

Scaling Brief #1: Scaling Web Conference Series with the CGIAR Science Leaders

Background, Contents and Outcomes

Agricultural Research for Development plays an important role in achieving the Sustainable Development Goals and making the world's food systems more sustainable. The products, services and solutions of the CGIAR can facilitate significant positive change for producers and consumers in partner countries. Scaling these innovations is one of the key goals of the new CGIAR 2030 Research and Innovation Strategy and an important driver of the One CGIAR process, which is aimed at stronger integration of its capabilities, knowledge, assets, and people.

The heart of the Research and Innovation Strategy is food system transformation, i.e., “a major shift – bringing about significant positive change in the governance and functioning of a system.” There multiple levers available for changing systems; for example, political changes may favour action for or against climate change mitigation, and disasters such as droughts or a global pandemic drive changes in the ways that rural areas and agri-food systems operate. Most of the effects induced by these levers cannot be foreseen, with the result that no single organisation can control them. However, one important lever does lie within the field of expertise of the CGIAR and its partners – the uptake of agricultural innovations. CGIAR has a critical role to play here by identifying inventions from upstream research and conducting translational research so they can be applied as innovations in practice at scale. However, not all innovations are suitable for wide uptake by beneficiaries; their cost per unit may be too high, or they might be too knowledge-intensive. One important

scaling role the CGIAR plays is to assess, adapt and improve the scalability of its innovations. The scaling interventions themselves can also be enhanced by the CGIAR, enabling them to make a significant contribution towards the attainment of the Sustainable Development Goals.

Scaling has been one of the central topics in various CGIAR Research Programs, and important conceptual advances have already been achieved by different research groups. Many scientists with a strong interest in scaling participate in the Agriculture and Rural Development Working Group of the Global Community of Practice on Scaling Development Outcomes. Although scaling-related questions increasingly receive attention in the CGIAR, a systematic exchange on scaling among CGIAR Science Leaders has not yet taken place. As a response to this gap, **four Scaling Web Conferences** were jointly organised between August and November 2020 by

- members of the CGIAR Science Leaders community, representing the heads of CGIAR Research Programs, Platforms and Research Directors,
- members of the CGIAR System Management Office,
- other members of the CGIAR interested in scaling and the
- GIZ/CGIAR Task Force on Scaling.

The goals of the series of web conferences were to

- contribute to a common understanding of scaling in general and the role of the CGIAR in scaling activities;
- identify ways of integrating comprehensive scaling concepts into the design of future research programmes of One CGIAR;
- create awareness of opportunities and challenges for interventions aimed at changing the behaviour and transformation of food systems; and
- to create awareness of inclusive scaling strategies with regard to gender/diversity.

The conferences featured contributions from scaling scientists and practitioners within the CGIAR and outside of it. They included an introduction to the **GIZ/CGIAR Task Force on Scaling**, an input from representatives of the **CGIAR GENDER Platform** on “gender and scaling” and a presentation of **HarvestPlus’s** Strategy for “Catalysing Scale up of Biofortification” (i.e., increasing the density of vitamins and minerals in a crop). Larry Cooley (MSI, Global CoP on Scaling) provided views on scaling from a non-agricultural perspective. A real-life example was shared for identifying, analysing and integrating existing scaling tools and management approaches in a CGIAR Research Program (**Impact at Scale**), followed by a panel discussion with developers of scaling approaches and tools. Results from surveys on the status of scaling in the CGIAR were also presented. A total of 23 people were directly and indirectly involved as speakers, panellists and moderators.

During the course of the seminar, three work groups were formed; they worked on

- principles for scaling,
- scaling approaches and tools and
- harmonising the terminology of scaling within the CGIAR.

Each work group ultimately produced a brief on a specific aspect of scaling. These scaling briefs were developed as supporting material for the new CGIAR 2030 Research and Innovation Strategy, but they can also be applied in broader contexts. **Brief #2** lays out five actionable principles built on established scaling guidelines that can be used to embed scaling in CGIAR initiatives. By presenting key features of selected scaling approaches and tools that are (or could potentially be) widely used in the CGIAR, **Brief #3** is aimed at supporting CGIAR scientists and research managers in operationalising scaling for projects and research investments that adequately address these scaling principles. It also refers to further information in its Annex. **Brief #4** contributes to the harmonised use of scaling terminology.

It became clear that there are heterogeneous perspectives about scaling in the CGIAR. The series of web conferences marked the beginning of a closer dialogue between CGIAR staff who are interested in scaling and a wider community. The outcomes of the webinar series can support the scaling interventions of the CGIAR and its partners in different contexts and stages of implementation in the future.

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Neil Palmer Photography for CGIAR

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Scaling Brief #2: Scaling Principles

This Scaling Brief was developed by CGIAR Science Leaders and scaling specialists to provide guidance for the design and implementation of scaling within the CGIAR (see **Brief #1** for more background information). The following principles build on established scaling



1. Pursue a shared vision of change

Reach a shared understanding with partners and other stakeholders about how they want agri-food systems and rural areas to be. Then agree on intended outcomes and impacts, e.g. for whom, where, when and with whom that vision can be achieved. Next, develop a shared understanding about what must be scaled by assessing the scalability of different innovations for various contexts and beneficiaries (see **Brief #3**). Determine how the scaling pathway and process must look if the intended changes are to be achieved in a sustainable and responsible manner. Recognise the fact that in dynamic situations, we can only make improvements and not permanent fixes. Available tools and approaches related to scaling and systems thinking help us to accommodate and integrate different perspec-

guidelines, and they can help to guide the design of the new CGIAR investments to enable sustainable impact at scale, but can also be applied in many other contexts. The Annex of **Brief #3** provides further information.

tives, unravel complexity, broaden options for action and identify leverage points (see **Brief #3**). All the solutions must be based on the needs of various stakeholders and on their practices, beliefs, aspirations and financial means. This will enable the solutions to be embedded in local systems after a project ends. However, you may have to deal with friction, conflict, disruption and consensus building among different stakeholder groups. Other requirements are: building on previous interventions, aligning with other initiatives and seeing your project as a piece of the puzzle that addresses parts of the system for a limited period of time – and while you move towards these goals, remember that your ultimate aim is to achieve the shared vision of change.



2. Be responsible in achieving the vision of change

Continuously assess whether or not the increased adoption of the innovation/outputs is resulting in positive outcomes and impacts and the desired synergies, but also be aware of unintended impacts, both positive and negative. Think about an optimal or an appropriate scale, rather than a maximum scale. Maximising the scale of the outputs may do more harm than good. For example, solar powered

irrigation may be beneficial for a farmer, but if it is applied at scale, the water may run out quickly if no accompanying rules and enforcement mechanisms are in place. Note that any scaling activity is likely to alter – or perpetuate – power relations and access to resources at different levels. This can have negative and unintended impacts on stakeholder groups, especially on the young, the elderly and women.



3. Design for scaling from the outset

Go beyond the boundaries of piloting to ascertain whether or not an innovation performs well and apply it in various usage scenarios and in different contexts. Environments in which innovations are tested are often only semi-controlled and therefore do not accurately reflect the reality at scale. This means embedding projects in local realities to ensure the continuation of the desired change does not depend on externally introduced incentives or unrealistic levels of capacity development. Pilot various modes of collaboration

and different strategies which can surmount barriers that hinder the attainment of the desired impact. This could mean working with innovative financing models, for example, developing capacity where it is lacking, addressing perverse incentives which work against integration of the innovation in local contexts. CGIAR should invest in the science of scaling (see the Annex of **Brief #3** as part of this design process – this will improve the practice of scaling and enhance impacts.



4. Nurture local ownership and leadership

Engage capable and motivated local actors for the design, implementation and evaluation of the projects. The CGIAR can play an important role in facilitating and catalysing local change; ultimately, however, only local private and public sector partners can grow and sustain the impact at scale. It is therefore important to decide (together with different beneficiaries, partners and/or other persons affected by the innovation) whether or not the achieved changes are “good”. Perform a critical appraisal of the incentives which enable (or discourage) different groups of stakeholders to support (or not support) the scaling process beyond the project. Support local capacity to innovate,

collaborate and scale – this will enable local actors to lead change process. Build on – and leverage – local movements for change, and design the intervention to meet local stakeholder needs. Be sure to consider how a broadly adopted innovation will affect different groups in different ways – and make sure that the most vulnerable will never be worse off. Engaging with those in power can help you understand why they may wish to drive or block a scaling process, and it can lead to a dialogue that may find common agreement between groups. This approach also includes being aware of our own (perhaps biased) opinions that drive us and influence our decisions.



5. Launch, learn and adjust

Avoid “paralysis by analysis”, embrace complexity and regard scaling as an both an art and a science. Identify investable scaling projects by applying transparent and broadly accepted processes. Launch, learn and adjust. Use the principles and the ultimate vision for change as a compass to point you in the right direction. Learn from the change process itself, both with and for local actors. Go beyond adoption studies and use metrics and monitoring methods, which create a general feeling of confidence that changes are indeed happening, or that they are likely to happen, within or beyond the project boundaries (space and time).

Use dynamic evaluation methods during the scaling process to understand how both intended and unintended impacts change as scaling proceeds. In addition, critically assess whether or not the scaling vision and the pathway towards the desired outcome are still appropriate, since the contexts are always dynamic. Keep the scaling plan simple, remain flexible and have the courage to change your course or even perform a U-turn based on what you learn during implementation. A growing number of scaling approaches and tools is available to support these processes (**Brief #3**).

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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 achieved¹. 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 <i>ex-ante</i> 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.

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

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.

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.

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: 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.

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.

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Annex: Overview of selected tools and approaches and further reading

Name and link Brief description

Tool and approaches for scaling innovations

<p>Scaling Up Management (SUM) Framework</p>	<p>The SUM framework has been developed to serve three related objectives, namely</p> <ol style="list-style-type: none"> 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. <p>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.</p>
<p>Agricultural scalability assessment Tool (ASAT)</p>	<p>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.</p> <p>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.</p>
<p>Impact of Research in the South (ImpresS)</p>	<p>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.</p> <ol style="list-style-type: none"> 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

<p>The Food System Transformation Framework</p>	<p>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:</p> <ol style="list-style-type: none"> 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. <p>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.</p>
<p>Six fundamental concepts of Systems thinking</p>	<p>Some concepts and tools that are proposed for developing and advancing systems mindsets for complex problem solving.</p>

Annex: Overview of selected tools and approaches and further reading

Ex-ante impact assessment approaches

Outcome Mapping	<p>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.</p>
Other impact/outcome assessment approaches	<ul style="list-style-type: none"> • 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	<p>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.</p>
Scale Up Sourcebook	<p>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.</p>
Scaling Impact	<p>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.</p>
Special issue on Science of Scaling in Agricultural Systems	<p>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.</p>



Scaling Brief #4: Scaling glossary

This scaling brief was developed by CGIAR Science Leaders and scaling specialists to provide guidance for the design and implementation of major CGIAR initiatives (see **Brief #1** for more background information). It explains key terms of relevance, building on those already recognized by the CGIAR, and which are used

Beneficiaries

The individuals, groups, or organizations, whether targeted or not, that benefit, directly or indirectly, from the chain of events that research has contributed to.

Impact

A durable change in the condition of people and their environment brought about by a chain of events to which research, innovations, and related activities have contributed.

Innovation

A new idea, product, service, and/or solution capable of facilitating impact through innovation systems involving multiple partners and enablers.

Innovation package

The combination of innovations that are needed for scaling in a specific location or context.

Innovation system

The interlinked set of people, processes, assets, and social institutions that enable the introduction and scaling of new ideas, products, services, and solutions capable of facilitating impact.

in **Brief #2** on principles and **Brief #3** on approaches and tools. The glossary builds partly on definitions provided by the [CGIAR 2030 Research and Innovation Strategy](#) and the [CGIAR glossary of terms for monitoring, evaluation, learning, and impact assessment](#).

Intervention

A project, program, policy, or other initiative taken by actors aimed at influencing behaviors or outcomes. In terms of scaling, certain interventions can be aimed at developing and scaling an innovation.

Monitoring

A process of continuous or periodic collection and analysis of data to compare how well a project, program, or policy is being implemented against expected progress and results, in order to track performance against plans and targets, to identify reasons for under or over achievement, and to take necessary actions to improve performance.

Outcome

A change in knowledge, skills, attitudes and/or relationships, which manifests as a change in behavior, to which research outputs and related activities have contributed.

Partners

Organizations or individual stakeholders that the CGIAR collaborates with to achieve its goals.

Projected Benefits Analysis Tool

An upcoming scaling tool that is aimed at designing frameworks for the initial screening of projects/ investments (see **Brief #3** for a description).

Research

Generation and communication of data, information and knowledge on an empirical basis.

Responsible scaling

Responsible scaling requires ethics of co-responsibility for ensuring that the impacts from the innovation are well captured by the intended beneficiaries and minimizing negative societal or ecological consequences, whether these impacts are intentional or not and whether they can be fully foreseen or not.

Scaling

Scaling of innovations is a deliberate and planned effort to enable the use of innovations to have positive impact for many people across broad geographies.

Scaling approach

An integrated set of scaling tools and procedures that can be used to design and implement scaling activities in different contexts.

Scaling Readiness

Scaling Readiness is the name of a scaling approach described in **Brief #3**. As part of this approach, scaling readiness is also the combined score of innovation readiness and innovation use. Scaling readiness reveals the potential and key bottlenecks in an innovation package for a specific scaling objective and context.

Scaling Scan

A scaling approach that helps to formulate and assess the scalability of scaling an innovation in a specific context (see **Brief #3** for a description).

Scaling strategy

A set of coherent activities, stakeholders, and stakeholder engagement models to enable scaling.

Science

Rigorous hypothesis-based research.

Science of scaling versus practice of scaling

The science of scaling is research on which scaling approaches and practices work in certain contexts and why. Science of scaling can inform the practice of scaling which is the use of those strategies and practices. Ideally the two are linked in a virtuous feedback loop (See annex of **Brief #3** for more information).

Stage-gating

A recognized performance management approach used to manage the process of design, testing, validation and scaling of both technological and non-technological CGIAR innovations (see **Brief #3** for a description).

System

A set of interacting entities and processes that form a complex whole.

System transformation

A major shift – bringing about significant positive change for the majority of people involved – in the governance and functioning of a system. It requires action from multiple stakeholders who work toward common goals along transformation pathways.

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