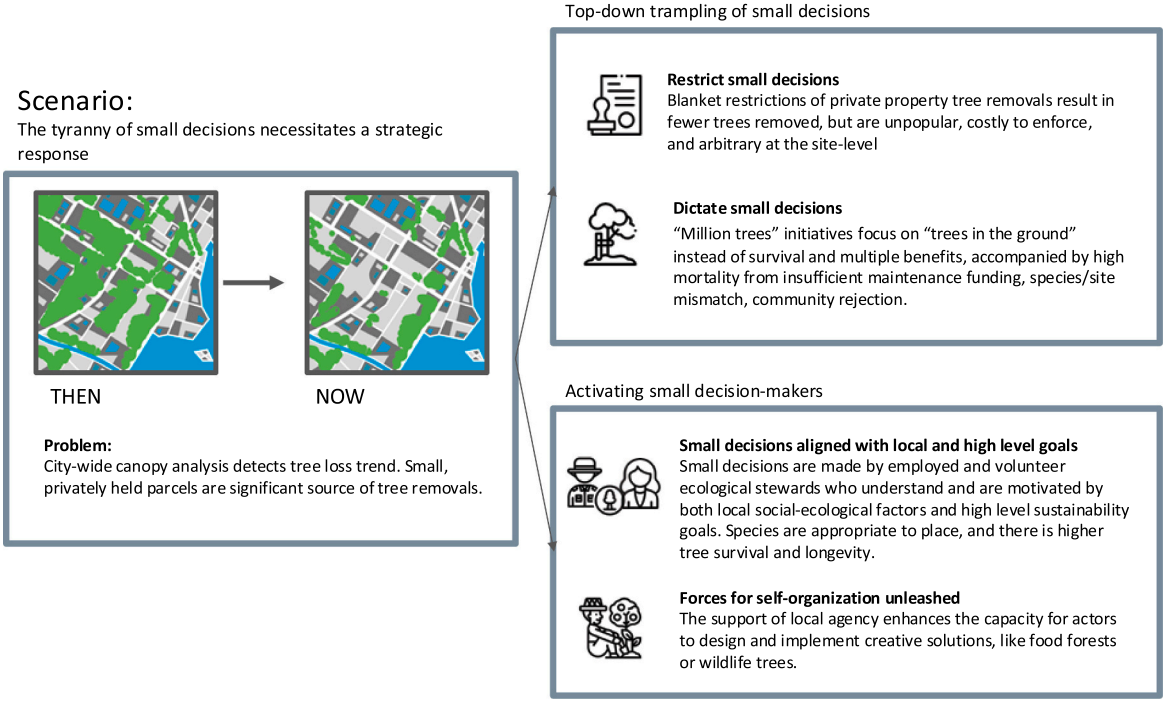


**Fig. 1.** How top-down policy solutions to the "tyranny of small decisions" that are intended to reverse cumulative effects of individual actions can lead to minimizing local agency. Ignoring the opportunities at the site-scale misses out on creativity, self-organization, and new pathways.

et al., 2017) or increased housing density (Cheng et al., 2024). However, policies restricting private tree removals tend to have very limited or strict roles (if any) for professionals to mediate or provide technical assistance to support tree retention decision-making, and these are generally not linked with efforts to improve tree stewardship (Ordóñez-Barona et al., 2021). This lack is not surprising, given that such tree-by-tree policies are incredibly costly and labor-intensive to enforce, challenging cities with typically already capacity-strapped urban forestry staff (Ordóñez-Barona et al., 2021)–and potentially suggest poor institutional fit between policy solution and social-ecological context (Epstein et al., 2015).

The other case of small-scale decisions in urban forestry we examine is urban tree planting. No matter the level of governance at which urban tree planting is initiated or the quantity of trees being planted, conditions at the scale of individual trees are "make or break." History offers many examples of the case of reacting to a tyranny of small-scale tree removals with mayoral campaigns setting numeric tree planting targets (Eisenman et al., 2021). For example, in Honolulu, US, and in Vancouver, Canada, documented declines in canopy cover triggered new city tree planting initiatives (Cheng, 2021; Pawson, 2020). Unfortunately, massive urban tree planting initiatives often end in widespread tree mortality, even if comprehensively monitored (McPherson, 2014), or fizzle out due to changing mayoral administrations and priorities (Ding, 2022). Many new urban trees do not survive to maturity, with half typically dead by 15–18 years after planting (as found in a review of urban tree mortality studies, predominantly from the US, by Hilbert et al., 2019). Of course, urban tree plantings can succeed, but not without thorough consideration of the site context of each tree, including soil and climatic conditions, built infrastructure, and social infrastructure, and dedicated labor-intensive maintenance (Roman et al., 2015). Beyond needing to overcome the many tree survival challenges in tree planting initiatives, top-down greening initiatives can also incur negative social outcomes when they fail to consider local social context. This is evidenced by the many examples of expensive green infrastructure installations that end up underutilized or even vandalized and rejected by their communities (Pauleit et al., 2002). In cities undergoing gentrification, implementation of such initiatives has the potential to exacerbate gentrifying forces and contribute to community displacement pressures (Sax et al., 2022). For example, in response to a tree planting initiative in Detroit, US, although residents appreciated having trees in their neighborhoods in general, they were wary and even rejected new tree plantings due to a history of negligent maintenance practices and distrust of the city (Carmichael and McDonough, 2018). These examples underscore the need to define roles and support local actors who understand not only the ecological context, but also the social context (i.e. those with "knowledge of the social-ecological system" (Ostrom, 2009)) to ensure tree planting initiatives accomplish stated goals without wasting resources and causing more harm than good.

Both the cases we present, broad-scale restrictions of tree removals and imposition of tree planting initiatives, can result in the "trampling" of small decisions when there is not sufficient role for social-ecological knowledge—including what to plant and where, how to maintain trees in the future, and how to engage with communities. This knowledge is often held by local experts and community members (Campbell et al., 2022a; Grant et al., 2024) and is not easily accessible by higher level actors and not practical to be written into policy with sufficient detail (Buijs et al., 2019). Small decisions made by local actors will occur whether or not they are intentionally connected with strategic goals. However, in describing problems with employing top-down solutions to the tyranny of small decisions, we are not in turn advocating for what might be simplified to a "free for all", market-driven approach to decision-making. Rather, we are arguing that site-level decisions can be aligned with strategic sustainability goals by integrating local expertise. The approach we suggest is needed is more than merely a question of getting to know the area's context in order to achieve buy-in, but of truly recognizing the value and expertise of the local actors and their networks (Pearsall et al., 2022). When attempting to reach social and environmental goals, policy makers may be better served by harnessing the power of small decisions, rather than trying to suppress them or work around them.

## 3. Contexts for activating small decision-makers for strategic sustainability goals

The importance of small decisions can be considered to be two sides of the same coin: they are so essential that if ignored, programs will fail, and so valuable that if recognized, they present the path leaders need to achieve goals. Here, we outline three contexts where empowering knowledgeable local ecological stewards (both employed and volunteer) in policy to make ecosystem management decisions aligning with strategic sustainability goals could avoid both the tyranny, and the trampling, of small decisions. We offer examples of policies from urban forestry to make these points (Table 1), which is typically governed at municipal and regional levels, though we acknowledge that there are many other systems with contexts where this strategy could be applicable to circumvent the tyranny of small decisions.

### *3.1. When local social-ecological conditions vary at fine scales and determine functioning of natural systems*

Not only do trends occurring on global and regional scales affect natural systems, but numerous intricate human and biophysical factors at local scales influence both the functioning of and benefits from socio-ecological systems (Andersson et al., 2021). These factors are often too

**Table 1**
Policy examples which could either trample or activate decision-making of local urban ecological stewards in service of strategic sustainability goals.

| | Contexts | Example of trampling urban ecological stewards | Example of activating urban ecological stewards |
|---|---|---|---|
| 1 | When local social-ecological factors vary at fine scales and determine functioning of natural systems | A tree planting program initiated at higher levels of government is overly prescriptive and requires specific species and numbers of trees be planted in specific locations on a specific timeline, with no due consideration of local conditions. | A tree planting program is designed to allow local leaders to plant and steward trees with flexibility on management decisions to fit local conditions and meet other neighborhood goals (e.g., species appropriate for erosion control or a location appropriate for a community orchard). |
| 2 | When local urban ecological stewards hold knowledge about small scale conditions not available at higher levels | A tree preservation policy issues a blanket prohibition on removal of all trees, or a prohibition on removing all trees of with certain attributes (e.g., all trees larger than a certain size, or of a species with special heritage status). | A tree preservation policy engages urban ecological stewards, enabling training on how to preserve trees, incentives for preservation actions, and community support networks that address tree preservation and prevent unnecessary removals. |
| 3 | When local urban ecological stewards are already motivated by higher level goals | Rigid policies dictate how small-scale decisions, like tree species selection, should be aligned with strategic-level sustainability goals, such as achieving net-zero carbon. | Policy makers bring local urban ecological stewards to the table through granting them official roles in the planning process to decide which local interventions could best further strategic-level sustainability goals. |

complex to be effectively addressed from higher decision-making levels alone. For example, decisions regarding species selection for urban forestry projects require a deep understanding of site conditions, ecological interactions, and economic realities (Fig. 2, see also Hilbert et al., 2023). The arborist's mantra of "right tree, right place," which promotes only planting species that meet site-based constraints and goals, requires a great deal of local knowledge and specialized expertise to follow and implement–more than just knowledge on trees, professionals must understand soils, built infrastructure, local regulations, and more (Breyer and Mohr, 2023). Likewise, local social and ecological factors can determine which benefits are most readily provided by ecosystems (e.g. can this site sustain fruit trees?) and if beneficiaries are able to access them (e.g. are there people with physical access, time, skill, demand, supporting culture, etc., to care for these trees and access this benefit?) (Olander et al., 2018).

### *3.2. When local urban ecological stewards hold knowledge about small scale conditions not available at higher levels*

In the case of urban nature-based solutions, professionals and volunteer stewards operating in their communities have intimate social-ecological knowledge that is not available to higher up actors. This continues to hold true despite the emergence and improvement of publicly available datasets on urban nature–in fact, the creation of many datasets on urban nature relies on innovative forms of citizen science (Dyson et al., 2019; Meixner et al., 2021). In the design of policy, regulations, and incentive programs, creating roles for local knowledge holders, like qualified arborists, urban foresters, and civic stewards, in policy-making could allow their specialized knowledge to ensure the right decisions are made (Eisenman et al., 2024). Investment in these experts, potentially along with offering training on the connections between management actions and sustainability goals, could also help negotiate the inherent tensions between the site and strategic scales in planning.

### *3.3. When local urban ecological stewards are already motivated by higher level goals and local stewardship*

Many local urban ecological stewards are highly motivated to manage ecosystems for broader sustainability objectives which relate to global and regional benefits, such as climate change mitigation or biodiversity conservation, as opposed to only caring about goals with primarily local benefits such as aesthetics or shade (Wolf et al., 2021). By both leveraging and serving their existing motivations, policymakers can enlist them to make decisions which serve both local and strategic goals, instead of trampling their agency and forcing decisions from higher up (Campbell et al., 2022a). Empowering these local, knowledgeable, actors with resources, technical support, and recognition can increase their capacity to manage ecosystems in ways that results in positive environmental change within their communities and align small decisions with strategic goals.

## 4. Missed opportunities to deliver site-level benefits and catalyze self-organization

In addition to potential negative consequences of trampling small decisions, there are key missed opportunities to consider if local knowledgeable actors are not sufficiently empowered and activated. Rigid policies can counteract the forces needed for one of society's most powerful tools for change: the power of self-organization (Meadows, 1997). By trampling actions at the local scale, for example, dictating requirements for landscaping, tree planting or care, decision-makers not only risk forcing the wrong decisions for that site, but miss out on the potential for individuals to find creative solutions that align with both local and strategic goals. Two examples are the movements to safely preserve standing dead trees in the urban landscape for wildlife habitat (Hoek et al., 2017), and to grow fruit trees or gardens for home food production (Dawes et al., 2018). Both of these land uses would benefit from facilitation by individuals with specific skills and present unique benefits that align with community needs. Yet, these practices would not contribute as significantly to a tree planting or tree canopy cover goal as would planting large stature trees. Policies seeking to affect ecosystem management in service of strategic goals would do better to not presume to understand site-level conditions better than the site's managers (the small decision-makers), as has been found to be a barrier to success in incentive programs such as payments for ecosystem services schemes (Chan et al., 2017; Chapman et al., 2019). Instead, policies could seek to design supports that can enlist the creativity and knowledge of such small decision-makers (Stoneham et al., 2003).

Beyond the advantages of empowering professional ecological stewards, a new perspective of small ecosystem management decisions sees them as an opportunity to tap into the deep and powerful connections between individuals and nature and provide further opportunity for connections within communities. The emerging field of study of

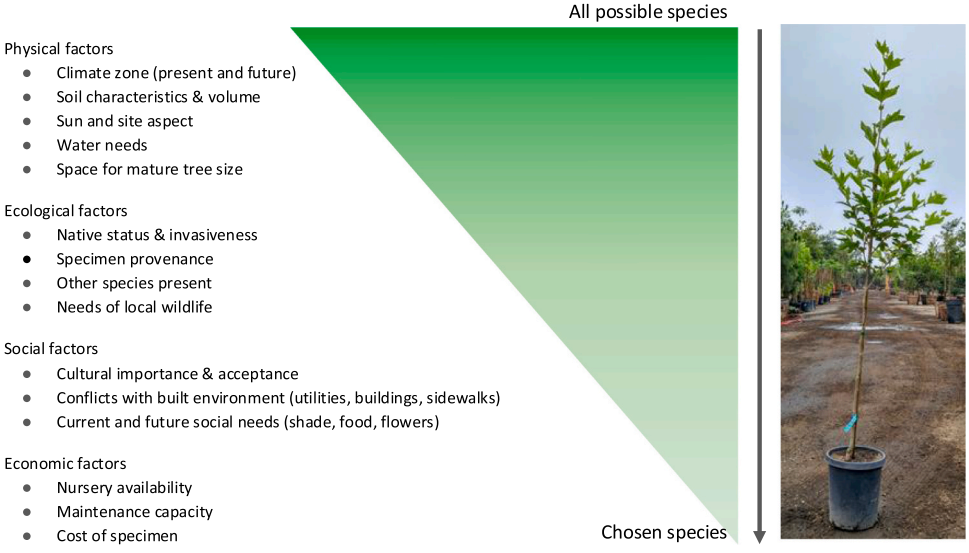


**Fig. 2.** The wide range of factors required to decide what species to plant in a single place. Species selection is an example of a decision that cannot be done successfully without site-level information and high levels of expertise.

relational values identifies a class of values consisting of "preferences, principles, and virtues about human-nature relationships" as distinct from intrinsic values (e.g., nature's own value) or instrumental values (e.g., value of what nature does) (Chan et al., 2018, 2016; Himes and Muraca, 2018). Studies of relational values show the significance of the emotional, cultural, and psychological bonds individuals form with their natural environment (Jax et al., 2018). These human-nature connections are formed at the level of individuals, reinforced and supported by greater cultural norms, form powerful building blocks for connecting communities, and represent irreplaceable relationships between people and nature at multiple, crossing spatial scales. For example, an individual or community's relationship with a tree, park, or forest, cannot simply be replaced with another tree, park, or forest. The physical labor required to steward urban nature requires taking many small actions—planting, watering, pruning, mulching, removing—and deepens site-scale relationships, while serving as a connection to both entire ecosystems (Jones, 2019) and their communities (Mincey and Vogt, 2014). By recognizing and nurturing models of stewardship which emphasize relationships to place, higher-level decision-makers can harness the motivational and transformative potential that stems from the personal connections people have with nature (Campbell et al., 2022b; Knibbe and Horstman, 2022). For example, urban biocultural stewardship transforms the notion of the separation of humans from nature in cities and emphasizes caring for whole networks of social-ecological relationships, rather than solely the care of natural resources (ʻĀina of Kaʻōnohi et al., 2023; McMillen et al., 2020). Cultivating relational values and fostering a sense of stewardship at the local level becomes instrumental in mobilizing collective action, fostering urban environmental stewardship, and achieving strategic goals (Chausson et al., 2023; Eyster et al., 2022; Yazar and York, 2023). Creating deliberate roles for local volunteer ecological stewards, to include cultural practitioners, in new and existing programs and policy would allow for already motivated and knowledgeable individuals to contribute in valuable ways—or expand the impact of the work they and their networks are already likely doing.

## 5. The hope of small decisions for urban sustainability

The stakes are high: nature-based solutions are being relied upon by policy makers and even regulators to achieve strategic sustainability outcomes. The literature we synthesized here from urban forestry, and urban nature-based solutions broadly, presents warning calls and lessons learned that are necessary to consider in future work, especially about the costs of failing to understand and honor site-level factors as well as local decision-makers and stakeholders in environmental policy and planning. The tyranny of small decisions presents a narrative whereby many individually made decisions at small scales cause unintended and negative societal consequences, thus requiring action from policy makers to avoid such consequences. However, this same story can be flipped. Acknowledging that small decisions have power and potential for significant effects at higher scales is the first step to seeing the opportunities they present. Practically speaking, small decisions that impact environmental outcomes will be made, and are already being made. Management and policy approaches can ensure that small decisions *support* critical long-term social and environmental goals rather than being seen as only *derailing* them.

We propose that new approaches to remedying the tyranny of small decisions should start with renewed focus on identifying and enabling the creativity of those ecological stewards already employed to implement broader policy objectives, and those enlisted to help, those with "knowledge of the social-ecological system" (Ostrom, 2009). In the case of urban forestry, urban foresters at municipalities are already trying to manage their resources for multiple and strategic benefits—they are on "the same team" as those seeking to advance broad sustainability objectives [citation redacted for peer review]. Yet, the profession lacks recognition and appreciation, even within urban sustainability planning (O'Herrin et al., 2020). When their expertise is not consulted, new policy solutions which seek to utilize urban forestry, such as tree planting initiatives, can be ungrounded and unrealistic (Sousa-Silva et al., 2023). As new initiatives to scale up nature-based solutions come to center stage (Croeser et al., 2021), especially those seeking to remedy the tyranny of small decisions, we urge policy makers and planners to consider the people and knowledge needed to make these plans come to fruition and avoid missed opportunities.

In sum, we propose that small decisions and the people who make them are not a source of tyranny to overcome but are instead necessary ingredients to further progress towards strategic goals. We issue a call to action to the environmental science and policy communities at large, especially those focused on urban sustainability and urban planning, to acknowledge and honor decisions that need to be made at local levels and the individuals who are responsible for making them. We argue that the complexity and variation of the social-ecological context of cities necessitates increased attention and that the opportunity to harness small decisions and the knowledge and creativity of small decision-makers is too great to ignore. Failure to prioritize small-scale decisions and those who make them can result in wasted resources and missed opportunities to achieve our cities' critical social and environmental goals.

## CRediT authorship contribution statement

**Corinne G. Bassett:** Writing – review & editing, Writing – original draft, Visualization, Project administration, Funding acquisition, Conceptualization. **Susan D. Day:** Writing – review & editing, Supervision, Funding acquisition, Conceptualization. **Cecil C. Konijnendijk:** Writing – review & editing, Supervision, Funding acquisition, Conceptualization. **Kai M.A.Chan:** Writing – review & editing, Conceptualization. **Lara A. Roman:** Writing – review & editing.

## Declaration of Competing Interest

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

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## Data availability

No data was used for the research described in the article.

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