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## CULTIVATING ECOSYSTEM CONVIVIALITY THROUGH SOIL ARTS AND URBAN GARDENING

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### Introduction

Urban soils provide a joyful sense of ecological belonging, yet they are understudied as co-creative sites that cultivate a much-needed sense of conviviality and ecological thriving amongst both human and more-than-human communities. Over 50% of the world's human population lives in cities. Although more recent as a notion, urban gardening has been a part of urban dwellings since the dawn of sedentary civilization. From ancient sedentism to urban sprawl, soils connect people to land and sustain a diversity of soil communities and soil cultures. Recently, urban gardens and their soils are gaining attention for their provisioning of ecosystem services, and specifically cultural ecosystem services such as recreation and social cohesion, emancipation of local communities, and offer sites of learning and identity making. Yet, urban gardens, their inhabitants, and the multifunctionality of these urban green areas continue to be regularly neglected and overlooked in planning and policy despite their key qualities, and their entanglement with wider urban ecosystems for climate mitigation, adaptation, and socioecological resilience.

In today's world of climatic, environmental, and democratic challenges and uncertainties, it is urgent to pay attention to nourishing sites of local empowerment, where the artificial modern separation of environment and people, nature and culture get integrated (Rose, 2004), and where sustainable practices can be explored despite disciplinary and institutional boundaries. To meet this need, several transdisciplinary, relational, and process-oriented approaches have emerged that move beyond such binary divisions and the standpoint of human mastery and control that has dominated Northern and proto-European societies' relationship with nature (Plumwood, 2005).

In this chapter, and through "thinking with soils" (Salazar et al., 2020), we employ such relational approaches in theory and practice and suggest that *cultivating ecosystem conviviality* is a generative notion to explore in relation to practices of planning and managing urban ecologies. We offer this as a complement to ongoing efforts to alter Cultural Ecosystem Services (CES) and Nature's Contributions to People (NCP) into more integrative ways of grappling with how to live, flourish, care and eventually also die differently on a damaged planet. We explore how soil-centered urban gardening and soil arts shift the anthropocentric inclination of CES through situating local human and more-than-human communities not merely as receivers or producers of services, but as entangled co-creators of open-ended ecosystems.

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Our engagement with modes of cultivating ecosystem conviviality through soils follows the recent ‘soils turn’ in environmentally oriented research, which testify to soils as generative for exploring the implications and potentials of altered natureculture relations in times of ecological crises (Granjou and Meulemans, 2023; Krzywoszynska and Marchesi, 2020; Montag et al., 2016; Norwegian BioArt Arena, 2022; Puig de La Bellacasa, 2019). We aim to show how urban soil practices seed “a new kind of green urban culture characterized by the cultivation of multispecies practices of care and conviviality among diverse communities” (Rigby, 2018, p. 79). These communities are dependent on a variety of material and temporal conditions, which in turn afford different forms of socioecological relations. More specifically, the chapter proposes that ecosystem conviviality brings attention to how gardening and soil growing can build grounds for different species to co-exist and thrive, and for urban soil and gardeners to be decommodified and acknowledged as a vital part of urban ecosystems. These are crucial insights for urban and environmental planning seeking to support and learn from the transformative potential of such soil-centered gardening practices.

Through our examples, we seek to convey how attention to soil inspires altered forms of urban naturecultures that sustain multispecies relational webs. It is in recognition of the fundamental intertwinement of humans and nature, and the material dimensions of culture, that we refer to naturecultures jointly. If the goal for CES is widened beyond human well-being to include ecological well-being, then there is a demand for an altered environmental planning and management paradigm that acknowledges such relational webs, which the notion of cultivating ecosystem conviviality could support and enable. Conviviality has been employed in for example environmental humanities ethnographies to convey how urban life unfolds as a temporally situated, place-based togetherness between humans and animals (van Dooren and Rose, 2012). We extend such a multi-species conviviality to include also plants and soils.

From our mixed-methodology toolbox, we discuss how *artist-led open stages* can both help recognize and cultivate convivial relational webs that often go unnoticed. These cultural forums offer a much-needed narrative approach, alongside instrumental and deliberative approaches, to environmental and ecosystem valuation (Edwards et al., 2016). Artist-led open stages offer ways to acknowledge such webs and their transformative potential, not with the goal of measuring or evaluating, but to explore and story them. The chapter suggests that a shift of focus, from benefits and valuation to practices of cultivating ecosystem conviviality, could help bring attention to ongoing experiments in building engaging and open-ended relations with and in naturecultures, urged by a need and desire to better deal with and adapt to multiple crises and uncertainties.

As a transdisciplinary team, we work in the vein of environmental humanities as a form of more-than-human arts and humanities (Åsberg, 2024; Neimanis et al., 2015). We draw on this and a body of long-standing feminist philosophy and care ethics, alongside more recent insights from our respective fields. These include anthropology of planning, critical heritage studies, gender studies and cultural studies, and multispecies art and artistic research. Our work has been conducted in Sweden, a sparsely populated country of the Global North. The research material presented in this chapter stems from the art and research project *Humus Economicus* (which includes the authors). The empirical corpus consists of two focus group interviews in Stockholm with community gardeners and municipality officials, three study visits to a community supported agriculture initiative in the Stockholm region, four art exhibitions, and seven arts-based open stages. We share quotes from written reflections and recorded and transcribed conversations with gardeners who participated in the arts-led open stage called the Soil Celebration over the course of 2021. This arts-based open stage was designed by Holmstedt, Lobell and Wegsjö, who performed six soil celebrations. In addition, outdoor educator Germund Sellgren performed three soil celebrations. In total, 53 persons participated across the nine events. This said, we acknowledge the limited scope

of our corpus and experimental practice, the emergent character of our theory-led practices and practice-led theories, and the open-ended results on highly select segments of society from our urban testing grounds.

In this chapter, we first explore the material and temporal conditions of urban gardening in Sweden and how they variously enable and hinder socioecological relational webs. Thereafter we explore soil conviviality with soil-centered gardeners and discuss this in relation to CES theory. We conclude with a discussion on the implications of engaging with relational approaches, and the potential of attending to practices of cultivating ecosystem conviviality in urban planning and environmental management.

### **Urban gardeners growing soil – conditions and practices in Sweden**

An expanded understanding of CES have brought attention to urban gardens as sites for recreation, social cohesion, healthy lifestyles, pedagogical and educational engagements (Camps-Calvet et al., 2016), and emancipation of local communities (Bergame, 2023). Yet, undervalued and without much societal prestige, urban gardens and gardeners find themselves under pressure when cities across Europe are densifying and development plans promise financial returns on coveted lands (Langemeyer et al., 2016). Furthermore, with Sweden as our example, municipalities mainly define and manage green areas either as social user-areas, or in need of protection from human wear and tear (Ernstson et al., 2010). The framing of humans as users providing impact only leaves little room for attending to reciprocal relations and caring practices. We will briefly describe three forms of urban gardens and show how the material and temporal conditions that frame them variously enable and disable deep soil relationalites and the cultivation of ecosystem conviviality.

Different forms of allotment gardens spurred in urban areas across Eastern and Northern Europe in the wake of the industrialization and urbanization of the 19th century and developed in the coming century as a social movement (Keshavarz and Bell, 2016). People moving into cities in connection with industrialisation got access, though not ownership, to pieces of land to grow food in times of austerity for recreational purposes, and as relief from heavy, harsh, and polluted working environments. In early 20th century Sweden, allotment gardens responded to urgencies of poverty and food shortages (Barthel et al., 2013). The allotment gardens that still exist today are often areas in which each gardener tends their separate plots, while certain facilities such as water and tools are communal. They are organized in associations of which the gardeners are members. Leasing contracts are nowadays reasonably long-term, allowing for investment of resources into the plots. Municipal regulations limit what is allowed in the allotment gardens, often approving sheds and sometimes huts where it is possible to sleep (Figure 22.1).

From the mid-20th century, expanding welfare society and economic developments secured food access through other means. Allotment gardens reduced in numbers and were outcompeted by housing and infrastructure developments. They continue to be so, despite a steadily growing interest in urban gardening among city dwellers. Since around 2010, there has been an emerging movement across Swedish cities with renewed attention to ecological crises, food security, soil health, biodiversity, organic food and a sense of desiring (re)connection with nature and local communities. This movement has given rise to various forms of gardens. One is the community gardens run by gardeners who jointly cultivate and manage a piece of land (Figure 22.2) and share managing activities (Bell et al. 2016). The user agreements with municipal governments are usually short-term, often yearlong leases with a notice period of one month (Bonow and Normark, 2018).

Lately, many city governments advocate gardening in urban pallet collars, a type of wooden packaging in the standardized format 120 × 80 cm (the European pallet). Cities authorize the



*Figure 22.1* An individual plot in a larger allotment garden association founded in 1921, Stockholm, Sweden, where tool sheds and huts are allowed.

*Source:* Photograph by Janna Holmstedt.

placement of pallet collars near apartment buildings with access provided short term, per season, and arranged individually, i.e. people are not required to form an association. Meanwhile, these pallet collars can also be seen in allotments and community gardens, as they can be used to make raised beds for gardening on sealed or polluted ground (Figure 22.3).

In a group discussion that we had with five community garden initiators in Stockholm, of which one is a member in our research group, the gardeners pointed out that the local councils favored pallet collars because they are easily movable and allow for gardening on top of sealed land. They described this as an example of how the city of Stockholm uses gardening for “beautification,” rather than being concerned with ecosystems as both social and ecological (personal communication, 20 December 2021). In contrast, the gardeners’ socioecological approach, which includes understanding soils as living, requires engagement with the soil on site and continuity over time for the transformative relations among humans and other-than-humans to emerge. In their descriptions, urban gardening is toilsome work. It requires being in the midst of unpredictability, both with regards to access to land and to the continuous co-shaping of relations among plants, soil critters, and among people who join gardens on voluntary grounds.

The bureaucracy around establishing, and yearly renewing, user agreements situates the community gardening in a temporal uncertainty since the efforts put into cultivating both garden and community can be blocked whenever the city chooses to quit the agreement (see also



**Figure 22.2** Bellevue Farm, Stockholm, Sweden, a collectively tended community garden referred to as a citizen garden and food park, near a railway track on a left-over green area in a public park. No tool sheds are allowed. Water is provided by the municipality.

*Source:* Photograph by Malin Lobell.



**Figure 22.3** Growing in pallet collars. Visit to Enskifteshagen during the Soil Celebration by the art platform (p)Art of the Biomass, Malmö, Sweden, 2021. The public park contains polluted soil and bioremediation experiments have been conducted.

*Source:* Photograph by Malin Lobell.

Bonow and Normark, 2018). With pallet collars for individual use, the conditions are even more restricting as the soil in the collar often is sealed off from the ground. This type of gardening often depends on the purchase of soil bags, which in turn depends on soil as an exchangeable commodity in disaggregated form. The pallet collar encourages short-term engagement, annual plants, and linear flows of goods that diminishes the web of microbial relations that makes soil living. On the other hand, long-term leases for allotments and community gardens enable engaging with longer life cycles of soil on site and the recycling of resources through e.g., composting. These conditions allow for regenerative practices, such as permaculture and forest gardening, concerned with biodiversity, soil health, circular flows of resources, and the build-up of mycelia and microbes that benefit perennial plants and long-lived trees and bushes that mutually support each other in larger ecosystems. The gardeners we spoke to pointed to how varying social and material conditions either supported or hindered the practicing of soil care. Thus, the emergence of ecosystem conviviality relies on factors such as temporal stability, access to land, water and sanitation, and social facilities that support recycling and sharing of resources. It also requires knowledge of the soil on site, since community gardens in Stockholm often are designated sites of polluted soils in poor conditions.

The contemporary urban gardening conditions in Stockholm and their implications form the basis of the artistic work that is part of our research team's transdisciplinary soil arts. The artistic practice belongs to a long tradition of eco- and participatory art, which is a context-sensitive curatorial practice that creates and hosts events as a way of "curating the convivial", a notion suggested by Fabre et al. (2015). Their practice includes ceremonial and emotional involvement mixed with science, craft, farming, and art, with the aim to build empathy, capacity, and inspire change in policy. In our iteration, curating conviviality also involves nurturing a heightened sensorial attention to how we participate in and with other species as entangled with specific environments (Holmstedt, 2020). This mode of working allows for unfolding and storying a multitude of interspecies relations that make up human-soil communities. Edwards and colleagues (2016) refer to similar practices as "arts-led dialogue" that offer an alternative approach to ecosystem service valuation and environmental decision-making. Arts-led dialogues bring attention to the much-needed narrative and interpretative methods offered by arts and humanities that favors dialogue before deliberation. Yet, since "dialogue" is easily mistaken for a verbal and exclusively human affair, we infuse this approach with a multispecies-oriented sensitivity and ethics, evident in an explosion of recent art and interdisciplinary initiatives (see e.g. Jaque et al., 2020; Serpentine, n.d.). In reworking the notion of arts-led dialogue, we consider such critical and creative initiatives more fully comprehended as *artist-led open stages*. They are stages not for virtuoso performances, but for rehearsals, improvisations, and explorations that center a maker perspective and the crafting of stories through multisensory aesthetic encounters (Jönsson and Lindström, 2022).

### ***Celebrating soil – an artist-led open stage for storying and cultivating ecosystem conviviality***

Across 2021, we initiated an artist-led open stage called the Soil Celebration that explored soil conviviality through a series of gatherings. In these celebrations, the mutual making and sharing while getting hands dirty with soils gathered people, matter, places, memories, ecosystems, practices, and diverse knowledge through an invitation to contemplate soil relations.

The first series of soil celebrations were part of the durational artwork "Four Sisters for Planthroposcene", conceived by Holmstedt and Lobell for the international exhibition *Sustainable Societies for the Future* at Malmö Art Museum, Sweden. The artwork explored human-plant-soil

relations through an installation stretching from the museum gallery on to the courtyard, animated by sound, film, seeds, and an almanac suggesting five thematically different events happening across the nine months of the installations. At the center of this art installation was an outdoor garden. It functioned as a stage for explorations inspired by Natasha Myers' (2017) notion "Planthroposcene", not to be perceived as a geological era but a way of doing life, since "garden designs have the potential to stage both new scenes of, and new ways to see (and even seed)" affective ecologies between plants and people. The artwork also alluded to Robin Wall Kimmerer's (2013) writing on humans as a "fourth sister" in relation to the Indigenous companion planting technique Three Sisters where corn, beans and squash mutually support each other. The artists' garden was a perennial forest garden, which hosted the sisters alongside other supporting siblings native to a Nordic climate. The intention with the garden was to attend to the invisible work performed by a plethora of soil workers, human and nonhuman, and their often-overlooked role in the urban ecosystem.

The garden in the museum courtyard functioned as a connecting hub for the soil celebrations that were performed 9–11 April by Holmstedt, Lobell, and Wegsjö. These were framed through a wordplay twisting the well-known trope *Homo economicus* into *Humus economicus*, to echo the contemporary world of economics while simultaneously pointing to other non-monetary values and economies grounded in soil ecologies (see also Pentecost, 2012). In the spirit of *Humus economicus*, in the early spring landscape before any green buds had burst, the participants joined us to make soil coins out of the soils in the gardens they tended to (Figure 22.4). The soil coins were gifted to the Planthroposcene-garden, merging with its in-the-making outside the art museum.

To perform the soil celebrations, we collaborated with gardening sites across Malmö and the neighboring city Lund. The sites included educational and experimental sites for children, allotment gardens, collectively cultivated community gardens, and an educational urban farming initiative. Their gardening conditions varied, ranging from deep, fertile black soil to raised beds in pallet collars isolated from the contaminated ground they were resting on. Across these sites, Wegsjö filmed 13 conversations with gardeners. In terms of transferability, the arts-based methods we used can be generative also in other contexts as evinced by our collaboration with outdoor educator Sellgren. In partnership with us, Sellgren carried out three soil celebrations in other parts of Sweden in May, June, and October 2021 with members of a community garden, visitors to a community supported agriculture site, and participants in a course on regenerative agriculture. In these, 40 participants wrote down reflections that they shared with each other. The quotes that we present below are both transcriptions from the films and excerpts from the participants' written accounts. They have been translated from Swedish and used with consent from the gardeners.

During the soil coining, the gardeners shared their thoughts on what soil meant to them. One gardener expressed how soil-centered gardening made them aware of the multispecies and intergenerational processes of soils, which led to a reevaluation of how to grasp soil's worth:

*Before I thought that soil was something bought in big bags, 4 for 100 Swedish crowns. Now I know that I and the animals, trees and bushes create soil, together with the life that is in the soil. I am soil. My children are soil. My ancestors are soil. The weird thing about those 4-for-100 bags is that it's kind of expensive, but also way too cheap. In the fields, the soil lies bare, almost torn and screaming. There, the soil is worth nothing, while the land is expensive.*

(SC, 31 October 2021)



Figure 22.4 A soil coin is gifted as part of the Soil Celebration to the artwork “Four Sisters for Planthroscene” by the art platform (p)Art of the Biomass, at Malmö Art Museum, Sweden, 2021. The donor has written “Living relation with Earth” on the label and marked it with 10+ referencing a soil fertility index scale 1–10.

Source: Photograph by Karin Wegsjö.

In one of the sites, the gardeners grieved that their community garden in former agricultural fields was going to be sealed once the construction of the planned urban developments started. One gardener highlighted the tensions between commodification of soil for urban development and as measured for agricultural use: “I feel sad that they will build houses on this class 8–10 soil which is the finest in Europe” (SC, 9–11 April, 2021). The Soil Celebration took place in the midst of the unfolding Covid19 pandemic, which actualized questions of food security and local self-sufficiency. The queues to the approximately 7, 465 lots in Stockholm’s allotment gardens grew fast in this time to over 9000 persons, to which the city administration responded with allowing for pallet collars to be put on designated areas, with little interest shown from residents (Ritzén, 2021). Related to the pandemic spurring interest in gardening and the unfolding climate crisis, one participant situated the renewed attention to food production and justice in relation to earlier periods across the 20th century:

*Our older generation told us that before the crash of the 1920s, the city, urban life and new technology had been considered the future. When the crisis hit, the garden and roadside became important for the unemployed, providing vegetables and potatoes for the family and grass for meat rabbits and dairy goats. When hunger struck during WW2, the farmer and cultivated land became of vital importance again.*

(SC, 19 June 2021)

The coining of currency in the Soil Celebration invited the participants to engage both in wordplay and workplay that held space for the articulation of soil relations beyond its often taken-for-granted role as a resource. As such, the invitation to make a soil coin in the gardening sites where the participants cultivated socioecological relations functioned as a non-textual concept. It offered a



Figure 22.5 Soil coins and storying in the making with Åsa at Brunnshög community garden in Lund, Sweden, during the Soil Celebration by the art platform (p)Art of the Biomass, 2021.

Source: Photograph by Malin Lobell.

framing without definitions. This framing and the joint making opened for contemplation, laughter, sensuous experiences, and emotions among the participants, through which relations with soil found expression (Figure 22.5). While the soil stories shared within the groups could continue to live on in our collective memories of the event and appreciations of soils, the coins were returned to the ground – in the museum courtyard or locally on site – to acknowledge the circular and ecological economy of soils.

Participants shared stories of how they felt intimately entangled with soils as that which sustains, nurtures, and gives. Several turned to poetic descriptions, bodily sensations, and childhood memories to capture fragments of these larger relational webs, evoked by touching soil in the soil celebrations. One participant put it that:

*Feeling [the soil] between my fingers creates a sense of belonging. Fellowship with those I share it with, living plants, animals and people, but also those who have been here before me and who are part of it now. The soil is what I live for, and off. The soil is what grounds me, roots me.*

(SC, 19 June 2021)

Yet another participant reflected, based on a self-experienced illness caused by pathogenic bacteria, on how human-soil entanglements are enabling life and involving death for both humans and other critters:

*Once I could have died when I breathed in soil and contracted bacterial pneumonia. Had it been before antibiotics, I most certainly would. I often think about it. I had plowed all spring*

*and sat harrowing. In the heat of the sun, the tractor's windows were open. The inhabitants of the earth, whom I had deprived of their homes with my tools, whirled around in the hot early summer air.*

(SC, 19 June 2021)

Meanwhile, other participants put forth experience of co-dependence, collaboration, and a sensation of attending to mutual needs. Such as one, who wrote: "I am part of the soil's life like all other beings. We co-exist in cooperation, I, the microbes, the antlions, wild cats, and harebells" (SC, 28 May 2021). Yet another participant suggested that:

*My presence in [the garden] is an exercise in both separating and uniting, basically to co-exist. I guess that's the point with community gardens, to be rubbed with and against each other, to give and take. Yesterday, I saw how the beans whirled up around the corn. I thought, we are twisted together. Sisterhood. Kinship.*

(SC, 9–11 April 2021)

This reflection highlights that conviviality is an ethical practice and exercise of sharing places with "strange others" (Fincher and Iveson, 2015, p. 24), and developing skills for being rubbed against each other with empathy. Several participants depicted soil-centered gardening as a transformative experience, and personal encounters with soil on site stood out as a necessary condition for ecological connections and emotional ties to emerge. In the celebrations, the act of returning the coins to the ground while sharing stories was a deeply moving ceremonial act that for some invited tears in. Similarly, we, the artists, experienced a sense of profound significance as participants crafted and shared stories. Across the soil stories, people connected to local ecosystems without necessarily having ties to the specific site beforehand but through everyday practices. Soil-centered urban gardening emerged as a naturecultural heritage phenomena in the making (Fredengren, 2015).

The gardeners did not primarily position themselves as recipients, or users. They rather put forth how their gardening practices situated them as part of relational webs for which they cared through soil-centered practices on the land to which they had gained (temporary) access. Their commitment was not based on human well-being, instead multiple relations formed and proliferated over time in a mutual and convivial process not devoid of toil or strain, where giving-and-receiving became indivisible. The conversations revealed how relations are knotted together to form and sustain significant patterns of bodies, places, practices, and stories that include previous and future generations, history and heritage, landscapes and communities, as well as nonhuman communities and processes. Such material relational knotting with their ethical binds and considerations, we propose, forms the root system of ecosystem conviviality, as people express how they co-exist, care in and with, and come to live through these patterns that constantly shift and multiply.

### **Lessons from soil for CES**

It has been thoroughly discussed elsewhere that dominant approaches to ecosystem services rely on productionist assumptions, cultural essentialism and anthropocentric inclinations of prioritizing human benefits from nature (Gould et al. 2020). Tensions inevitably arise when a metaphor stemming from a linear stock-flow model of exchange inspired by economics is reconstructed and invigorated with cultural and relational insights. The Soil Celebration addressed the problem of

for whom and in what way soil has value, and exposed the diversity of material relationalities that gardening soils hold. The soil stories from the celebrations revealed a range of different emotions, meanings, and values that evade the metaphor of services. Critique on the metaphor of services have proposed relational values as a concept to acknowledge values formed through people's or communities' relationship with nature, where the relation itself brings about human well-being (Chan et al., 2016; Jax et al., 2018). As such, relational values offer a much-needed complement to valuations of nature that focus on instrumental values, what nature produces for humans, and intrinsic values, nature's worth in its own right (Chan et al., 2018; Himes and Muraca, 2018). Attention to relational values promises to address a web of previously neglected relationships with nature. Yet, with economic framings dominating many aspects of society comes a risk that non-instrumental relational values might be argued for in utilitarian terms for strategic and communicative reasons. This would not only instrumentalize and co-opt them, but also diminish their capacity to claim space for alternative and vital people-nature relationships.

Our study might indicate that people could be identified as providing ecosystem services to soil, in resonance with generative efforts in CES to emphasize the importance of reciprocity in nature-people relations (Comberti et al., 2015). We would like to add an affirmative critique to this reasoning, which risks positioning humans and nature as separate entities with linear flows between them. Such visualizations underestimate the depth of the nature-culture divide and might downplay the rich knotting of soil relations that we have detailed, which form a living web of ecosystem conviviality. Our situated practice-theory of soil arts instead shifts towards recognizing the embodied co-becoming of people, soils, and sites. This is not meant as a mere hair-splitting remark. If neglected, onto-epistemological oversimplifications could undermine the capacity of CES to recognize forms of co-existence where humans come into being with ecological conditions, through everyday life sustaining activities. In other words, ecosystem conviviality recognizes that values may arise not as extracted from nature, but rather, as we show, are co-cultivated in and with ecosystems. We thus support efforts to rework CES to accommodate co-evolution over time of socioecological relations that sustain health and resilience. The numerous evictions worldwide of Indigenous communities from their homeland in the name of nature protection and conservation (Dowie, 2011) testify to misguided approaches to environmental management that disregards the important role local communities and lifeways may play for sustaining ecosystem health. This points beyond recreation, tourism, and idealized conceptions of nature that tends to value the scenic and spectacular (Büscher and Fletcher, 2020; van Bommel and Boonman-Berson, 2022). It also highlights the role of culture in environmental management.

In the CES framework, 'cultural' signifies a separate class of services and is defined as nonmaterial, which as we have seen is problematic since CES emerges as embodied, place-based and co-created relational phenomena (see also Fish et al., 2016; Ojeda et al., 2022; Raymond et al., 2018;). In the expanded framework of NCP adopted by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, culture is no longer a subcategory but instead considered central and pervasive in all interactions between people and nature (Hill et al., 2021). Yet, the separation of material and nonmaterial remains, where the category 'nonmaterial NCP' more or less is analogous to CES. Our examples from urban gardening show that it is complicated to separate material from nonmaterial, as soil care has material effects not only for humans, but for several multispecies others in soils and gardens. It is not the individual or collective value making, or the exchange between humans and soils in the present that are central. Lessons from soil challenge us to approach humans and humus as part of local multispecies soil communities with responsibilities across generations.

Urban gardens contribute to human well-being in many ways. Yet, we wish to emphasize the need to shift focus from benefits to modes of cultivating ecosystem conviviality that notice situated and entangled worldmakings. The integrative notion of cultivating ecosystem conviviality articulates and claims space for urban imaginaries grounded in care practices, intergenerational justice, and future heritage rather than in utility, benefits, and production.

To avoid confusion, we do not suggest replacing CES with a new notion. Cultivating ecosystem conviviality is offered as a complement. Engaging the notion through artist-led open stages offers opportunities to explore and story natureculture entanglements, while at the same time allowing for shifting values, deepening socioecological relations, and building capacity. Importantly, it demands that the limitations of calculability and utility as basis for judgment are clearly articulated and acknowledged in planning and decision-making processes. Practices, places, and conditions all interact and differently afford ecosystem conviviality to emerge and thrive. This is what CES, environmental assessments, and planning need to capture and better acknowledge to ensure the continued cultivation of thriving nature-human entanglements over time.

### **Concluding remarks on artist-led open stages in CES work**

In this chapter, we have offered an artist-led open stage that presents ways to pay attention and story patterns of significance through visiting and listening. Instead of staying with ‘what is’, such stages invite considerations of ‘what if?’ Such convivial acts can help strengthen existing communities and inspire new ones to form – new alliances of strange others in research, planning, gardening, environmental management, and elsewhere.

Our soil arts and humanities, guided by a *Humus economicus* relationality rather than a *Homo economicus* rationality, have worked to recognize how urban soils are cultivated in ways where humans and nature are decommodified, and constantly braided together in new and altering formations of giving-and-receiving, life-and-death. Such formations are always situated in place, but never fixed in time. They are unevenly composed heritage phenomena that entangle humans and the more-than-human in a relational dance that stretches across generations.

Soil-centered gardening responds to calls for re-embedding societies in soils (Krzywoszynska and Marchesi, 2020). It holds transformative potential and contributes to a way of living, learning, relating, and co-creating with nature. There is limited access to such a mode of engagement with nature and soils in many contemporary cities. Yet it shows the potential and vital role urban gardens could play as part of urban ecologies to help enable nourishing sites of local resilience and empowerment, and the convivial co-creation of multispecies urban places. We would like to prompt CES work in planning and environmental management to take into account such situated more-than-human soil entanglement that are on the move towards different futures. This demands a new type of practice-theory and multispecies art and humanities collaborations able to encompass an understanding of the world that does not hinge on an outmoded divide between nature and culture. Instead, it is on the lookout for the unexpected and unplanned, remaining sensitive to unforeseen emergent capacities and relational fields.

For this purpose, we have suggested the notion cultivating ecosystem conviviality to bring attention to how soil-centered urban gardening builds multispecies empathy and caring relations with and in open-ended naturecultures (Figure 22.6). Such engagements are urged by a need and desire to better deal with and adapt to multiple crises and uncertainties, beyond the management of nature as a resource. These local soil-centered gardening practices offer crucial insights for urban and environmental planning seeking to support and learn from existing efforts to grow equitable, sustainable communities.



Figure 22.6 “The importance of being an earthworm”, excerpt from an almanac made for the durational artwork “Four Sisters for Planthroposcene” by the artists Janna Holmstedt and Malin Lobell of (p)Art of the Biomass, at Malmö Art Museum, Sweden, 2021.

Source: Photograph by Malin Lobell.

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