

Breaking the 'scaling-up' stalemate

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While the terms “change of scale” or “scaling-up” do not really convey the nature of the challenges to be addressed, the need for linking local innovations and global issues remains relevant. Looking for large-scale impact is a legitimate ambition of policymakers and funding agencies; this calls for moving beyond the local impact of innovations and development projects designed to transform food systems. Yet, experience over the past 30 years has shown that impact at scale does not always live up to expectations. It reveals how intermediate territorial levels matter to link local innovation and solutions to global challenges. However, those levels are not always effectively taken into account in scaling-up doctrines or strategies. The intermediate level is either not thought about at all, or poorly thought through; it is the missing link where the ‘contamination’ or spread of ideas and ‘bricolage’ take place, where cobbling together of territory-based solutions is designed and implemented. This is the only way to ensure that innovations are consistent with development challenges and have an impact at scale.

WHAT'S AT STAKE

The mirage of scaling-up

The concept of scaling-up encompasses various ways of learning from a successful pilot experiment, replicating it “horizontally” in other locations, or “vertically” by fostering policies and programmes on a larger scale and reaching a larger number of people (Linn, 2012). Taking agroforestry as an example, Coe et al. (2014) showed that in-depth transformation cannot be achieved just by promoting a small number of virtuous practices on a large scale and merely replicating them.

In the simple mathematics of a change of scale, multiplying successful experimental initiatives would meet the expectations of a wider impact. For many stakeholders, any global change begins on a local scale, because of various seemingly highly relevant reasons: acquiring precise knowledge of situations; compensating for deficiencies of professional organizations, the inconsistency of public policies, the failings of certain states; building on proximity between stakeholders, co constructing and managing common goods; making a rapid impact visible. Since the 1980s, local development laboratories have thus mushroomed here and there. Those initiatives were followed by calls for “scaling-up”, the watchword of donors, keen to justify the effectiveness of their actions and investments, and their impact on global objectives.

The notion of scaling-up by multiplying local solutions is polymorphous and questionable for various reasons. First of all, it is best not to equate local with sustainable, and local should not be considered inherently virtuous (Conaré and Bricas, 2021). As examples, local production processes or supply chains do not always have a lower carbon footprint (Stein et al., 2022); local competition may be destructive if not regulated; the control of specific attributes for quality products by local organizations can prove prohibitively expensive; decentralized storage options would generally lead to an increase in losses and wastage; local benefits can result in negative environmental and social consequences for the immediate vicinity or at long distance, etc. Secondly “success stories” often cannot be replicated, irrespective of the methodological efforts made to differentiate between generic and specific, original and singular. The repeatability of results obtained by farming families in the Massaroca semi-arid region of northern Bahia State in the Brazilian Nordeste, in a suitable context, calls for contextualization and an understanding of the conditions for success, as shown by Tonneau

(1994). It also calls for adapting intervention patterns, which then usually differ from the original ones, as confirmed by many evaluation studies and the analysis of innovation systems and processes shedding light on the limitations of linear and diffusionist approaches. Thirdly, scaling-up by replicating and multiplying results ends up promoting universal solutions, the “do’s” and “don’t’s” for decision-makers, strung out like so many 1s and 0s in a computer code. By masking the context, denying the very existence of any scale becomes paradoxical. Lastly, actors who innovate may themselves be reticent to see its generalization, afraid of losing control or seeing their success jeopardized (Bricas and Douillet, 2021).

It is delusional to imagine that a change of scale alone can have a major impact. Nevertheless, trial and error and experiments inspired by such an idea have proved fruitful. First of all, the multiplication of local initiatives in all countries should be acknowledged. Certain cities have proved to be extremely innovative and have initiated far-reaching transformations that are more difficult to implement on a national scale. Networks are being set up to compare, learn, structure and advocate, such as [the Milan Pact](#), an international agreement currently signed up to by over 200 cities worldwide to support the design and appraisal of urban food policies.

Neither are multilateral commitments lagging behind, such as the United Nations Food Systems Summit (UNFSS) in 2021. It reflects a major shift in paradigm and agenda: food now takes centre stage in issues of nutrition and public health, environment and ecosystem health, social justice and political stability. Like commitments to climate change mitigation (NDC) for UNCCC or biodiversity loss (NBSAP) for UNCBD and because of a weakened multilateralism, the Summit is banking on actions to be implemented at a national scale. Having been unceremoniously sidelined in recent decades, the national dimension is now back with a call to draw up roadmaps to transform food systems in all their multiple and interconnected dimensions. As an actor and observer of these events, it is clear that their outcome is not enough to bring about the expected changes. Yet, such roadmaps will remain necessary and help changing the narrative on the levels to be considered, drawing together expectations towards the implementation of innovative approaches based on the complementarity of local, national and global actions.

The virtues of 'bricolage' for coordinating actions on different levels

A MULTI-LEVEL PERSPECTIVE BASED ON THE ACTIVE PARTICIPATION OF MESO-STRUCTURES

Aligning local, national and global actions is crucial to guiding our societies towards greater sustainability. By their very nature, these actions are interconnected, but their coherence or convergence cannot be taken for granted (Caron, 1998). For example, implementing new forage production practices may require prior intervention at national level, to change land tenure status or access to credit. If not, failure to disseminate a forage technology could too easily be attributed to an unsuitable environment, rather than questioning its appropriateness. Coordinating actions at different scales is especially important in the fields of food and agriculture, insofar as innovation generates social, environmental, health and political impacts elsewhere, whether intended or not.

To help us navigate such a complexity, Geels and colleagues (Geels, 2002; Geels and Schot, 2007) recommend adopting a multi-level perspective, distinguishing between niche innovations, action regimes and the sociotechnical landscapes that shape them. Niche innovations break free from dominant practices and plant the seeds for thinking and acting elsewhere. In some cases, they also help to identify actions to be taken at other levels, to overcome any bottlenecks and build the necessary coalitions of players. However, such processes depend on the existence and commitment of intermediate-level social structures – or “meso-structures” – which enable local action to nurture and influence national and international action via advocacy and balances of power, and enable innovation to contribute to new regimes of action or, conversely, to the local translation of systems and guidelines developed at macro level. As a social construct, the territory is a meso-structure capable of playing a major role. Whatever its size, it is a space where the link between collective action and regulatory frameworks, and between local and global, is fashioned, so as to transform the world by shaking up the balances of power inherent to any transformation (Caron et al., 2017).

Transformations arise from the embeddedness of actions implemented at multiple levels and from interactions between political and administrative units (country, state, municipality), social networks, supply chains. These levels of organization rarely coincide and fostering synergies between organizations and players with different ways of operating is challenging (Caron, 2011). Programming an intervention means identifying and targeting the relevant levels of organization, as well as the meso-structures that enable coordination of actions undertaken at different levels. The example of livestock systems in the Brazilian Nordeste illustrates this: in Massaroca, where initiatives to support “small-scale production” were tested, an analysis of practices resulting from the establishment of a local credit scheme revealed processes of individual appropriation of collective rangelands (Caron, 1998). Rather than establishing small

forage areas on their own land to feed their livestock in the dry season, as recommended by technicians, livestock farmers funded the purchase of barbed wire to fence off for their own private use vast areas of grazing land previously available to all. This led to changes in all the livestock farming systems, with new breeding, herd reproduction and product marketing practices. This situation resulted in reflection about the need to transform the collective management of rangelands; in the State of Bahia, the question of adapting legal and fiscal regulations for rangeland status and use has been raised. Massaroca leaders have played a central role, not hesitating to travel to the capital to call for legislative changes (Sabourin et al., 1996).

ASSUMED 'BRICOLAGE'

As social processes are unique, interactions between the organizations, players and processes active at different levels seeking to transform societies and make them more sustainable do not respond to any ready-made model that can be used to prescribe one path rather than another, or predict its effect. We thus propose using the concept of 'bricolage' (Cleaver, 2017), based on experiments, failures, mistakes and learning in situations of uncertainty, without any normative reference or prescriptive frame of reference as back-up. As already shown, the territory offers a framework, and represents a sort of laboratory focusing on the virtues of local innovation, where experiments, new initiatives and learning systems can be set in place and quite simply await observers, so that lessons of general interest can be drawn from them.

Let us now return to the Massaroca 'laboratory' in Brazil. It has become a symbol of what can be done to bring family farmers out of oblivion, after being ignored by policies, by showing that “smallholders” can have projects, can be responsible respondents, and can organize themselves. Even so, the achievements were not enough to satisfy politicians and donors at the level of Nordeste and its two million family farmers. Although “agreeable”, this experiment involving 250 families carried out in a marginalized area did not address political and social challenges. Agroecological zoning of the entire Nordeste (1.5 million km²) was then carried out adapting the methods tested in Massaroca. While it offered a relevant framework for drawing up policies at that scale, it remained just a bureaucratic tool in support of local and territorial innovation dynamics (Tonneau et al., 1997). We therefore embarked on a zoning exercise based on interviews with stakeholders in the municipality of Juazeiro, in which Massaroca is located, and which is characterized by considerable polarization between family farming and enterprises benefiting from irrigation and integrated into the global economy. The results served to identify priorities to be applied throughout this 5600 km² territory (Caron, 2011). At each scale, be it local, municipal or regional, the results gave rise to innovative, distinct and complementary actions, without claiming the prevalence of any optimum scale, or the fact that innovation would be first and foremost a local process.

Bridging local and global through 'contamination'

Engagement in international bodies and dynamics (HLPE, UNFSS) confirms the importance of local approaches in instilling change: the participation of representatives from local communities or municipalities sheds light on innovative initiatives and, in return, results in frequent references in reports and recommendations. This engagement also confirms the challenge for ensuring the co-existence of a set of distinct transformations in different places, while guaranteeing overall coherence of the direction: the recommendations of international reports insist on taking into account the diversity of contexts; national calls invite territorial authorities to engage; the latter express the need for new policy frameworks to remove lock-in and increase the scope and impact of their actions. Thus emerges the ambition of a rainbow revolution for food systems, with an intensity similar to the green revolution of the 20th century, and in reference to the symbol of South Africa.

Simultaneously implementing coordinated and coherent actions on a world, national and local scales, as in some sort of Marshall plan that does not speak its name, does not seem feasible given the diversity of political contexts and the complexity of the issue. In each context, food systems are specific and their transformation calls for adapted solutions to be implemented through actions taken at different scales, that a plan, no matter how well designed, would be incapable of delivering. We therefore propose a pragmatic approach through 'contamination'. It is an opportunistic approach, in the positive sense of this term. It is intentional and consists in making the most of the spaces and the historical and political momentum for possible change, in analysing the processes at work to learn from them and in generating changes at other scales. This may mean learning from a local initiative, such as the one in Massaroca, to overcome some bottleneck – financial, land tenure, etc. – and give rise to a new national policy; or it could be an innovative national policy, such as the Mexican food law modifying food environments, thereby stimulating new local behaviours, such as reducing the consumption of sweet beverage and advocating for such a measure in international arenas.

Like the organization in France of the Assises de la Transition Agroécologique et de l'Alimentation Durable (cycle of conferences on agroecological transition and sustainable food systems), based on promoting initiatives taken by certain cities such as Montpellier, 'contamination' is not just replication. That cycle provides the opportunity to learn from experimentation, apply the lessons learned, whether they involved failure or success, and to design and innovate elsewhere by promoting the following pillars.

SUPPORT AND PROMOTE LOCAL INITIATIVES

Local dynamics remain essential for testing new forms of collective action. This bedrock of development holds true for action at all scales, including for State interventions. Local distribution channels, collective restauration, innovative production and consumption practices, etc., make it possible to explore options for innovation that transcend sectoral compartmentalization and silos.

COUNT ON "CHAMPIONS OF CHANGE"

By banking on the ability of "champions of change" to anticipate and mobilize, fostering their leadership and their ability to advocate for a cause is key to politically organize change (Lahlou et al., 2011; Lahlou et al., 2024). Remember here the example of the Massaroca leaders travelling to the capital to explore the possibility of changing land tenure legislation.

SHOWCASE ALTERNATIVES AND BUILD FUTURES

Advocacy promoting alternatives by highlighting their merits as a form of "food activism" (Siniscalchi, 2025) is essential for making food a political issue and engaging stakeholders in new dynamics. Countless changes are occurring at a local scale, right in front of our eyes, and we see them without looking at them (Sachse et al., 2025). We need to promote them, place them in the spotlight and identify the obstacles they face so as to generate changes nationally and internationally.

ADDRESS POWER ASYMMETRIES TO BREAK FREE OF THE STATUS QUO

Thanks to mediation processes, common goals and projects can be drawn up despite diverging positions and values across stakeholders, and polarizations that lead to deadlock. Balancing changes in power asymmetries and co-construction is the only way of escaping from the naivety of consensus incapable of breaking free of the status quo, and from the violence and uncertainty of dual confrontation (Caron, 2021). This presupposes the elucidation of a joint project, a secure space for advocating for contrasted views and positions and for building agreements, a shared information and data-based knowledge system to stimulate discussion (Sabourin et al., 2001).

All these aspects constitute, enable and define 'contamination'. These are the elements on which the Montpellier Process relies to strengthen collective intelligence and structure a changing process that involves academia (Caron et al., 2022). It aims at creating spaces for dialogue across stakeholders with different positions, originating from or representing sectors that are indifferent to each other or sometimes in conflict (agriculture, environment, health, etc.), and active at different scales. In its ambition to address controversies (Caron, 2025), it relies on dialogue across stakeholders involved in transforming food systems, on mediation to characterize disagreements and on negotiation to explore the opportunities for agreement. It proposes to identify, document, promote and build upon numerous on-going dynamics, whether or not they benefit from outside support. Particular attention is paid to possible 'contamination' from one scale to another. To ensure that local initiatives generate transformations at other scales, the Montpellier Process proposes to effectively characterize contexts and define meso-structures and dialogue processes capable of conveying learning and stimulating 'bricolage'. It is also geared towards the reverse process, so that international resolutions generate new national policies and local dynamics. It relies on the 'contamination' and 'bricolage' we have just described.

CONCLUSION

At the global level, the UNFSS Summit provides an opportunity to devise new actions at local and national scales. The commitment made for national governments to draw up roadmaps to transform food systems with the perspective to combat climate change is in line with the Emirates Declaration signed by 159 countries at the UNFCCC COP 28 in Dubai. Governments agreed to review such commitments in Belem at the end of 2025 at UNFCCC COP 30. To ensure that such major resolutions do not go unheeded, there is an urgent need to bridge local, national and global dynamics, as well as the gap between perceptions of global inertia and pointless local activism by banking on initiatives from governments and meso-structures. As a conclusion, articulating scales is key.

While the terms “change of scale” or “scaling up” do not really convey the nature of the challenges faced, linking and aligning local innovations and global issues is central. This means learning from successes and failures; the ambition is not to reproduce and multiply results by increasing resources through identical arrangements, but to enhance promising dynamics and generate new ones. The “scaling-up” stalemate conceived as a top-down geometric increase should be replaced by a framework for understanding and for acting coherently at different scales as occasions arise. The UNFSS organizers are banking on the design and implementation of national action plans and roadmaps. If the required bridges across scales are not organized, while paying specific attention to Science-Policy interfaces (Hainzelin et al., 2023), such an intention is doomed to failure, or at most to random and fleeting successes. To organize these bridges, we recommend strengthening territorial relays that are capable of ensuring interactions between local and national networks. This is a field of scientific experimentation in its own right, as much as it is an issue for political intervention.

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