

Info Note

The why, what, who and how of scaling agricultural innovations

Key messages from the CCAFS SEA and cross-CRP Scaling Conference, Hanoi 2018

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Getting ready for system change

- In recent years, there is growing international demand that research outputs shall bring quality benefits to millions of farmers, contributing to the SDG 2030.
- Scaling up agricultural innovations takes place in complex systems of agricultural transformation.
- Therefore, sustainable scaling should build into “sustainable change at scale”. This calls for cooperation of all involved stakeholders.
- To support sustainable system change, we also need to be open to challenge ourselves and change the way we work.

Within CCAFS, scaling is understood as the set of processes required to go beyond pilot projects, for bringing more quality solutions to millions of farmers in a fast, equitable and lastingly manner. This is especially important in the context of climate variability, climate change and uncertainty about future climate conditions. Experience has shown that scaling innovations can take different pathways and involves a wide range of partners, capacity building, finance, and communications skills. It has also shown that scaling takes place in complex environments and requires institutional support.

In recent years, the CGIAR and partners already achieved a wide range of development outcomes on local, national, regional and global levels. However, uncertainties and open questions with regard to scaling remain. At the occasion of the CCAFS SEA Annual Event in Hanoi 2018, the CGIAR/GIZ Task Force on Scaling organized a Conference on Scaling across the different CGIAR Research Programs (CRPs), to provide a forum

for capitalizing on existing experiences, sharing and learning.

“Interactive Scaling”

70 participants of 34 research, development, farmer, policy and finance organizations shared their perspectives and experiences, actively contributing to the Scaling Conference’s aim to understand scaling as a dynamic process that involves a wide range of different stake-holders, pathways, tools and methodologies. Formats featured impulse presentations, panel discussions and multi-stakeholder group works.

The following synthesis reflects the key messages of the Conference’s discussions throughout the day. It does not claim completeness of the topic of scaling innovations.

Why is scaling important?

With the call for agricultural transformation, the international development community increasingly focuses on agricultural innovation, with a trend to support new technologies, prototypes and pilots. Still, it is commonly recognized that “the size of the problem does not match the size of the solutions”.

“Pilots never fail, pilots never scale!”

Pilot projects are often set up and managed in very controlled environments that do not reflect the reality. They are shielded from many influential forces such as politics and markets. This might work for a small project, where the reward is doing another project. By pilot projects, however, the aim should be to test not only the innovation but also the processes around it for scaling: Which collaboration works best, who will build the

leadership for the push after the project duration, how is the access to market finance, and more. This is also an opportunity: The way you pilot an innovation already influences the chance to reach later scale.

What is meant by scaling?

There is still poor conceptual clarity on what scaling is, which results in a narrow focus on numbers, with the assumption that a certain adoption rate at a defined time, usually the end of the project, will lead to the desired impact, in a sustainable way. But is more always better?

“Sustainable change at scale”

Reaching scale is not automatically sustainability. This concept ignores dropout rates, and the complex environment in which scaling shall take place. The focus on the simple and the visible goes at the expense of the people and the relationships (SNV). To support scaling of an innovation, all relevant actors and entities need to accommodate the change. Therefore, to achieve sustainable impact for many people, scaling should lead to sustainable system change (CIMMYT). A project should be designed in a normal, real life situation. Sustainable change will be “the new normal”, paving the way to sustainable change at scale.

Who is involved in scaling?

We cannot bring innovations to all farmers, and we do not have to – we can collaborate with those people and organizations that have the same vision, the drive and mission to reach scale. These are not necessarily the farmers themselves, but the people with the most reach and influence in our scaling environment. These can be all public or private players, as long they have a comparative advantage in their field. The ideal partner matching brings together people with complementary skills and capacities.

“Work with the right partners in the right way.”

In pilot projects, farmers are often told to adapt an innovation by a strong project leader. In the real world, we have to find the farmers that have aspirations and will be the pioneers, the early adopters. Farmers are also entrepreneurs, no uptake without business incentives.

The private sector, as key actor for scaling low emission innovations along the respective value chains, has two main motivations: Supporting low emission production as a way to highlight their commitment to sustainability, and to mitigate the risks to their own value chains. The CEOs also have little time. When engaging with the private sector or financier, we cannot expect them to “come and sit with us for three months to discuss on how to do things.”

Policy makers will have to be convinced, which can require a lot of time. Communication has an important role, especially in settings where the commitment is

voluntary (vs regulatory). Consensus is a slow and expensive process. Campaigning for scaling is also specific and different from campaigning in public. It needs to adapt to the different languages of the ministries, and also of the sectors.

Donors are not only giving the money, but they are also part of the scaling processes. They influence the design of funding instruments, which in turn influences our chances to achieve scale. E.g., as trend of the last 25 years, the number of donors doubled, the number of projects doubled, while projects’ duration and size halved! At the same time, donors, trust funds and financiers influence what is being scaled out, by whom and where, depending on national partners’ and investors’ interests.



Figure 1. Group picture CCAFS Scaling Conference Hanoi.

How to achieve scale?

Scaling innovations in complex systems brings a full set of systemic challenges, especially when viewed from a national, regional or global perspective. ACIAR, GIZ, FAO and World Bank representatives shared their experiences and discussed key issues put by the audience:

“Systemic challenges for scaling”

- **Focus:** To achieve system change, we need to find the bottlenecks/leverage points. Along the Pareto principle, what is the 20% intervention that could lead to 80% of the impact?
- **Targeting:** The most vulnerable areas and people are not necessarily the ones with conditions and infrastructure that lend themselves for scaling.
- **Coherence:** There are multitudes of frameworks and agendas across the different sectors needed for sustainable scaling. Coverage is mostly limited for the challenge to coordinate efforts among key players.
- **Data:** For monitoring or tracking impact like sustainability or climate change, it is crucial to have aggregate data from the field to the national levels. With the existing national M&E systems, this becomes a big challenge.
- **Competing interests and priorities:** Each part of the system has different interests and priorities. This accounts for ministries as well as for private sector industries and other stakeholders, and can lead to biased design of projects/ programs and influence the implementation.

- **Finance:** Finance is limited. Banks increasingly focus on catalyzing private sector capital. But it is not only about the quantity of money that has to be provided, but also about the quality of how the money is utilized. “Something that has to happen within that system itself that leads to exponential proliferation throughout the system.”
- **Continuous learning and innovation:** The environment keeps changing, and systems are highly context-specific. We need to build capacities in our local partners and organizations working on the ground to keep adapting appropriate technologies with nuanced, contextualized approaches.
- **Behavior change:** The need for behavior change accounts for all actors in the system, from the farmers themselves, all actors in the value chains and up to the consumers. We need to question our assumptions critically along each step that we are taking, and reflect upon if they are realistic, given the operating context.

“Good practices and working areas in progress”

The presentation and discussion of CGIAR and partners’ scaling projects and initiatives reflected the diversity of technologies and practices, scaling pathways, good practices and challenges on implementation level. One shared take-away from the Conference was that indeed, sharing with small groups of different stakeholders brings new aspects into each initiative. It also triggered an ongoing discussion about where and how to improve:

Translation, packaging and communication

For allowing an innovation to become scalable and an action in the field, the first large investment should go into the translation of the research into a product that is useful for the farmers. One way to decide what and how to scale are “empathic interviews” with the farmers and stakeholders, which seek by active listening to reveal contexts, motivations, and possible incentives. This might also include reframing the product, e.g., emphasizing on food safety instead of “low emission food”, and packaging.

Finally, the product needs to be easily understood and usable by farmers, and/or the respective users. Complex research and knowledge shall stay at the “back front”, with an easy “forefront” for communication. Also need to adapt the communication to the different languages of the stakeholders and the particularities of users in different countries.

Systematically building partners’ capacities

Long-term partnerships are not only crucial for learning and exchange, but also to understand the capacity of the different stakeholders. Workshops and conferences alone will not provide enough information to make impact for the communities. We need to have a clear and systematic approach and invest more in our partners’ and farmers’

capacity building, because “we will not save the world by flying around the world as consultants”.

Inspiring Initiative: Nong Thon Moi Program

The Vietnamese National Target Program Nong Thon Moi - New Rural Development - aims to scale out countrywide to 9,000 communes. The increased impacts of climate change initiated the MARD to look for additional solutions. After a visit to the CIAT-led Climate Smart Village (CSV) in Ma, Yen Bai Province, the NTM program now aims to incorporate the CCAFS CSV approach into their program. What convinced them to promote this approach?

“The CSV approach uses local tradition and local knowledge. We work with communities in very different contexts. When disaster strikes, they are the first to respond. So communities must be informed, and empowered to use their local knowledge to deal with the situation.”

Textbox 1. Nguyen Minh Tien, Director General NTM, sharing his experiences, together with Dr. Le Bui Vinh, CIAT.

Responsible scaling

We do not want to scale at all costs, but also look out for unintended consequences. It might happen that the concepts we want to scale will affect negatively on the intended outcomes, or have unexpected consequences on the livelihoods or environment. This will be even more true for “general applicable solutions”. Good practices e.g., related to farmer business planning are tools that allow thorough but simple assessments and calculations. “We must know that the farmers have a chance in the market before we scale up”.

Apart from social and environmental aspects, scaling is also about governance. We need to make sure that there is “no regret, no risk, higher income, no added labor, or no other cost.” Farmers may hold you accountable for promoting an innovation. In some cases, governments, and also researchers, are even legally liable.

Use tools systematically

Are we using tested and validated tools? There are a number of tools already available, also from other sectors, which are useful for the different actors in the different steps of project planning, design and implementation.

Especially with regard to scaling, the task would not be to develop more tools, but to test and scientifically validate the existing ones. These might also help donors and financiers to more systematically assess scaling proposals.

Tools for Scaling

A number of tools for scaling are already available, or in the process of validation for agricultural innovation:

The Scaling Scan (PPPLab & CIMMYT):

A practical tool to determine the potential to scale, which unpacks the concept of scaling to make it more understandable and actionable. It looks at 10 scaling ingredients to: fully understand what scaling your innovation would require; facilitate an exploration about the challenges scaling your innovation is likely to face and the opportunities it can leverage; identify points of attention that should be addressed in the scaling strategy; and monitor and learn how the scalability of the project changes over time.

More information on <https://ppplab.org/2018/11/3223/> and <https://www.cimmyt.org/scaling-scan-a-simple-tool-for-big-impact/>.

Business Plan Development (promoted by WorldFish), a set of tools including:

- Value Chain Analysis
- Stakeholder Analysis
- Empathic smallholder need assessment
- Competitor Analysis
- CANVAS Business Plan Development
- Gross margin calculations
- Transportation costs
- Microfinance need assessment

More information at: s.uhlenbrock@cgiar.org.

Scaling Readiness (CGIAR Research Program Roots, Tubers and Bananas, RTB)

A decision support system for “how to” achieve higher scalability performance, by creating evidence for making strategic choices on

- What to work on
- On what to invest
- Who to work with
- How to engage with partners

More information at: m.sartas@cgiar.org.

The Adoption & Diffusion Outcome Prediction Tool ADOPT (CSIRO/ACIAR)

An MS Excel-based tool that evaluates and predicts the likely level of adoption and diffusion of specific agricultural technologies and practices, with a particular target population in mind.

- Predict
- Inform
- Engage

More information on: <https://adopt.csiro.au/> and <https://research.csiro.au/software/adopt/>.

Textbox 2: A choice of tools for scaling, introduced at the Scaling Conference in form of a World Café Format.

Science for scaling or science of scaling

Are we using science to inform our scaling strategies? Journals, donors and the research community increasingly recognize the emerging science of scaling. Still, science-informed scaling strategies, like many pilots, may have been developed in a “green-house”, an ideal situation. In reality, scaling is more a learning by doing process, with many trials and errors and continuous improvement along the way. However, opportunities abound to produce science from our scaling work and to contribute to the global, also peer reviewed, knowledge base!

Adaptive management

Experience has shown that in many cases the best outcomes are the unexpected ones. Theories of Change are important tools for reflecting on assumptions, but we need to be open and challenge and question ourselves as we go, based on the actual demand.

Since the context in which projects operate changes continuously, new skills are needed to address the different issues. Are we benefitting from the right people in our team? We need more adaptive employment strategies, to have broader capacities. E.g., people with history in the private or financial sector.

At the same time, when actively driving scaling processes, researchers themselves will change their roles. The more advanced the process, the more likely they will become conveners, brokers, facilitators and advocates.

Are we using efficient and effective management options? Good practices relate to reviewing projects frequently and at the end of each cycle, and fostering communication across projects/programs.

MEAL for scaling

We do not know how to measure the success of scaling as sustainability or system change. A related challenge is balancing the emphasis of outcomes and results against the process orientation. M&E of scaling is different from impact assessments. We also measure too quickly. System change takes time.

Regarding impact, there are trade-offs between indicators of food security, nutrition, poverty, natural resource management and more. In addition, different partners are advancing different indicators. Still, there is lots of unused potential of new formal and informal partnerships with organizations working on the ground and well cognizant of the respective contexts, for thinking together and generating and sharing data and experiences.

We also need partners to help us to measure system change not only in the project, but beyond, in the real world. In a complex system, we cannot trace back all changes to our intervention. We all contribute to the

outcomes. Attribution chokes us! This mindset keeps holding us back. Answers in that area could pull our work in a new direction.

Are we using M&E and Learning (MEAL) systematically as a tool to generate learnings on what works for scaling, and what does not? E.g., how to identify the technologies and practices that have most potential for adoption?

Efficient investment

Not only investors, also farmers need to see a business cases to invest in agricultural innovations. Inclusive business models work with farmers' groups and link farmers to markets, using the market pull for achieving scale along the entire value chain. Micro-finance institutions and community-managed revolving funds can play an important role for business incubation.

Building agricultural literacy in banks and financiers to invest in other areas than cash crops will help to develop rural markets. A good practice is also to bundle different investment areas, e.g., making the business model of climate information start-ups more sustainable by linking to agricultural insurance.

Inspiring Initiative: SNV's AgResults Program

AgResults is a \$147 million multi-donor initiative using pay-for-results prizes to incentivize and reward high impact agricultural innovations that improve outcomes in the sectors Food Security, Health, Nutrition and Livestock. It promotes the adoption and scaling of new technologies by the private sector to benefit smallholder farmers, by a staged testing and scaling process, without initial funding by SNV. Competitors that have a promising innovations and show good results in the first stages receive a cash prize and may continue in the next, more scaling oriented phase.

Currently, out of 22 companies that set out to increase rice yields by reducing emissions in the Mekong Delta, 9 companies have won the cash prize of 75,000 USD in the third phase.

Why do private sector companies with working innovations still need SNV's prize? - "Because it is an incentive that companies overcome market barriers themselves and to accelerate. We need systemic change in the market, not in 5-10 years, but now!"

Text Box 3: Alison Rusinow sharing the AgResults Program supported by SNV and partners.

Also, private public partnerships and government and private sector procurement can be targeted for increasing the impact of finance. Can we support investors on local, national and global level by providing and using data for identifying bottlenecks and efficient investments?

The disruptive element

Uber just forced through the market within months, with global penetration and massive adoption. In agriculture, average adoption takes 30 to 40 years. What might be the disruptive element to speed the super-change?

It might be related to our own mindset. We researchers and implementers are playing only with 0.1% of the gain money, thinking from one project to another. That is only a fraction of what the market finance, private sector or commercial banks could invest. Go out and link! In this aspect, we are still illiterate, and a bit too comfortable. We work with the same people we went to university with. Opportunities lie in working with different companies, communication companies, transport companies – "why don't we work with Uber?!"

How to mainstream scaling?

"Even among ourselves, we need behavior change"

To actively support system change, we have to be open to challenge ourselves, and to change the way we work. For the participants of the Conference, this means:

- Have a scaling mindset. Think simple, embrace risks, get out of the lab and the comfort zone, allow for failures and document them, foster start-up culture.
- Get stakeholder buy in from the very beginning. Make use of multi-stakeholder think tanks or hackathons.
- Understand the needs of farmers, partners and stakeholders – needs, incentives and goals are all different.
- Maintain continuous communication with farmers, partners and stakeholders; build in feedback loops.
- Build long lasting partnerships, be transparent, foster joint ownership. Share learnings and data.
- Be precise in what you want to scale and target. Also be aware that not everything needs to be scaled up.
- Make use of unexpected outcomes and undiscovered potential.

For some of these, we need institutional support from our organizations. Structures for fostering innovation and communication are different from pure technology transfer. We need commitment from our management, providing the space and opportunity to think about scaling, and to walk the talk. This implies:

- **Recognition:** Value and invest in scaling as an important and exciting field of action and emerging Science of Scaling, both crosscutting and stand-alone, like gender and M&E.
- **Resources and support systems** for scaling: Make available the needed time, effort, people and money.

Build staff's capacity (e.g., for systems thinking, business planning...), reduce staff turnover and revise Key Performance Indicators. Develop work plans, M&E and knowledge management for scaling. Take on facilitation role to connect to markets, networks, disruptive technologies, task forces and think tanks.

- **Consistency** for building momentum: Bundle scaling pathways in programmatic portfolios and long-term strategies (10 years minimum), so that projects can become building blocks for sustainability to achieve mid- and long-term impact. Rethink our Partnerships, with MoAs for joint fundraising and long-term cooperation in country or regional strategies.
- **Advocacy** - together with our partners - for funding mechanisms that allow for innovation and scaling, with the principle of contribution versus attribution.

Next steps

In the Workshop on Scaling connecting to the Scaling Conference, 25 participants of 11 CGIAR centers and CCAFS partners identified 10 key messages for Change Management and Institutionalization of Scaling within their organizations. Stay tuned for more updates!

Thanks to all participants from:

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Further materials

- The full set of conference presentations is available [here](#).



The CGIAR/GIZ Task Force on Scaling

To bring forward the CRPs and centers' scaling activities, as outlined in the CGIAR Strategy and Results Framework 2015–2030, GIZ supports Integrated Experts at different centers and CRPs, who since 2017 form the so-called Task Force on Scaling (TaFoS). Currently, TaFoS scaling experts are active in three CG Centers that lead five CRPs.

This Conference on Scaling was organized and facilitated by the CGIAR/GIZ TaFoS members:

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About CCAFS Info Notes

The CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) is led by the International Center for Tropical Agriculture (CIAT). CCAFS brings together some of the world's best researchers in agricultural science, development research, climate science and Earth System science, to identify and address the most important interactions, synergies and tradeoffs between climate change, agriculture and food security. Visit us online at <https://ccafs.cgiar.org>.

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