

Routledge Studies in Food, Society and the Environment

EVALUATING SUSTAINABLE FOOD SYSTEM INNOVATIONS

A GLOBAL TOOLKIT FOR CITIES

Edited by

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1 Mapping change

The Urbal approach

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1.1 Introduction

This book describes the Urbal (Urban Driven Sustainable Food System Innovations) research approach that was developed by a multidisciplinary, international team of food system researchers and experts between 2018 and 2023. The Urbal research project, supported by the Agropolis, Carasso, and Cariplo Foundations' *Thought for Food* initiative,¹ provided the time and resources necessary to explore how innovations can produce short-term changes and longer-term impacts on multiple dimensions of urban food system sustainability. Urbal enables and activates a better understanding of the flows in food system innovation processes and the impediments and enablers to increasingly sustainable food systems.

Urbal emerged as a response to the multiple challenges that arise from industrial food systems that generate enormous exploitation, externalities, and cascading socio-environmental damage. On top of increasing food insecurity, environmental degradation, and inadequate livelihoods (Biovision Foundation for Ecological Development & IPES-Food, 2020; FAO et al., 2022; Lacerda et al., 2020), climate change, the COVID-19 pandemic, and conflicts including the war in Ukraine add extra strain for those already marginalized by this globalized food system (Moustier et al., 2023; Lang & McKee, 2022; Blay-Palmer et al., 2021; Kaiser et al., 2021). Confronting these challenges demands a multi-scale approach that addresses multiple sustainability issues at the same time so polyvalent solutions can help improve food and nutrition security, livelihoods, and preserve biocultural diversity, among other co-benefits (Tribaldos & Kortetmäki, 2022; Hebinck et al., 2021).

Calls from policy and decision-makers to understand food systems at the regional scale are growing, with a recognition of the need for evidence to support the transformation of the existing global food system to one that is more regionally focused and sustainable. In the fall of 2022, the United Nations Committee on World Food Security set its 2-year goals and directions for its High-Level Panel of Experts on Food Security and Nutrition. These goals and directions focus on creating more regional food systems through improved urban, peri-urban, and rural linkages with a mandate to “provid[e] independent,

comprehensive and evidence-based analysis, and elaborat[e] its studies through a scientific, transparent and inclusive process” (High Level Panel of Experts, 2023, np). The Convention on Biodiversity COP15 meeting in December 2022 and the resulting Global Biodiversity Framework (GBF) which includes 23 targets and associated indicators further demonstrates the need to monitor and map out food system changes and impacts. Urbal can contribute to developing and tracking regionally relevant evidence about meaningful change brought about through more sustainable food systems, including agricultural and ecosystem biodiversity, improved livelihoods, and increasing gender equity, all included in the GBF.

Urbal’s urban focus is also important given the fast pace and extent of urbanization. While urbanization can be a challenge for future sustainability given the complexity of urban spaces, it can also open up opportunities for solutions. Key questions in applying Urbal are whether existing innovations are broad enough or too narrow to bring about food system transformation within urban regions and how public policy can enable sustainable food system transitions. This can be particularly important when local city authorities are increasingly involved in developing food policies to support more sustainable food systems (Moragues-Faus & Morgan, 2015). It is also important to understand when and how food system innovations result in significant and/or unintended consequences for urban and social landscapes and to note that change is not always positive, intentional, or governable.

Attention to systems is equally relevant for sustainability where the inherent complexity means that solutions often only address one dimension of sustainability. A uni-dimensional approach can result in unanticipated conflicts or require trade-offs with other sustainability dimensions. For example, direct sales from producers to consumers through farmers’ markets can eliminate the need for distributors so that producers earn more revenue while consumers may pay lower prices. However, from an environmental perspective, direct sales don’t guarantee pesticide-free food production, and from an economic perspective it may adversely affect the viability of livelihoods for distributors who work between the farmer and retail spaces. Mapping impacts can help us understand how innovation contributes to sustainability by analysing these complex interactions that result in positive outcomes as well as identify areas for improvement.

This introductory chapter describes the key components of the Urbal approach and provides collective insights from the case studies, called Urban Food Innovation Labs (UFILS), which helped to test and refine this approach. It was written using many internal and publicly available resources developed and gathered during the Urbal process from 2018 to 2023, including author participation in workshops and interviews, participant exit surveys, internal Urbal webinars and meetings, training workshops, and key reflections from the chapters in this book. The subsequent chapters focus on developing the Urbal process and lessons learned. Chapter 2 describes how Urbal was developed across all the 16 UFILs (Figure 1.1) and highlights lessons learned from the



Figure 1.1 Map of all 16 Urban Food Innovation Labs (UFILs).

research including how, by working on the ground with communities, Urbal was developed to enable a deeper understanding of governance, food system supply chains, and consumer practices. Starting with Chapter 3, 8 UFILS out of 16 present insights from their adoption and adaptation of the Urbal approach for their specific context.

The book is structured according to the three over-arching themes that guided the research project and were used, as relevant, to organize, consider and report our findings: (1) consumer practices, (2) value chain organization, and (3) governance. Explicitly differentiating the three themes helped ensure there was a cross section of case studies from different sources. Given the interconnectedness that is inherent to food systems, UFIL missions were nevertheless obviously found to overlap in many cases, so drawing clear thematic lines was not possible in several cases. Chapters 3–5 present three case studies which focus on initiatives that aim to transform consumers' practices, from social gastronomy in Brasilia and Mexico City (Chapters 3 and 4) to school canteens in Montpellier (Chapter 5). Chapters 6–8 explore various innovations focused on value chain organization, from the impact of the use of short food supply chains in the school food system in Milan (Chapter 6) to that of e-commerce in Hanoi (Chapter 7) and that of a private urban farm in Berlin (Chapter 8). Chapters 9 and 10 focus on governance innovations in Milan (Chapter 9) and Cape Town (Chapter 10). The book concludes with a discussion about applying Urbal as a monitoring and tracking tool (Chapter 11).

1.2 The possibilities in applying Urbal

While questions of sustainable food system assessment have been addressed elsewhere (see Blay-Palmer et al., 2019), this work has focused mainly on developing indicators to measure urban food system sustainability. Many of these approaches are time- and cost-intensive and cannot be easily adopted by local authorities or innovators to better inform decision-making processes. In the absence of accessible tools to support decision-making, policymakers may engage in planning without a clear idea of their context and/or the impacts they can expect from food systems innovations (Callon et al., 2001). To address this gap, Urbal offers a simple, participatory methodology that fosters learning in the context of public policy and improved sustainability.

This qualitative, participatory evaluation approach can help build consensus, empower stakeholders, and create agency to support actors as they strive to increase sustainability (Ciaccia et al., 2019; Ceasar et al., 2017). Urbal uses a participatory research approach as it enables community members to identify the outputs, barriers, and enablers of change and impacts on their food system. This approach builds on the foundations of impact pathway assessment, allowing the identification of pathways for action that are relevant to stakeholders (Tribaldos et al., 2020) and that can reach across scales. As an evolving, field-tested approach, Urbal can help innovators, policymakers, researchers, and funders understand how urban innovation unfolds

in place-specific, sustainable food systems (Lever et al., 2022; Rees 2019; Sonnino et al., 2016). By mapping the pathways of sustainability from the possible five dimensions—governance, health, environment, socio-cultural, and economic—the enablers and barriers to sustainable innovation can be made more apparent, helping to activate the benefits of using a systems approach (Hebinck et al., 2021; Gliessman, 2013). As a whole, Urbal can support the decision-making process undertaken by organizations and funders and the creation of policy and programmes by policymakers.

Following the initial development of the Urbal approach, it was tested in 16 UFILs, including 1 in each of Baltimore, Berlin, Brasilia, Cape Town, Lyons, Mexico City, Rabat; 2 in Hanoi, Montpellier, and Paris; and 3 in Milan. To ensure that the approach is widely accessible and adopted, a free, detailed, and adaptable Urbal guide and resource toolkit is available online at <http://urbalfood.org>.

1.3 The Urbal process: A participatory impact pathway analysis

The Urbal approach builds on theory of change and impact pathway assessment. Impact pathway maps have been used and refined for decades, emerging from and alongside other assessment and project management resources such as theory of change, project management tools, and causal modelling concepts and tools. Impact pathway maps were originally created to assess agricultural development projects (Padilla, 2002; Thornton et al. 2017) and initially developed to map out how research projects unfolded and what researchers observed about the impact of their work. In the early 2000s, ex-post impact pathway maps were developed to assess project impacts in complex circumstances (Douthwaite et al., 2003) and used to evaluate agricultural research in response to increasing pressure from funders to provide evidence of social impact (Springer-Heinze et al., 2003). Building on this work, CIRAD, the French Agricultural Research Centre for International Development, launched the ImpresS (IMPact of RESearch in the South) project in 2011 to assess the impact of public institutional research on innovation. ImpresS used a participatory approach to get answers to questions about the value of agricultural research through 13 projects that were either completed or in process (Hainzelin et al. 2017; Faure et al., 2020). ImpresS created impact pathway maps to describe how research impeded or supported the emergence of an innovation, uncovering where power imbalances existed in the process. Urbal takes up and refines the tools developed by ImpresS and others by expanding the focus from assessing academic research to creating tools for innovators working within food systems. These tools can be used to understand and improve sustainability changes and impacts of their work.

Urbal builds on and contributes to these approaches by providing a qualitative and participatory approach and a suite of tools to help innovators, policymakers, funders, academics, and practitioners improve the sustainability of an innovation. The aim of the Urbal approach is to help disentangle the chain of

actions and strategies that push an innovation towards or away from sustainability. Urbal invites a diversity of actors to co-design impact pathway maps that make explicit the changes and impacts of innovations on sustainability dimensions. Impact pathway maps identify three key types of information about an impact: (1) the actual changes produced by the innovation on sustainability; (2) how changes are generated by innovation activities; and (3) the ways that actions and sustainability are interconnected, from short-term changes (outputs) to medium-term (outcomes) and to long-term changes (impacts). The approach therefore assesses not only the intended and unintended impacts on sustainability but also the pathways that lead to change, in some cases addressing multiple scales from the local to the global. It is important to understand that these pathways are not necessarily linear and are often winding or circuitous. There can also be divergence between the various changes and pathways as to how the innovations contribute to different sustainability dimensions. As such, Urbal focuses primarily on the process of change rather than the final result and does not measure the innovation's impact. Impact pathway maps can help identify positive and negative feedback loops as well as unforeseen changes, trade-offs, and contradictions between pathways, which can be particularly relevant when examining complex sustainable food systems.

1.4 A 3+1-step approach

Urbal helps answer one central question: what are the actual changes that result from the innovation? To address this question, Urbal unfolds as a three-step methodology, with an optional fourth step. Step 1 is dedicated to the collection of background information through interviews with key informants that help to raise awareness about the innovation, document the context, develop a timeline and network diagram for the innovation, and in some cases, draft a preliminary impact pathway map. In Step 2, a participatory workshop is organized with practitioners and experts to understand the innovation and map the pathways of activities through changes to impacts. Step 3 offers the opportunity to reflect on the outputs from Step 2 during another workshop or meeting according to needs and constraints. Finally, Step 4 is an optional step that extends the impact pathway maps developed during the workshop to specify indicators to measure and, perhaps, track change over time (see Chapter 11).

This 3+1-step approach was undertaken in various forms in the 16 UFILs over 3 years. These first three steps were outlined at the beginning of the research project in 2018. As the research project developed, we adapted the thematic foci, the terms of reference and the details of how to use the Urbal approach. While we provide an exemplary UFIL process in Box 1.1 that features the work undertaken in Ma Cantine Autrement (MCA) in Montpellier (see also Chapter 5), other UFILs and their learnings are presented in the subsequent chapters of this book.

Box 1.1 Ma Cantine Autrement (MCA)

Ma Cantine Autrement (MCA) was exceptionally well suited to engage in and actively use the Urbal approach. The enabling conditions included a clear request from the local authority in charge of the MCA programme for a long and thorough evaluation; the active and committed participation of faculty and graduate students at CIRAD and the active and thoughtful contributions from people working at MCA. The fact that MCA operates in Montpellier, where the researchers live and work also made this UFIL more robust and iterative. As a result, the MCA research extended the Urbal approach beyond original expectations, and, in some cases, facilitated revisions to the Urbal approach in time to share with other UFIL, especially the Lyons, Paris, and Mexico projects.

Notable insights from MCA include the need to:

- clearly identify relevant and meaningful activities from the interview process and use these to animate the workshop. As a key informant from MCA explained in the exit interview,

During the workshop we used the chronogram and the map we made during the workshop in Step 1, because at that time we mapped all the activities of innovation, and also different actors/stakeholders. In step 1 we had to describe very precisely all the activities of the innovation, and identify all the actors.

- Distinguish between *outputs*, or *direct effects*, and *outcomes* as the intermediate changes from the innovation. As noted in Chapter 5 (the MCA chapter), outcomes help spread activities to more actors than direct outputs. Outcomes result in positive changes but also some (un)avoidable negative changes. The unavoidable changes often result as trade-offs from implementing the innovation. For example, there was an increased workload for staff at MCA as they prepared more meals from scratch that, in turn, required pay adjustments for staff. This effect, among others, needed to be taken into account if this innovation is adopted in other places. *Impacts* are long-term shifts in sustainability as a result of the innovation such as policy changes. There are practical considerations during workshops where it can be fairly straightforward to determine “changes” or “effects” while it is more challenging to locate them on the causal chain as, for example, direct or indirect changes. This distinction between three possible effects

produced by an innovation is a key contribution from the MCA UFIL and consistent with classic distinction made in the impact pathway literature (Hainzelin et al., 2016, 2017). As the Urbal approach explores the sustainability dimensions for each activity, MCA researchers and participants suggested that the sub-dimensions be clearly specified and made consistent as much as possible to improve the clarity and readability of the IP.

- The final recommendation from MCA researchers is the opportunity to

...identify the *brakes and enablers along the IP*, and classify them into: i) *conditions for success* (required to reach the expected impact), ii) *impact facilitators* (not necessary to reach the impact but favourable to its achievement), and iii) *brakes* (i.e. factors that limit the efficacy/performance of the program).

(Chapter 5, p. 92)

There is also the need to distinguish between the conditions needed for success and others that are facilitators but not required, “and to identify if they are *context-related, material or organisational inputs*” (Chapter 5, p. 97). As relevant, with respect to the *outputs and outcomes step*, MCA notes the importance to be clear about,

which group of actors these effects occur, and to classify them in *positive or negative effects*. In addition, negative effects should be classified as “*avoidable*” or “*unavoidable*” effects, in order to subsequently identify how the first could be avoided, and how the second could be compensated.

(Chapter 5, p. 97)

While providing valuable insights, MCA is not universally representative as other innovations come to the process with various capacities. In other cases, this level of precision may not be possible or even desirable as the impact pathway mapping process may be more exploratory.

Social dimensions, such as food access and equity, were a foundational component in the development of specific tools for each step in the Urbal method, including actor network diagrams, interview questions, guidelines for choosing and engaging with participants, and impact maps. Urbal’s participatory approach helps to ensure that the social dimensions of sustainability are incorporated throughout the process, especially during the co-creation of impact pathway maps in Step 2. While the extent of participation in the Urbal process

varied from one UFIL to another depending on the resource availability, capacity, and project goals in each context, overall it was broadly inclusive of key actors implicated and affected by the innovation process. While the overarching Urbal approach itself was developed prior to the research in each lab, it was modified based on input from the various UFILs over the course of the project. The emergent and adaptive nature of the Urbal approach facilitated increased consideration on social innovation in UFILs where the social dimensions of sustainability were not a key consideration at the outset of the project (see Berlin UFIL, Chapter 8).

1.4.1 Step 1: The context

Step 1, as the foundational basis for the Urbal approach, begins with a literature review to provide a context for the innovation and the impact pathway map in Step 2. This includes grey literature and academic sources where applicable to ground the UFIL innovation in both theory and practice. The literature review provides the information necessary to craft effective questions for interviews with innovators and other stakeholders about the development of the innovation and helps to make decisions about the workshop. General categories of questions put to key informants include the following: (1) Was there a clearly defined innovation statement at any point in the process?; (2) How was the challenge defined as an innovation problem?; (3) Was sustainability a consideration?; and (4) How did the innovation develop over time into a range of defined activities meant to directly or indirectly propose alternatives to the dominant food system's regular activities? In general, UFILs interviewed between 4 and 10 people, including innovators and stakeholders representing different stages of the process and experts to help understand the different aspects of sustainability and the larger context.

The interview results typically described the mission and activities of the innovation and enabled the creation of a case description, timeline, actors network map, list of activities created by the innovation and, sometimes, a draft impact pathway map. A key goal was to produce knowledge useful for: (1) the Urbal workshop; (2) innovation stakeholders to help them understand and promote their innovation; and (3) decision-makers and other supporting actors to help them make informed decisions about the innovation.

It is important to note that the Urbal approach—including the interviews in Step 1—is not intended to question innovation objectives, values, drivers for action, or future directions. Rather, the aims are to uncover the actual contribution of the innovation to the various dimensions of sustainability, to build reflexively from these observations, and to identify the various changes and impacts produced by the innovation activities. The interviews and other Step 1 activities provide the context needed to plan and conduct an effective workshop in Step 2.

1.4.2 Step 2: The workshop

The findings from Step 1 create interest, awareness, and understanding about the innovation and help to generate more support for the Urbal initiative. As the key activity of Step 2 of the Urbal approach, the workshop builds on this momentum using a participatory exercise that draws on the collective intelligence to enable discussion about the innovation processes and pathways that lead to changes. The workshop may look very different in different contexts, but it should provide the time and space for key stakeholders and experts to engage in co-creation of impact pathway maps that help to uncover the changes, impacts, enablers, and barriers for selected innovation activities. More information about planning and facilitating the workshop can be found in Chapters 3 through 10 and in the Urbal guide and toolkit. The workshop provides many other benefits including gathering community support for the innovation and capacity-building that, in some cases, can ultimately lead to a Community of Practice.

1.4.3 Step 3: Sharing results

The third step in the Urbal approach provides the opportunity to consolidate the findings from Steps 1 and 2 and share these back to the participants and other stakeholders. Since knowledge sharing goals and capacity are much variable across contexts, Step 3 is the least prescribed step in the Urbal approach. As a result, the UFILs described in this book each found a unique and context-specific way to report their findings from their engagement in the Urbal process back to their communities. In some cases, UFILs prepared reports that were shared directly with key stakeholders (e.g., Berlin, Chapter 8) while in others, UFILs established new relationships and adopted the Urbal approach as part of on-going evaluation (e.g., Cape Town, Chapter 10 and MCA, Chapter 5). These reports are available at <http://urbalfood.org>.

1.4.4 Step 4: Indicators

Urbal can provide a jumping off point for identifying place-specific metrics based on existing indicators (e.g., Milan Urban Food Policy Pact, Sustainable Development Goals, etc.) or support the creation of new initiatives (see Chapter 11 for a more detailed discussion). Impact pathway maps can be used to community-relevant indicators that can help better align global, regional, and local priorities.

Given the policy/decision-maker interest in indicators, Urbal can provide both the inclusive relationships and tools necessary for an iterative process to develop and refine indicators and use them to monitor changes and impacts over time. As observed in Chapter 11, “practitioners can identify metrics that embrace complexity and specificity of where they work and are making change, so the results are place-specific” (pp. 225). Equally important, Urbal provides

the local knowledge and relationships needed to develop relevant indicators for sustainability changes and impacts. While it can be difficult to operationalize meta-indicators and there are challenges in moving between scales, indicators developed using Urbal may offer an important opportunity to benchmark, monitor, and compare innovation over time. That said, there are challenges in moving between scales and it can be difficult to operationalize meta-indicators.

1.5 Considerations when using Urbal

The trial phase for Urbal allowed the researchers to identify some key considerations for people using Urbal. These include Urbal as a flexible and adaptable approach, power asymmetries, the value of engaging with experts, as well as place-based considerations, sustainability dimensions in the context of food systems, innovation, and social innovation (see Chapter 2).

1.5.1 *Urbal as a flexible, adaptable approach*

Urbal is flexible in many ways and, as a result, it has been, and can be, applied to a variety of innovations. We also expect that Urbal can be used in other circumstances including monitoring and tracking changes and impacts over time (Chapter 11). What is possible depends on stakeholder needs, the time available, the result expected, and the capacity for organizing participatory meetings, among other considerations. Given its flexibility, Urbal can be carried out very quickly or more extensively, researchers can be included or not at all, final results may be formalized as a report or utilized in more informal ways, and key findings may be communicated to the general public or only used internally. All this depends on the initial reasons for using Urbal, the organizational needs and capacity, and on budgetary, time, and organizational constraints.

The relevance of Urbal for diverse circumstances became more evident in the last phase of Urbal. As the project wound down, the scope of UFILs expanded to include practitioner led UFILs where project leads were willing to apply the Urbal approach to their own innovation with little help from researchers. These UFILs each offered a unique opportunity to live-test the Urbal approach with great success. The results confirmed the possibility to adapt the method to the particular needs and constraints of UFILs. In the case of one of the UFILs in Paris, la Panaméenne, the impacts were distinguished according to the type of social impact on different public participants enabling the results to be refined with precision. In this case, as well as in the UFIL in Lyons, researchers were only involved in the process to explain the steps and answer questions, while the practitioners selected the interview questions and innovation activities to be mapped based on their interests and needs vis-à-vis the assessment. In the case of the other UFIL in Paris, Bobigny, preliminary impact pathway maps were merged with those produced during the

workshop resulting in a very rich summary map. In the UFIL in Lyons, every decision about applying the methodology, particularly those related to the workshop, including appropriate participants and the innovation activities selected for building the impact pathway maps, was discussed collectively by the team of innovators to better fit the expectations of the evaluation.

1.5.2 *Taking power asymmetries into account*

It is crucial to consider power relationships when selecting participants for the workshop and work to avoid power asymmetries where one or a few voices dominate the conversation at the expense of others (Gray et al., 2022). Flexibility and reflexivity are also key to successful engagement using the Ubal approach. It is crucial to the production of relevant impact pathway maps that all voices are included in the discussion and a concerted effort must be made to include everyone who has been either directly or indirectly impacted by the innovation. And, as participation does not equal inclusion, it is critical that participants feel they can provide feedback and input throughout the process so that their voices are heard, and they have the opportunity to build additional capacity through engagement. In practice, this may require more than one workshop and/or breakout sessions during the workshop to provide opportunities for all participants to express their perspectives and ideas. For example, it may be difficult for new members to speak honestly if innovation leaders are in their group and organizing breakout groups can allow more open conversations. A mix methods approach can also help. For example, it is possible to conduct interviews with more/less vocal people followed by a workshop that might be more stakeholder focused. Interviews can supplement the workshop results for those who might either dominate a workshop or be too intimidated to participate. Clear, plain language that avoids jargon can also help participants feel engaged. As all knowledge and experiences should be treated as equally valuable and valid, lived experience, scientific knowledge, and policymaker contributions need to be given the same consideration.

More generally, engaging participants and ensuring their free and inclusive participation might be a challenge, as participatory approaches might not be commonly used and/or encouraged by the authorities (see Hanoi, Chapter 7). Language issues should also be addressed. In the UFIL in Brasilia, Brazil (Chapter 3), communication challenges arose in Step 2 as workshop as not all participants spoke the same language with the same fluency, and some could not read or write. To make the workshop as inclusive as possible, the UFIL leaders adapted the process accordingly:

Although they [workshop participants] speak and understand Portuguese, some of the participants from traditional populations express themselves more easily in their own languages. For this reason, guiding questions were pre-established by the researchers and organized into four impact pathways: social inclusion, economic justice, nutritional aspects

and environmental dimension. In order to ensure full engagement of all participants, the food system actors were invited to answer questions orally and interact with others in the workshop. Video and sound recordings were collected for the production of a summary video and the audio recordings were transcribed for content analysis.

(Chapter 3, pp. 42)

Concerns around language barriers to full participation in the Urbal process reinforce the importance of inclusion and the need to attend to power asymmetries based on people's capacity to engage in participatory processes. While there was a very explicit effort made from the start of the research to be as inclusive as possible across all UFILs, most UFIL teams were working together for the first time and the trust-based relationships required for participatory research processes to excel were in their initial stages. Accordingly, in some cases the research results may not reflect the needs of all the actors being affected by the innovation.

1.5.3 The value and role of experts and facilitators to the Urbal process

An expert facilitator can enable an inclusive-, smoothly-run workshop by making people feel comfortable, keeping discussions on topic, and creating the space where all participants can express their perspectives, including any concerns or negative observations they may want to share. Sustainability experts, as participants to the workshop, can help provide context for the innovation, insight on the sustainability dimensions and other research, raise gaps or missing questions, and provide support in the dialogues.

Experts in various capacities, not necessarily academics, helped to streamline the Urbal process and uncover important information with participants. As we developed the Urbal approach, especially in the UFILs where core Urbal academics were involved in the interviews and workshops, the findings about the Urbal process were clear and easily interpreted (Box 1.1). In other cases, the results from interviews and workshops were not so obvious and their interpretation required consultation with academic and community leaders. The role of researchers as experts in applying the Urbal approach has varied substantially and we expect this trend to continue as Urbal is adopted more widely. For several reasons including the amount of time available for case studies, the expressed needs by UFIL leaders, and the type of expected outputs, the Urbal approach was tested in multiple UFILs and exceeded the initial expectations about impact pathway maps for Urbal (e.g., MCA and their elaborate maps), or was applied in a shorter period of time than anticipated (e.g., UFILs in Paris and Lyon). In the case of MCA (Box 1.1), there was important iteration between practice and theory by adding insights from the academic literature to the Urbal process. During the analysis phase, great effort was made to ensure interpretations were true to the intentions of workshop participants.

The UFIL in Cape Town also benefited from the deep knowledge of academic experts with the credibility to both provide information and lead the Urbal consultation process. This meant that

When the Nourish to Flourish [the key document that was part of the governance innovation] process started its final phase, that of building the Western Cape Western Cape Food and Nutrition Working Group, URBAL researchers were asked to play a role in the Working Group as independent specialists. Not only were voices from the URBAL researchers included in the process, the figures and tables derived from the methodology were key tools used to build consensus, to shift overly simplistic views, and to demonstrate the long-term evolution of the process.

(Chapter 10, pp. 207)

These examples point to the role of various experts including academic, researchers, and practitioners in facilitating various iterations of Urbal. Accordingly, the results differ based on the expectations and processes adopted and developed by each group, and this flexibility is a hallmark of the Urbal approach. And while experts can help, the UFILs in Paris and Lyons were undertaken successfully by community members on their own.

1.6 Conclusions: The benefits of using Urbal

Given the flexibility and adaptability of Urbal, it is no surprise the benefits of using the approach varied from one innovation and UFIL to another. For stakeholders in urban-driven innovations across the UFILs—including producers, processors, commercial businesses, consumers, citizens, environmentalists, or officials working in government—the Urbal process provided valuable insights about innovation processes and how the changes and impacts on sustainability dimensions emerged from the innovation. Urbal also resulted in the creation of several resources including reports and diagrams that can be used by the organization to be more strategic about the innovation pathways and enable deeper understanding of the innovation process. These materials can also enable clearer communications with others, including funders, policy and decision-makers, and the public. In some cases, the process of creating innovation impact pathway maps contributed to the development of a local food system sustainability network and emergence of as some form of a Community of Practice (CoP) to support the innovation as it grew and changed (see MCA Chapter 5 and Cape Town Chapter 10) (Mohtar & Lawford, 2016; Wenger & Snyder, 2000).

For policymakers, Urbal provides a step-by-step process and related tools to help create a deeper, evidence-based understanding about existing and proposed urban food innovations, including useful insights for the development of programmes and policies. We expect that improved insights about the actual contribution of innovations to the sustainability of food systems could be a

valuable asset in the conceptual development of local food policies that promote and foster innovations in an integrated way (Moragues-Faus & Morgan, 2015). For researchers, Urbal has expanded what is understood about the interactions between urban food system innovations and sustainability dimensions, and the extent to which innovations build towards more sustainable food systems (Blay-Palmer et al., 2022). For funders, Urbal offers a way to assess projects and the extent to which and how they create sustainable changes. The insights from Urbal can also enable more evidence-based and strategic decisions for a range of innovators and organizations (Faure et al., 2020). As demonstrated by the UFILs presented in this book, the flexibility of Urbal allows it to be adapted to the unique constraints and opportunities in each urban food system innovation. The experiences in the UFILs also demonstrate the ability of Urbal to make relationships more dynamic, build capacity, and envision future directions for Urbal users. And, as discussed in the subsequent chapters, each UFIL also provides insights into how to improve Urbal.

Note

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References

- Biovision Foundation for Ecological Development & IPES-Food. (2020). *Money flows: What is holding back investment in agroecological research for Africa?* [Executive Summary]. Biovision Foundation for Ecological Development & International Panel of Experts on Sustainable Food Systems. www.agroecology-pool.org/MoneyFlowsReport
- Blay-Palmer, A., Conaré, D., Meter, K., Di Battista, A., & Johnston, C. (Eds.). (2019). *Sustainable food system assessment: Lessons from global practice* (1st ed.). Routledge. <https://doi.org/10.4324/9780429439896>
- Blay-Palmer, A., Halliday, J., Santini, G., Carey, J., Malec, R., Taguchi, M., van Veenhuizen, R., & Young, L. (2022). The city region food system: Broadening space for urban governance. In *Routledge handbook of urban food governance*, Edited by Ana Moragues-Faus, Jill K. Clark, Jane Battersby, Anna Davies. Routledge.
- Blay-Palmer, A., Spring, A., Nelson, E., & Valette, E. (2021). Food systems—Beyond the buzz. *Rural 21*, 56(3), 7–9. https://www.rural21.com/fileadmin/downloads/2021/en-03/rural2021_03-S07-09.pdf
- Callon, M., Lascoumes, P., & Barthe, Y. (2001). *Agir dans un monde incertain: essai sur la démocratie technique*, Seuil.
- Ceasar, J., Peters-Lawrence, M.H., Mitchell, V., & Powell-Wiley, T.M. (2017). The communication, awareness, relationships and empowerment (CARE) model: An effective tool for engaging urban communities in community-based participatory research. *International Journal of Environmental Research and Public Health*, 14(11), 1422.
- Ciaccia, C., Di Pierro, M., Testani, E., Rocuzzo, G., Cutuli, M., & Ceccarelli, D. (2019). Participatory research towards food system redesign: Italian case study and perspectives. *Sustainability*, 11(24), 7138.

- Douthwaite, B., Kuby, T., van de Fliert, E., & Schulz, S. (2003). Impact pathway evaluation: An approach for achieving and attributing impact in complex systems. *Agricultural Systems*, 78(2), 243–265.
- FAO, IFAD, UNICEF, WFP, & WHO. (2022). *The state of food security and nutrition in the world 2022*. FAO; IFAD; UNICEF; WFP; WHO. <https://doi.org/10.4060/cc0639en>
- Faure, G., Blundo-Canto, G., Devaux-Spatarakis, A., Le Guerroué, J.L., Mathé, S., Temple, L., Toillier, A., Triomphe, B., & Hainzelin, E. (2020). A participatory method to assess the contribution of agricultural research to societal changes in developing countries. *Research Evaluation*, 29(2), 158–170.
- Gliessman, S. (2013). Agroecology and food system transformation. *Agroecology and Sustainable Food Systems*, 37(1), 1–2.
- Gray, B., Purdy, J., & Ansari, S. (2022). Confronting power asymmetries in partnerships to address grand challenges. *Organization Theory*, 3(2), 26317877221098765.
- Hainzelin, E., Barret, D., & Faure, G. (2016). Agriculture research in developing countries: From a "culture of promise" to a "culture of impact". ImpresS Policy Brief. CIRAD. <https://agritrop.cirad.fr/583241/1/Impress%20Policy%20Brief.pdf>
- Hainzelin, E., Barret, D., Faure, G., Dabat, M.H., & Triomphe, B. (2017). Agricultural research in the Global South: Steering research beyond impact promises. *Perspective*, 42, 1–4.
- Hebinck, A., Selomane, O., Veen, E., De Vrieze, A., Hasnain, S., Sellberg, M., Sovová, L., Thompson, K., Vervoort, J., & Wood, A. (2021). Exploring the transformative potential of urban food. *NPJ Urban Sustainability*, 1(1). <https://doi.org/10.1038/s42949-021-00041-x>
- High Level Panel of Experts. 2023. About the HLPE of the United Nations food and agriculture committee on world food security. <https://www.fao.org/cfs/cfs-hlpe/en>
- Kaiser, M., Goldson, S., Buklijas, T., Gluckman, P., Allen, K., Bardsley, A., & Lam, M.E. (2021). Towards post-pandemic sustainable and ethical food systems. *Food Ethics*, 6(4), 1–19. <https://doi.org/10.1007/s41055-020-00084-3>
- Lacerda, A., Hanisch, A.L., & Nimmo, E. (2020). Leveraging traditional agroforestry practices to support sustainable and agrobiodiverse landscapes in Southern Brazil. *Land*, 9(6), 176. <https://doi.org/10.3390/land9060176>
- Lang, T., & McKee, M. (2022). The reinvasion of Ukraine threatens global food supplies. *BMJ*, 376. <https://doi.org/10.1136/bmj.o676>
- Lever, J., Blake, M., Newton, D., & Downing, G., 2022. Working across boundaries in regional place-based food systems: Triggering transformation in a time of crisis. *Cities*, 130, 103842.
- Mohtar, R.H., & Lawford, R. (2016). Present and future of the water-energy-food nexus and the role of the community of practice. *Journal of Environmental Studies and Sciences*, 6, 192–199. <https://doi.org/10.1007/s13412-016-0378-5>
- Moragues-Faus, A., & Morgan, K. (2015). Reframing the foodscape: The emergent world of urban food policy. *Environment and Planning A: Economy and Space*, 47(7), 1558–1573.
- Moustier, P., Holdsworth, M., Anh, D.T., Seck, P.A., Renting, H., Caron, P., & Bricas, N. (2023). The diverse and complementary components of urban food systems in the global South: Characterization and policy implications. *Global Food Security*, 36, 100663.
- Padilla, E. (2002). Intergenerational equity and sustainability. *Ecological Economics*, 41(1), 69–83.

- Rees, W.E. (2019). Why place-based food systems? Food security in a chaotic world. *Journal of Agriculture, Food Systems, and Community Development*, 9(A), 5–13.
- Sonnino, R., Marsden, T., & Moragues-Faus, A. (2016). Relationalities and convergences in food security narratives: Towards a place-based approach. *Transactions of the Institute of British Geographers*, 41(4), 477–489.
- Springer-Heinze, A., Hartwich, F., Henderson, J.S., Horton, D., & Minde, I. (2003). Impact pathway analysis: An approach to strengthening the impact orientation of agricultural research. *Agricultural Systems*, 78(2), 267–285. [https://doi.org/10.1016/S0308-521X\(03\)00129-X](https://doi.org/10.1016/S0308-521X(03)00129-X)
- Thornton, P., Schuetz, T., Förch, W., Cramer, L., Abreu, D., Vermeulen, S., & Campbell, B. (2017). *Responding to global change: A theory of change approach to making agricultural research for development outcome-based*. *Agricultural Systems*, 152, 145–153. <https://doi.org/10.1016/j.agsy.2017.01.005>
- Tribaldos, T., & Kortetmäki, T. (2022). Just transition principles and criteria for food systems and beyond. *Environmental Innovation and Societal Transitions*, 43, 244–256. <https://doi.org/10.1016/j.eist.2022.04.005>
- Tribaldos, T.M., Oberlack, C., & Schneider, F. (2020). Impact through participatory research approaches: An archetype analysis. *Ecology and Society*, 25(3), 15.
- Wenger, E.C., & Snyder, W.M. (2000). Communities of practice: The organizational frontier. *Harvard Business Review*, 78(1), 139–146. <https://hbr.org/2000/01/communities-of-practice-the-organizational-frontier>