Scaling Brief #3:
Scaling approaches and tools

Purpose and background

This Scaling Brief was developed by CGIAR Science Leaders and scaling specialists to provide guidance in the design and implementation of scaling within the CGIAR initiatives (see **Brief #1** for more background information). Its purpose is to support scientists and research managers in operationalising scaling interventions that adequately address the scaling principles introduced in **Brief #2**. These principles align well with the scaling needs commonly identified by scaling practitioners in the context of the CGIAR (Table 1). This calls for **scaling tools** and holistic **scaling approaches** (meaning integrated sets of tools and procedures for scaling activities in different contexts). These tools and approaches help to address the multi-dimensional factors that must be considered if scaling is to produce a useful and responsible impact. They also help to manage scaling related interventions. Professionalising the manner in which technical, social, governance innovations are scaled up is essential if the ambitious goals of the One CGIAR are to be achieved[1]. Available scaling approaches and tools do offer solutions for various needs (Table 1), but they differ in their scope, depth and intensity of use. Key features – and differences – of a selection of approaches and tools that are (or potentially could be) used widely in and beyond One CGIAR are listed below. Additional options and information about the practical and scientific aspects of scaling are referred to in the Annex.

Table 1: Linking the needs of scaling practitioners to scaling principles and approaches/tools

Scaling practitioners expressed needs related to:	Reference to scaling principles in Brief #2	Examples of relevant approaches and tools
Prioritising investment decisions in scaling proposals based on their likelihood to achieve scale	3,5	Stage-Gating Projected Benefits Analysis Tool
– Evaluating, managing and reporting the scalability (and impact) of a specific innovation	1, 2, 5	
– Identifying context-specific, complementary innovations (in an innovation package) that must be targeted to achieve scaling success	2, 3	Scaling Scan and Scaling Readiness
– Identifying suitable partners for developing, validating, disseminating, and scaling innovations	4	
Estimating and measuring positive economic and social impacts	5	Projected Benefits Analysis Tool Various *ex-ante* impact assessment approaches
Designing activities aimed at transformative changes in whole food systems (rather than scaling up innovations that had been identified ex-ante)	1	System transformation approaches

[1] i.e., "ending hunger through science as well as innovations that advance the transformation of food, land and water systems in a climate crisis" (DRAFT One CGIAR Operational Structure, p. 15)

Overview of scaling approaches and tools

a) STAGE-GATING

Purpose: Stage-gating is a performance management approach used to manage the process of design, testing, validation and scaling of both technological and non-technological innovations in One CGIAR, while acknowledging that such processes are characterised by limited predictability and controllability, and that not all innovations will lead to positive outcomes at scale.

In One CGIAR, stage-gating **will be** designed to:
- inform resource allocation to all initiatives and components, and to assess initiative design and implementation at different stages (including, e.g., design stage or implementation stage), featuring *Proceed*, *Adapt/Modify*, and *Cancel* decisions,
- create space for discovery, failure and learning, while also nurturing and scaling innovations that have a high impact potential,
- ensure a steady flow of continuous innovation, as well as continuous investment in the different stages of innovation design, testing, validation and scaling.

Description: Stage-gating supports critical reflection and decision-making on which innovations or combinations of innovations (i.e. innovation package) and investments have the highest likelihood of resulting in positive societal outcomes and impacts at scale. Its design will be tested during 2021 and the mechanism will be validated by 2024. (see here for further information). Stage-gating will be based on four principles: 1) Enabling transparent, evidence-based resource allocation; 2) Supporting reflection, learning and adaptive management; 3) Facilitating performance management using specific indicators and metrics; and 4) Encouraging innovation, creativity and action.

b) SCALING READINESS

Purpose: Scaling Readiness is a scientific approach which supports organisations, projects and programmes in achieving their ambitions to scale innovations.

Scaling Readiness is mostly **useful** in order to:
- systematically improve the scaling performance of scaling activities by using scientific methods to assess the scaling readiness of innovation,
- manage a portfolio of interventions aimed at scaling using standardised approaches,
- support development, implementation and the evaluation of scaling strategies,
- develop a shared understanding among various stakeholders regarding the details of the intervention and the innovations that the interventions aim to scale.

Description: Scaling Readiness helps to understand innovations in a comprehensive manner. This includes quantitative analyses of their *innovation readiness* (development stage of an innovation) and *innovation use* (the extent to which an innovation is already being used in society). It also helps to identify the actions that could accelerate or enhance scaling. To achieve this, Scaling Readiness provides a 5-step approach (1. Characterise, 2. Diagnose, 3. Strategise, 4. Agree, 5. Navigate) that iteratively supports the design, adaptive implementation and monitoring of scaling strategies. It does not focus on single innovations, but uses innovation packages as the unit of analysis. Instead of perceptions, it uses documented evidence, and it can help to develop scaling capacity and select effective and capable partners and partnership models.

Scaling Readiness was **not** designed to
- yield quick outputs; a certain degree of data input is needed for evidence-based results,
- achieve system transformation, as it aims to scale a selected package of innovations for a given objective in a specific context,
- capture detailed impacts achieved by the intervention.

c) SCALING SCAN

Purpose: The Scaling Scan is a user-friendly approach that helps scaling practitioners to formulate a realistic, context-specific and responsible scaling ambition for a selected innovation.

The Scaling Scan is mostly **useful** in order to:
- rapidly scan the strengths and weaknesses of a scaling strategy and generate immediate information for scaling practitioners, enabling them to adjust scaling strategies or identify a need for new collaborations, for instance,
- facilitate and support discussions on systematic scaling strategies with a range of scientific and non-scientific stakeholders,
- understand what scaling a selected innovation would require in order to generate sustained impacts,
- be applied in different formats ranging from face-to-face workshops of two hours to two full days or through virtual sessions.

Description: It guides its users through several tactical questions and a scoring of ten key scaling ingredients (e.g., finance, demand, value chains). This allows them to recognise multi-disciplinary bottlenecks and opportunities that should be addressed to achieve scale. Much of the data input for the Scaling Scan is generated in stakeholder workshops, and the tool helps to rapidly prepare and structure scaling discussions with key partners. The tool is divided into 3 major steps: 1) Building a realistic scaling ambition, 2) Assessing the scaling ambition and 3) Assessing bottlenecks and opportunities.

The Scaling Scan was **not** designed to
- deliver a scaling strategy – instead, it clearly shows the points that should be addressed for successful scaling and not how to do it,
- give exact answers, as it is based on experiences rather than on evidence.

d) Projected Benefits Analysis Tool

Purpose: The Projected Benefits Analysis Tool is aimed at designing frameworks for the initial screening of projects/investments. These frameworks help to guide investment designs and decisions. It is an analytical tool for assessing the impact and/or the value for money of project proposals.

The Projected Benefits Analysis Tool is mostly **useful** in order to:
- make an initial screening of projects/investments to justify a funding decision
- estimate the expected impact of projects/investments/ research portfolios
- check plausibility/effectiveness of the theory of change

Description: The assessment is based on the potential contribution of an investment to defined impact targets and its contribution to SDGs and the likelihood of impact, but aspects such as the adequate consideration of gender/youth can also play a role. The methodology is currently being refined and will soon be tested on practical cases (completion is planned for early 2021).

The Projected Benefits Analysis Tool was **not** designed for
- designing or managing scaling activities,
- identifying strategic partnerships.

Conclusions

Various actors in One CGIAR have diverse scaling needs depending on their directorate, science group and region. **Scaling approaches** like Scaling Scan or Scaling Readiness can support them in, e.g., managing innovations, interventions, stakeholder engagement and monitoring. Specific needs can be addressed by using **tools**, such as the Projected Benefits Analysis Tool, or by blending and customising existing approaches and tools (see, e.g. the ILRI Impact at Scale framework). However, the degree of understanding regarding the diversity of approaches/tools and their main feature areas still varies among CGIAR actors. There are also some needs such as the management of time, knowledge and costs, that cannot currently be sufficiently addressed by the available tools.

Complementary to approaches and tools that focus on bottom-up **scaling activities** aimed at selected innovations and innovation packages, guidance is required for designing top-down activities that target **transformative changes in whole food systems** by improving policies, partnerships and research designs (see, e.g, the Food System Transformation Framework in the Annex). In addition, the proposed One CGIAR Operational Structure distinguishes between scaling and system transformation. Differentiating scaling up and system transformation in tool classification can therefore increase the fitness of the tools for different One CGIAR purposes.

The diversity of needs and actors requires a transparent, comprehensive and integrated tactic for tool utilisation. Approaches for investment decisions could benefit from the consideration that innovation development and scaling processes are often non-linear and may require iterations. Depending on their aims, contexts and beneficiaries, target and support needs differ between innovations and scaling strategies. For example, stage-gating design can respond to this by featuring stages with flexible durations and context-sensitive assessment criteria provisions for learning.

The CGIAR Performance and Results Management Framework 2022-2030 provides a space for relevant scaling approaches and tools that can be applied to support the introduction and implementation of the 2030 Research and Innovation Strategy. We recommend that One CGIAR documents the capabilities of different scaling and system transformation approaches/tools to address diverse One CGIAR needs – and that it establishes mechanisms that will not only consolidate and rationalise the tools, but also develop the capacity of key One CGIAR staff and partners to learn, use and adapt these tools. The documentation and the mechanisms can complement the early testing and further development efforts of CGIAR stage-gating in 2021, and introduce a collaborative design dimension to the testing and further development processes.

Annex: Overview of selected tools and approaches and further reading

Name and link	Brief description

Tool and approaches for scaling innovations

Scaling Up Management (SUM) Framework	The **SUM** framework has been developed to serve three related objectives, namely 1. to provide an easy and straightforward way to assess the scalability of proposed interventions, 2. to provide guidelines for designing pilot projects and other innovations "with scale in mind", 3. to provide tools and approaches to help practitioners manage the scaling process. **SUM** offers advice on a three-step (1. develop a plan 2. establish preconditions 3. implement scaling up process), ten task process for effective innovation scaling. It is to be noted that step 1. includes a scalability assessment tool with 32 items over seven model categories.
Agricultural scalability assessment Tool (ASAT)	**ASAT** has been developed by USAID's Bureau for Food Security to provide a qualitative appraisal of an innovation's scalability. **ASAT** provides information on the strengths and weaknesses of the innovation regarding its scalability, the most promising scaling up pathways, and information on the extent to which contexts facilitate scaling. **ASAT** consists of two tools: an Agriculture Scaling Decision Tree (ASDT) and an Agricultural Scalability Assessment Matrix (ASAM). A dashboard summarizes the results of the tools and provides recommendations based on that analysis. The ASDT helps to select the appropriate scaling up pathway for an intervention (i.e., private, public, or donor driven). It should be applied first, since scoring via the ASAM is contingent on the choice of pathway.
Impact of Research in the South (ImpresS)	With **ImpresS**, CIRAD has developed two separate approaches 1) to better understand innovation processes and impacts in agricultural research for development interventions and 2) to increase its impacts. 1. The **ImpresS ex-post** approach allows to better understand the innovation process and assess the impact of innovation for development interventions. This method has two main particularities: being participatory, as major actors are involved in the analysis of the intervention impacts. Moreover, this approach enhances the learning processes and capacity strengthening between the different actors (researchers, farmers, producer organizations …). 2. The **ImpresS ex-ante** approach supports the formulation of a common vision and plausible impact pathway of an intervention, taking impact into account since the conception of an intervention. The approach is participatory, iterative and adaptive. It puts the actors in an innovation process at the center of the construction of plausible impact pathways. It relies on three main principles: the focus on the generation of outcomes, on long term processes and on building a shared vision on the hypothetical impact narrative among partners. Three main tools are used: the innovation story, the outcome mapping and the impact pathway.

System transformation approaches

The Food System Transformation Framework	The **Food System Transformation Framework** enables to analyze how potential trade-offs between food system dimensions (such as access, safety, affordability, and resilience) can be addressed and how synergies can be enhanced. The framework consists of three major stages: 1. understand societal demands arising from different societal transitions in the areas of agriculture, demography, income and diets, and climate change, 2. identify the full range of intervention strategies, ranging from technologies and market development to social innovation and adaptive governance regimes, 3. evaluate the interventions and leverage points where there is an established evidence base demonstrating the likely impact for key stakeholders. The framework recommends tools and literature to go through each of these steps. It allows to better understand the interfaces between structural change processes in society and the impact of different types of development interventions or business investments.
Six fundamental concepts of Systems thinking	Some concepts and tools that are proposed for developing and advancing systems mindsets for complex problem solving.

Annex: Overview of selected tools and approaches and further reading

Ex-ante impact assessment approaches

Outcome Mapping	**Outcome Mapping** is an approach for planning and assessing development programming that is oriented towards change and social transformation. It provides a set of tools to design and gather information on the outcomes, defined as behavioral changes, of the change process. It supports learning in projects or programs about its influence on the progression of change and helps those in the assessment process think more systematically and pragmatically about what they are doing and to adaptively manage variations in strategies to bring about desired outcomes. **Outcome Mapping** puts people and learning at the center of development and accepts unanticipated changes as potential for innovation.
Other impact/outcome assessment approaches	• International Initiative for Impact Evaluation • Publications of CGIAR's SPIA (Standing Panel on Impact Assessment) • Tools and guidelines of the International Fund for Agricultural Development (IFAD)

Further reading

Scaling Up: A Framework and Lessons for Development Effectiveness from Literature and Practice	Based on a review of scaling up literature and practice, the report provides a framework for the key dynamics that allow scaling processes to happen. The authors explore the possible approaches and paths to scaling up, the drivers of expansion and of replication, the space that has to be created for interventions to grow, and the role of evaluation and of careful planning and implementation.
Scale Up Sourcebook	The book is informed and inspired the Conference "Innovations in Agriculture: Scaling Up to Reach Millions", organized by Purdue University. It is an easy-to-use guidebook targeted to a broad and diverse audience of stakeholders associated with scaling agricultural technologies and innovations. The book has nine chapters: designing with scale in mind; assessing scalability; using commercial markets to drive scaling; financing the transition to scale; creating an enabling environment for scale; tailoring metrics, monitoring, and evaluation to support sustainable outcomes at scale; and the critical role of intermediary and donor organizations.
Scaling Impact	The book Scaling Impact introduces a new and practical approach to scaling the positive impacts of research and innovation. It is inspired by leading scientific and entrepreneurial innovators from across Africa, Asia, the Caribbean, Latin America, and the Middle East. The result is a different perspective on how to achieve impact that matters, which also challenges the more-is-better paradigm of scaling. To encourage uptake and co-development, the authors present actionable principles that can help organizations and innovators design, manage, and evaluate scaling strategies.
Special issue on Science of Scaling in Agricultural Systems	The Special Issue "Science of Scaling: Connecting the pathways of agricultural research and development for improved food, income and nutrition security" includes recent relevant contributions about the scaling principles outlined in **Brief #1** and learning from scaling activities.