



# INCEPTION REPORT

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## Evaluation of Capacity Development activities of CGIAR



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Evaluation  
Arrangement

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## Acronyms and Key Terms

AAS	CRP on Aquatic Agricultural Systems.
A4NH	CRP on Agriculture for Nutrition and Health.
AR4D	Agricultural Research for Development. Also used to refer to all research done in CGIAR but not restricted to it.
AUC	The African Union Commission.
BecA-ILRI Hub	Biosciences eastern and central Africa-ILRI Hub, a shared agricultural research and biosciences platform, located at and managed by ILRI in Nairobi, Kenya.
BI	Bioversity International. One of CGIAR’s 15 Centers.
CAADP	The Comprehensive Africa Agriculture Development Program.
Capacity	The ability of people, organizations, and systems to consistently achieve results that resemble what was originally aspired. Capacity development, consequently, is then defined as the process whereby people, organizations and systems unleash, strengthen, create, adapt and maintain capacity over time.
Capacity Building	Synonym to “capacity development” but usage is avoided as it connotes that no capacity existed before.
Capacity Development	The process whereby people, organizations and systems unleash, strengthen, create, adapt and maintain capacity over time.
CD	Capacity Development.
Capacity Enhancement	Synonym to “capacity development”.
Capacity Strengthening	Synonym to “capacity development”.
CapDev	Capacity Development. Acronym introduced by the CapDev CoP, not widely used beyond CGIAR, and used only in relation to the CapDev CoP in this evaluation.
CapDev CoP	CGIAR Capacity Development Community of Practice.
CCAFS	CRP on Climate Change, Agriculture and Food Security.
Center	CGIAR Research Center. One of CGIAR’s 15 international research institutions.
CIAT	Centro Internacional de Agricultura Tropical. One of CGIAR’s 15 Centers.
CIFOR	Center for International Forestry Research. One of CGIAR’s 15 Centers.
CIMMYT	Centro Internacional de Mejoramiento de Maíz y Trigo. One of CGIAR’s 15 Centers.
CIP	Centro Internacional de la Papa. One of CGIAR’s 15 Centers.
CMA/WCA	The Conference of Ministers of Agriculture of West and Central Africa.
COMESA	The Common Market for Eastern and Southern Africa.
CRP	CGIAR Research Program. CGIAR’s principal programmatic research modality introduced with the reform initiated in 2007.
DC	CRP on Dryland Cereals.
DS	CRP on Dryland Systems.
GCARD	Global Conference on Agricultural Research for Development.

GFAR	Global Forum on Agriculture Research.
ECCAS	Economic Community of Central African States.
ECOWAS	The Economic Community of West African States.
FARA	Forum for Agricultural Research in Africa.
FTA	CRP on Forests, Trees and Agroforestry.
GL	Grain Legumes.
GRIISP	CRP on Rice (Global Rice Science Partnership).
HUMIDTROPICS	CRP on Integrated Systems for the Humid Tropics.
ICARDA	International Center for Agricultural Research in the Dry Areas. One of CGIAR's 15 Centers.
ICRAF	World Agroforestry Centre. One of CGIAR's 15 Centers.
ICRISAT	International Crops Research Institute for the Semi-Arid Tropics. One of CGIAR's 15 Centers.
ICT	Information and Communication Technologies.
IEA	The Independent Evaluation Arrangement of CGIAR. IEA supervises, commissions and supports this evaluation.
IDO	Intermediary Development Objective. In CGIAR's goal's hierarchy, IDOs lie below SLOs and above sub-IDOs. The SRF 2016-2014 defines 10 IDOs catering to the 3 SLOs and 4 IDOs catering to the 4 SRF cross-cutting issues.
IFPRI	The International Food Policy Research Institute. One of CGIAR's 15 Centers.
IITA	International Institute of Tropical Agriculture. One of CGIAR's 15 Centers.
ILRI	International Livestock Research Institute. One of CGIAR's 15 Centers.
Institution	Used interchangeably with "organization". If instead formal and informal rules that structure and constrain human behavior and interaction are referred to, this will be made explicit in accompanying text.
IRRI	International Rice Research Institute. One of CGIAR's 15 Centers.
ISNAR	International Service for National Agricultural Research. A Center focused on organizational capacity development that was closed on 2004.
IWMI	International Water Management Institute. One of CGIAR's 15 Centers.
L&F	CRP on Livestock and Fish.
M&E	Monitoring and evaluation. Used synonymously with ML&E.
MAIZE	CRP on Maize.
ML&E	Monitoring, Learning and Evaluation.
NEPAD	The New Partnership for Africa's Development. Used synonymously with M&E.
Organization	A group of actors that collaborate over a sustained period for a particular purpose.
PIM	CRP on Policies, Institutions and Markets.
RTB	CRP on Roots, Tubers and Bananas.
RUFORUM	Regional Universities Forum for Capacity Building in Agriculture.
SADC	The Southern African Development Community.
SLO	System Level Objective. SLOs are the top-level goals CGIAR aims to make a contribution to. The SRF 2016-2030 defines 3 SLOs (reduced poverty, improved

	food and nutrition for health, and improved natural resource systems and ecosystem services) and 4 SRF cross-cutting issues on the SLO level (climate change, gender and youth, policies and institutions, and capacity development).
SRF	Strategy and Results Framework. CGIAR’s principal system-level strategy document.
SRF cross-cutting issues	Climate change, gender and youth, policies and institutions, and capacity development.
Sub-IDO	In CGIAR’s goal’s hierarchy, sub-IDOs lie below IDOs. The SRF 2016-2030 defines 46 sub-IDOs, 16 of which cater to cross-cutting issues.
WHEAT	CRP on Wheat.
WLE	CRP on Water, Land and Ecosystems.

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We have done our best to adequately reflect all feedback, comments and suggestions we were provided with in this final version of the inception report.

# 1. Introduction and Context

## 1.1. Trends in Capacity Development

Capacity development has been at the center stage of international development throughout the second half of the 20<sup>th</sup> century, beginning with the creation of the Bretton Woods Organizations and the United Nations in 1944 and 1945, the growth of post-colonial bilateral development assistance since the 1950s and 1960s and the emergence of important private and corporate aid donors.<sup>1</sup>

Over time, *technical* assistance has evolved considerably but has kept a constant focus on developing capacities in recipient countries. *Financial* assistance, in its shift from concentration on infrastructure to today's mix of program and policy instruments, has led to intensification and diversification of accompanying capacity development interventions.

Now, capacity development features prominently in recent development discourse, for example in the four forums on aid effectiveness in Rome (2002), Paris (2005), Accra (2008) and Busan (2011). The agendas, plans and partnerships emanating from these high-level meetings stress the need for a coordinated, harmonized and effective approach to international development in which developing countries drive the process. The broad push towards more aid harmonization and effectiveness impacted how capacity development is understood today.

Modern understanding of capacity development embraces broad definitions that stress the importance of capacity development on all levels, of taking a recipient perspective, of fitting interventions into broader development processes, and of an enlargement of the capacity development toolbox:

- **First, capacity development happens on several interconnected levels.** Traditionally, capacity development focused on the level of the individual. Modern understanding now includes two additional levels: the levels of organizations and of systems.<sup>2</sup> The three levels interact: lower level capacities can contribute to higher level capacities, and higher level capacities can enable capacity development on lower levels.
- **Second, capacity development materializes from a beneficiary perspective.** Capacity development is understood to aim at providing individuals, organizations and systems with the capacities they require for effectively fulfilling their mandates and responsibilities. This implies assessing needs, and planning and coordinating capacity development from the perspective of individuals, organizations or systems. This *endogenous* perspective stands in contrast to an *intervention-perspective* view of capacity development that, driven by pressures for delivering development results, employs it as a means to achieve the objectives of individual development projects.

<sup>1</sup> The term capacity building was originally used and has been replaced with capacity development in the most recent literature and debates.

<sup>2</sup> There are differences on how the terms “organization” and “system” are defined in literature. In addition, the term “institution” is colloquially used as synonym for “organization” but usually used differently in capacity development research. The terminology used in the evaluation is explained in Section 1.4.

- **Third, single capacity development interventions are just one element in an overall capacity development process.** Following from the two points above, capacity development interventions need to be coordinated and integrated with past, ongoing and future change and development processes on the three interconnected levels. Increasing attention is paid to combining diverse capacity development instruments with each other and over time. Single capacity development interventions are viewed as integrated elements of long-term capacity development processes that have started before and continue beyond a particular intervention.
- **Fourth, capacity development includes but also goes beyond training.** Technically, this reflects the enlargement of the capacity development toolbox from a focus on training modalities to including a wide variety of additional instruments and approaches, some of which are listed in this report (
- Table 1). This enlargement of scope reflects the insight that isolated supply-driven training interventions have often displayed disappointing effectiveness and sustainability.

While the understanding of capacity development has indeed shifted significantly in the past, several important aspects of today's understanding are not new and have been around under different labels. Organizational development, for example, used to be considered a separate strand of technical assistance but is now regarded a part of capacity development. In some cases, there also may be a tendency to dismiss past approaches as less informed and holistic than they actually were. One example is the 2006 evaluation of training in CGIAR that, while indeed focusing on the individual level, surprised many by addressing learning facilitation and network learning in addition to classical training (Stern and others, 2006, pp. 19). In order to avoid duplicating efforts, it is hence important to keep an open mind and acknowledge and learn from past experience in developing capacities, even if dated or presented under different labels.

Most frameworks for capacity development published over the last ten years embrace most or all of the general points outlined above. But they also differ in many other ways, for example in how success factors are defined and labeled, what types and constituting elements of capacity development are considered, and in how capacity development processes are described. In this evaluation, instead of using a generic framework for capacity development, we will embed capacity development in the overall theory of change of agricultural research for development (Section 2.3).

A literature review which outlines capacity development definitions and approaches was prepared by the Independent Evaluation Arrangement of CGIAR in preparation of this evaluation (Annex A).

## 1.2. Trends in Capacity Development in CGIAR

Reaching CGIAR System-Level Objectives of reducing poverty, improving food and nutrition security for health and improving natural resources systems and ecosystem services, as well as the 12 Sustainable Development Goals they cater to (CGIAR Consortium, 2015a), depend in multiple ways on developing a wide variety of capacities.

*External* to CGIAR, the capacities of Agricultural Research for Development (AR4D) systems and their various global, regional, national and local, actors are critically important for achieving these poverty, food, nutrition and environmental goals. These capacities are diverse and apply to a wide range of stakeholders, from individuals whose technical skill and scientific education are augmented to the strengthening of actors in agricultural innovation systems.

CGIAR also requires a set of *internal* capacities for reaching its objectives. These are capacities of its staff for conducting and delivering high quality research, and strengthening the capacities of its Centers, CRPs and the CGIAR system for funding, organizing, coordinating, producing, communicating and delivering relevant high quality research. And, beyond, the engagement of staff and Centers in capacity strengthening activities as part of their mandate and with specific deliverables in CRPs Programs of Work and Budgets.

In CGIAR, approaches to – and overall focus on – capacity development have evolved significantly since the group was established in 1971.

As an overall trend, capacity development has gradually shifted its focus from central research support services such as the training programs of the 1970s and 1980s to capacity development elements mainstreamed across individually funded research projects and programs.

A likely driver for this development are changes in the nature of CGIAR financing. Early funding in CGIAR consisted essentially of direct financing of Centers and their programs. This funding was mostly unrestricted in the sense that Centers were free to allocate funds to research priorities within their mandate and within their programs. From 2000 onwards, restricted funding, i.e. funding with additional usage conditions and restrictions, for the first time became the majority funding source in CGIAR. Since then and until today, a majority of CGIAR funding is raised bilaterally by Centers and CRPs, directly from donors, often on the level of individual research projects. The introduction of programmatic modalities (System-Wide and Eco-Regional Programs, Challenge Programs and CGIAR Research Programs) and the system reform processes started in 2000 and 2007 did not bring the system back to a primarily unrestricted funding regime.

Another important challenge to CGIAR capacity development is related to the fact that CGIAR donors have demonstrated increased interest in funding CGIAR research for the development results it contributes to rather than for research results. This reflects a broad trend in international development towards more results-based learning, management and accountability and has driven donor agencies and development programs to develop and operate results-based management systems, results frameworks and sometimes also payment for results schemes. In CGIAR, this trend took the form of comprehensive Strategy and Results Frameworks on the system level (CGIAR Consortium, 2015a, 2011) and results-based target setting, indicator-based reporting, and results-based performance assessment of its Research Programs (CRPs).

The growing interest of linking funding to demonstrated development results has increased incentives for CGIAR Centers and CRPs to increase – to the extent possible – the degree of control and influence they have over uptake and application of their research products and, ultimately, over the development outcomes for ultimate beneficiaries their research is intended to contribute to. In other words, CGIAR's *spheres of control, influence and concern* have been gradually stretched to increasingly cover downstream segments of the various AR4D pathways CGIAR caters to. The *system boundaries* of CGIAR have extended downstream, encompassing a wide variety of additional actors with development rather than research mandates. Developing capacities of these actors is challenging for CGIAR as it requires new competencies such as product development and marketing at the bottom of the pyramid, private sector stimuli, and access and delivery to poor farming communities on a mass scale.

Apart from these gradual trends, a singular event with pronounced impact on capacity development in CGIAR was the closure of the International Service for National Agricultural Research (ISNAR) in 2004. ISNAR was founded in 1979 in the Netherlands and was the only CGIAR Center with an exclusive focus on capacity development of agricultural research systems. ISNAR's mandate was to strengthen national agricultural research in developing countries and the Center aimed at bringing about sustained improvements in the performance of their national agricultural research systems.

The closure of ISNAR had adverse effect on the organization and delivery of capacity development in CGIAR in multifaceted ways and, according to the evaluation team's first interactions, profound in some cases. Although part of its program was merged into IFPRI, much of ISNAR's work has been discontinued and the degree to which ISNAR's focus on organizational strengthening of national agricultural research systems and their actors has been taken up by other initiatives and networks remains to be investigated.

Since the last CGIAR reform that began in 2007, the critical role of capacity development in CGIAR has repeatedly been reaffirmed and a broader approach along the lines portrayed above has been advocated and prescribed. In particular, the current Strategy and Results Framework (SRF) of CGIAR (2016-2030) displays explicit capacity development goals, highlights its importance, and stresses the need to go beyond training and to address capacities at multiple levels. It frames capacity development as a cross-cutting issue that contributes to the achievement of CGIAR's System Level Outcomes (SLOs). A capacity-related Intermediate Development Outcome (IDO) has been introduced ("National partners and beneficiaries enabled") and several sub-IDOs are linked to it.

In 2012, a *Capacity Development Community of Practice* (CapDev CoP) came together to start working more collaboratively on capacity development and in its first meeting the development of a framework emerged as a priority. In parallel, the CGIAR Consortium Office had begun exploring options for a system-level capacity development function and now helps facilitating the CapDev CoP. In 2015, that group developed the CGIAR Capacity Development Framework (CGIAR CapDev CoP, 2015) that now guides the formulation of capacity development elements in second phase proposals for CRPs (CGIAR Consortium, 2015b; Consortium and others, 2015).

A more detailed history of capacity development in CGIAR with focus on the recent years has been synthesized by the Independent Evaluation Arrangement of CGIAR in preparation of this evaluation (Annex B).

### 1.3. Purpose and Scope of this Evaluation

This section briefly summarizes the relevant sections of the terms of reference, to which the reader is referred for more detail (Annex C).

The primary purpose of this evaluation is to help CGIAR Centers, CRPs, and the CGIAR system to improve the relevance, comparative advantage, effectiveness, efficiency and sustainability of their capacity development activities. A secondary purpose is to provide essential evaluative information to CGIAR partners and the wider expert community.

Thus, the evaluation is principally *formative* and *forward-looking*. It aims to provide insight to improve future performance.

The scope of the evaluation extends to principally all capacity development activities carried out within the framework of CRPs and Centers, thus including activities funded by Window 1, 2 and 3 as well as bilaterally funded projects.

The evaluation will cover completed and ongoing activities since 2011 as well as planned future activities. In order to investigate long-term effects of capacity development, a longer period between activity and behavior and performance change is expected, and we will therefore also assess long-term effects of selected interventions that commenced before 2011.

The evaluation questions to be answered have been adapted from the terms of reference with some refinements and are listed in Section 2.2. An evaluation matrix summarizing the approach and the tools used for answering each question is provided in Annex D.

This evaluation is commissioned by the Independent Evaluation Arrangement of CGIAR in parallel with two other thematic evaluations, on gender and on partnerships. Collaborations and synergies will be sought to address these complementary topics, to avoid overlap and duplication, especially with respect to inquiry activities in and beyond CGIAR.

## 1.4. Clarification of Key Terms and Concepts

Capacity development terminology and concepts are not always used consistently and with similar meaning. Therefore, it is important to establish a common understanding on terminology and concepts for this evaluation. For consistency, our definitions remain close to those introduced by the CapDev Community of Practice (CGIAR CapDev CoP, 2015, glossary).

**Capacity** is defined as *the ability of people, organizations, and systems to consistently achieve results that resemble what was originally aspired.*<sup>3</sup>

**Capacity development**, consequently, is then defined as *the process whereby people, organizations and systems unleash, strengthen, create, adapt and maintain capacity over time.*<sup>4</sup>

Other terms are sometimes used to refer to capacity development as well. We treat “capacity building”, “capacity strengthening” and “capacity enhancement” as synonyms to capacity development and avoid usage of “capacity building” as it connotes that no capacity existed before.

We use the terms **organization** and **institution** interchangeably to mean *a group of actors that collaborate over a sustained period* (CGIAR CapDev CoP, 2015, p. 18) for a particular purpose. This reflects how these terms have been used in many documents reviewed to date and is therefore expected to help communication. In the social sciences the term institution is often used with a more specific meaning to refer to *formal and informal rules that structure and constrain human behavior and interaction* (CGIAR CapDev CoP, 2015). We will only use the term in this sense, for example during interviews with capacity development professionals, when that meaning is clear. Otherwise, whenever we refer to rules, norms, practices, contracts, policies, processes or strategies we will simply refer to them explicitly.

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<sup>3</sup> Compared to the glossary, for consistency, the system level was added and „an individual” was replaced by “people.” People and Individuals are used interchangeably in this report and are considered as synonyms.

<sup>4</sup> Compared to the glossary the term “system” was used instead of “society” in order to accommodate different interpretations of that third level. Also see remarks made later in this section.

Capacity development happens on different levels. In this evaluation, we differentiate between capacity at three principal levels (**Error! No bookmark name given.**).

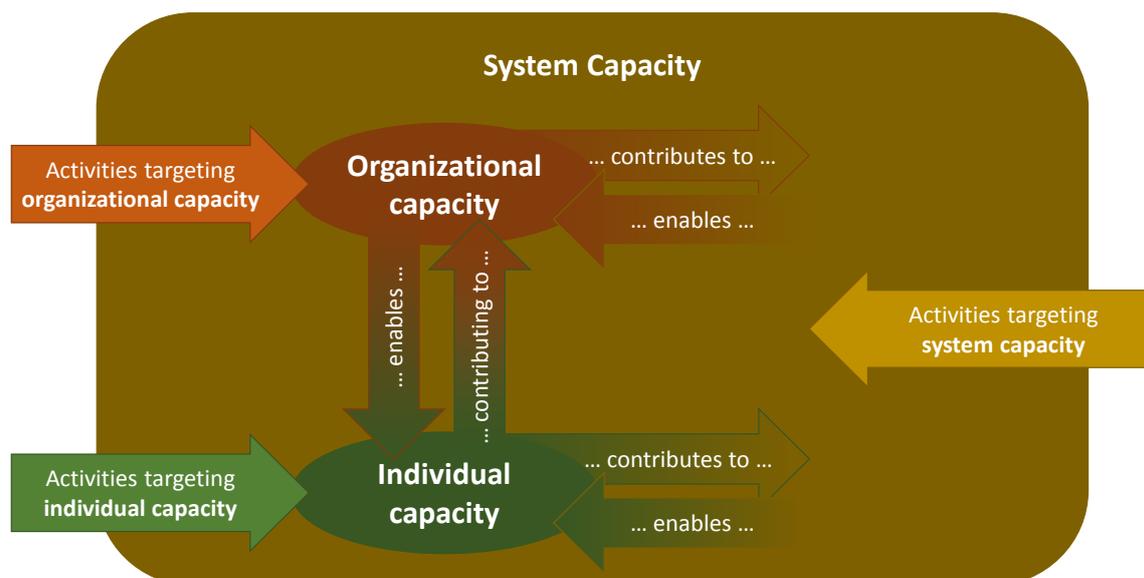
We understand **individual capacity** as essential skills, experience and knowledge of people. These are acquired by the individual for example through training and coaching, education, knowledge exchange and through accumulating professional experience. The effects of capacity development on the individual level may or may not translate into organizational capacity. For example, graduate academic education aims primarily at increasing individual capacity whereas managerial training of senior staff in a specific organization uses strengthened individual capacities as conduit for increased organization level capacities. For CGIAR, individual capacity development activities are listed in the first column of Table 1.

We understand **organizational capacity** to support the coming together of individual capacities to become self-sustained economically and in their ability to plan, produce, assess and replicate sustainable outcomes and achieve goals. This includes the capacity of organizations to partner with and influence others. Organizational capacity is developed by leading partner institutions (e.g. research organizations or farmer groups) to perform and have the ability to successfully apply skills and resources toward the accomplishment of set goals and the satisfaction of their stakeholders' expectations, by promotion of internal organizational development and learning to increase internal performance and skills, by providing technical support for organizational development, and by supporting public or private sector entities to implement projects. For CGIAR, organization capacity development activities are listed in the second column of Table 1.

Understanding of the third level (**system capacity**) appears to vary in literature and among experts. In some instances, it is simply referred to as *enabling environment*, in other cases the *entire society* is meant, and in still other cases *interactions between organizations* are highlighted.

We understand system level capacities broadly as capacities of groups of people and organizations, and as their capacity to interact and collaborate. Examples for systems are stakeholder networks, agricultural landscapes, farming systems, national agricultural research and extension systems, agricultural innovation systems, district governance, nation states, regional organizations, and global conventions. Systems represent the group of actors contributing to it and the broader framework within which they operate and which can facilitate or hamper their existence and performance. System capacities comprise policies, arrangements, procedures, frameworks and networks that allow organizations and individuals to operate and deliver on their objectives. System capacities can be developed in many ways, for example through supporting system actors in documentation and reporting, improving cooperative policies, or by expanding networking capabilities through improved communication infrastructure. For CGIAR, system capacity development activities are listed in the first column of Table 1.

Figure 1. Three levels of capacities and their interactions.



The three levels of capacity development interact as depicted in Figure 1. For example, organizational capacity can contribute to the enabling environment for individual capacity development of organization staff. Inversely, individual capacities of staff can contribute to organizational capacity.

As a consequence, capacity development on all levels occurs both directly and indirectly. Directly, through capacity development activities targeted at that level and indirectly, through the sum of less aggregate capacities and the enabling environment to which more aggregate capacities contribute, providing that conditions are met for these crossover effects to happen.

## 2. Evaluation Approach

### 2.1. Clarifying the Scope of the Evaluation

Definitions for capacity and capacity development are broad and vary considerably across Centers and CRPs. Mostly, they reflect the desire to extend capacity development beyond training and to highlight that capacity development can happen at various levels. These definitions, including the definition adopted for this evaluation, can be interpreted broadly to allow almost all activities in CGIAR to be labeled capacity development. Hence, it is important to set boundaries to what the evaluation will cover. This is done in three ways.

First, we will focus on capacity development activities targeted at individuals, organizations and systems *outside* of CGIAR. CGIAR-internal capacity development, i.e. human resources development of CGIAR staff, is beyond the scope of this evaluation. This restriction does of course not imply that CGIAR-internal capacity development is not important as well – the fact that is beyond scope simply reflects capacity constraints of this evaluation. This outside focus does *not* exclude the analysis of institutional arrangements for capacity development in CGIAR (how Centers organized, manage, fund and monitor and evaluate their capacity development activities), or the capacity of partners to engage with and influence the CGIAR research agenda.

Second, we will focus on “software” capacity development, for example training and organizational advice. Stand-alone provision of hardware or financial assistance will only be included if accompanied by such engagement.<sup>5</sup> Likewise, stand-alone one-way communication and dissemination of research findings and other knowledge generated by CGIAR through publication, internet and mass media will not be covered unless part of a more comprehensive capacity development package.

Third, in order to avoid duplication, the scope of this evaluation is clearly demarcated from the scope of the other ongoing thematic evaluations (gender and partnerships), as reflected by the evaluation questions 13-16 (Section 2.2).

The evaluation scope will *not* be restricted regarding thematic content of capacity development. Capacities often cited in CRP proposals are, for example, capacity for conducting scientific research, capacity to change and innovate, capacity to collaborate, capacity to influence policy development, and capacity to lead. From 1990 to 2004, and with a focus on training, main capacity development topics in CGIAR were crop production, crop protection, breeding, natural resource management, social science, biotechnology, livestock, and agroforestry (Stern and others, 2006, pp. 34). In this evaluation, we will consider a wider range of potential capacity development topics and also consider capacities on the organization and system level (Section 2.3).

The evaluation scope will also *not* be restricted by what types of capacity development activities will be covered.

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<sup>5</sup> The 2010 evaluation of FAO capacity development in Africa (FAO, 2010, p. 7) introduces three modalities of capacity development support: software (e.g., technical assistance, training, workshops, knowledge and information sharing), hardware (e.g., provision of agricultural inputs, infrastructure and equipment, including IT facilities and laboratories) and financial assistance. That evaluation limited its scope in a similar fashion by only considering hardware and financial assistance support when provided in conjunction with software components.

Table 1 provides an initial overview of activities in each level that will be further refined during the evaluation.

**Table 1. Capacity development activities directly addressing capacity on different levels.**

Individual capacity development	Organizational capacity development	System-level capacity development
<ul style="list-style-type: none"> <li>• Specification, assessment, prioritization of individual capacity development needs, including gender (e.g. assessment of HR strategy, of organizational enabling environment, of organizational culture, and of other interventions)</li> <li>• (Participative) development of capacity development materials and tools (aimed at the individual level)</li> <li>• Group training (Long/ short, intensive/ extensive, face-to-face/ distance courses)</li> <li>• Individual on-the-job training (internships, visiting researchers, fellowships, coached collaboration)</li> <li>• Teaching of CGIAR staff at university</li> <li>• Stipends or other support for attending university degree programs or for post-degree researchers</li> <li>• Mentoring of scientists</li> </ul>	<ul style="list-style-type: none"> <li>• Specification, assessment, prioritization of organizational capacity development needs, including gender (e.g. organizational performance analysis, analysis of other interventions and change processes and understanding of the system the organization operates in)</li> <li>• (Participative) development of capacity development materials and tools (aimed at the organization level)</li> <li>• Analysis and consulting on organizational performance</li> <li>• Organization-level technical support (e.g. technical equipment, ICT, data and communication systems, monitoring and evaluation arrangements, and related usage information and training), if related to other capacity development</li> <li>• Provision of funding and infrastructure (if related to other capacity development)</li> <li>• Establishment or strengthening of organizational units (e.g. research labs, training centers) with accompanying capacity development</li> <li>• Regional centers of excellence for research and training</li> </ul>	<ul style="list-style-type: none"> <li>• Identification of systemic capacity development needs together with system actors, including gender, and taking account of other development processes and interventions</li> <li>• (Participative) development of capacity development materials and tools (aimed at the system level)</li> <li>• Establishment and maintenance of networks</li> <li>• System-level technical support (e.g. technical equipment and ICT to increase networking abilities), if related to other capacity development.</li> <li>• Provision of funding and infrastructure (if related to other capacity development)</li> <li>• Support or establishment of online platforms for knowledge sharing, web-based applications, best practices and training materials</li> <li>• Development of capacities for partnering with (and influencing the agendas) of CGIAR and others</li> </ul>

## 2.2. Evaluation Questions

With this evaluation, we aim at answering four overarching questions, which have been modified from the Terms of Reference, in accordance with IEA Evaluation Manager:

- A. **How relevant has CGIAR capacity development been and what has been its comparative advantage?**
- B. **What results has CGIAR capacity development contributed to (or is likely to contribute to)?**
- C. **How can CGIAR improve its capacity development operationally and strategically?**
- D. **What capacity development lessons can be learned related to gender and partnerships?**

To answer these overarching questions, we will build our evidence base along 16 specific evaluation questions that are ordered into 6 groups.

## Relevance

1. What are the capacity development needs at the local, national, regional and global level required for achieving CGIAR's goals and how well do CGIAR's capacity development goals, strategies, priorities and activities correspond to those needs?
2. Are CGIAR capacity development strategies and activities at system, Center and CRP level in line with established good practices for capacity development in agricultural research and development?
3. How coherent, consistent and plausible are CGIAR capacity development-related goals and strategies on different levels (SLO, IDO, Sub-IDO, Center, CRP and Flagship)?
4. Are the capacity development-related theories of change at system, CRP and Flagship level logical and plausible? Are underlying assumptions supported by evidence?
5. How well is capacity development integrated with research in planning, implementation and the delivery of research outputs?
6. What other organizations and networks beyond CGIAR provide similar capacity development services and in what areas and to what extent does CGIAR have a comparative advantage? Is this reflected in CGIAR priorities for capacity development?

## Likely Effectiveness

7. To what results and changes have past capacity development activities contributed? What are the likely contributions of current capacity development activities? What is the significance of these contributions relative to overall CRP and Center goals?
8. What are the factors contributing to or constraining the effectiveness of capacity development?

## Sustainability

9. How long-lasting have developed capacities and their effects been or are likely to be? What have been enabling and constraining factors to sustainability?
10. How has capacity development contributed to CGIAR's AR4D agenda through strengthening the self-sufficiency of critical actors and systems?

## Resources, Management and Efficiency

11. Are financial and human resources (in particular skill sets) adequate to implement capacity development strategies?
12. How efficiently is capacity development organized at CRP, Center and system level with respect to the requirements of CRPs and across the system? In particular, are the institutional arrangements for capacity development (including the CapDev Community of Practice) adequate?
13. Are there adequate and appropriate M&E systems for capacity development with and across Centers, CRPs, and the entire CGIAR system? Are these consistent across Centers and CRPs?

## Partnerships in Capacity Development

14. Does CGIAR work effectively in delivering capacity development activities in partnership with national and regional organizations and other actors?
15. What institutional partnerships for capacity development have been most effective?

## Gender

16. To what degree is gender mainstreamed as a topic in capacity development by CGIAR?
17. Has gender analysis adequately informed capacity development program design, budgeting and targeting and are gender issues incorporated in the design of capacity development at the three levels? What have been success and failure factors?

## 2.3. Evaluation Method

The evaluation is a theory-based program evaluation at the level of the CGIAR system. As such, it is based on an *overall theory of change for capacity development by CGIAR* that explains how CGIAR's capacity development activities contribute to the development goals it aims to contribute to.

Such a single, comprehensive theory of change for capacity development has not yet been formulated in CGIAR. It is also likely to be difficult to represent the complexities and assumptions involved in such a theory of change within one framework. The evaluation will therefore use two frameworks:

- **A linear theory of change from the perspective of the capacity development intervention** for describing capacity development interventions and their immediate effects up to the point of strengthened capacities on the individual, organizational and system level; and
- The **principal AR4D impact pathways, their actors, and their capacity requirements** that describe how strengthened capacities support AR4D systems and their actors in fulfilling their respective mandates more effectively.

Together, these two frameworks look at the overall theory of change for capacity development by CGIAR from two different perspectives: the first framework from the perspective of capacity development interventions, the second and probably the most important in terms of perception of CGIAR impact from the perspective of the actors and systems whose performance these interventions aim to strengthen.

These two perspectives reflect our understanding that generic linear frameworks for capacity development are most helpful for understanding immediate effects while subsequent contributions are better grasped by frameworks that map how strengthened capacities support specific AR4D processes, actors and systems.

### 2.3.1. Framework 1: Theory of Change from an Intervention-Perspective

The first, intervention-perspective framework consists of a simple linear results chain for capacity development that depicts its immediate results, and of the set of assumptions and conditions required for this chain to function effectively (Table 2).

**Table 2. Generic, Intervention-Perspective Theory of Change for Capacity Development.**

	Activities	Outputs	Behavior Change	Capacity Change
<b>Examples</b>	<ul style="list-style-type: none"> <li>Capacity development intervention is prepared by CGIAR and partners</li> <li>Capacity development intervention is implemented by CGIAR and partners</li> <li>Capacity development intervention is attended/received by targeted actors</li> </ul> (see activities in Table 1)	<ul style="list-style-type: none"> <li>Individual participants recognized that they have increased knowledge</li> <li>Organizations have access to increased funds, improved equipment and infrastructure, and the knowledge to use it</li> <li>Tools, policies, technical networking resources available and accessible to system actors</li> </ul>	<ul style="list-style-type: none"> <li>Individual skill development and behavior change</li> <li>Change of rules, regulations and organizational culture</li> <li>Change of interactions on the system level</li> </ul>	On same level: <ul style="list-style-type: none"> <li>Improved individual, organization or system capacity</li> </ul> Across levels: <ul style="list-style-type: none"> <li>Changes in enabling environment, e.g. better individual staff performance through improved human resources capacity</li> <li>Aggregate effects of increased individual capacities on organizations and systems, for example loss of qualified staff after successful individual capacity development</li> </ul>
<b>Assumption</b>	Capacity development good practices (to be synthesized during the evaluation)			

An important element of the framework is the set of assumptions that need to hold for capacity development to actually lead to strengthened capacities, and to do so effectively and efficiently. To this end, we will synthesize capacity development good practices and use them to assess the likelihood for success along the framework steps. In addition, these good practices will also inform our assessment of changes beyond strengthened capacities in our second framework (Section 2.3.2).

Regarding the first framework it is important to stress its limited applicability. Longer-term effects of capacity development do not occur along simple linear chains of cause and effect and we will generally view capacity development interventions to *contribute to* rather than to *cause* such results. We therefore limit the scope of this framework to describe results up the point of strengthened capacities. We note that various enabling conditions already play an important role up to this point and consider the framework to lose its applicability beyond it. Of course, strengthened capacities are not an end in themselves but are expected to influence further change. We will address subsequent changes induced by strengthened capacities and their linkages to development goals in the second framework (Section 2.3.2).

For short-term training on the individual level, the first framework maps “Kirkpatrick’s Four Levels for Evaluating Training Programs” (Kirkpatrick and Kirkpatrick, 2006), a simple framework frequently used to assess training courses: Kirkpatrick Level 1 (participant reaction) is described by the perception of activities (e.g. in Table 2), Level 2 (participant learning) corresponds to outputs in our framework, Level 3 (behavior change) is the same in our framework, and Level 4 (results), usually understood as organizational performance increases, is a direct consequence of increased organizational capacity to which improved individual capacity contributes.

The CGIAR CapDev Community of Practice has developed a description and categorization of capacity development (CGIAR CapDev CoP, 2015) that enjoys wide acceptance and is used by the CGIAR

Consortium as guidance for capacity development in the ongoing CRP phase II proposal process (Consortium and others, 2015). In parallel to the writing of this inception report, the CapDev Community of Practice is also further developing an earlier set of indicators for target setting and effectiveness assessment of capacity development activities along the dimensions of its framework (CGIAR Consortium, 2015b).

In this evaluation, we will not use the CGIAR Consortium framework to guide the evaluation, as it will be assessed as well. We will, however, refer to its nine elements of capacity development, use those categories to check for completeness of our analysis, use the capacity development indicators to inform our own evaluation frameworks, and use the language introduced by the CapDev Community of Practice to the extent possible.

### *2.3.2. Framework 2: Principal AR4D Impact Pathways, System Actors, and Required Capacities*

The first framework is useful for assessing the effectiveness with which capacities have been strengthened, but it is not capable of describing further change or of grasping how relevant these capacities are for AR4D actors and systems in developing countries. Hence, another framework is required. Our second framework consists of three elements:

1. The principal AR4D impact pathways;
2. The actors contributing to each of those pathways; and
3. The individual, organization and system-level capacities required for each pathway to be effective.

This second framework has been developed based on document review,<sup>6</sup> expert advice and the team's own experience. It is based on three principal AR4D impact pathways:

**Impact pathway 1: Genetic improvements of crops, livestock, fish and trees.** Improved varieties and species are integrated into the seed, farming, food and fodder systems of developing countries. This ultimately reduces poverty, improve food and nutrition security for health, with a special focus on women.

**Impact pathway 2: Integrated approaches for sustainable agriculture.** Improved agricultural practices are adopted by a wide range of farmers in developing countries and integrated approaches for sustainable agriculture are adopted by AR4D actors. This ultimately reduces poverty, improve food and nutrition security for health and improve the management of natural resources, with a special focus on women.

**Impact pathway 3: Evidence-based policy advice.** Research on sustainable agriculture, gender, natural resource management, climate change mitigation and adaptation and biodiversity conservation generates evidence that positively influences national and global policies. These policies, once implemented, ultimately reduce poverty, improve food and nutrition security for health and improve global and local management of natural resources, with a special focus on women.

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<sup>6</sup> Documents consulted so far are (CGIAR Consortium, 2015a, 2011; FAO, 2010; Kuyvenhoven, 2015; Martin et al., 2013; Science Council, 2006).

These impact pathways are not to be understood as linear chains of cause and effect but as descriptions of complex interactive systems with which CGIAR interacts through research and capacity development. We do not intend to map out the causal dependencies and feedback loops in these systems in any detail, but aim at identifying their key actors and their most important required capacities (see the table summaries at the end of this report).

The number of pathways is kept limited for simplicity but we nevertheless expect that most if not all activities of AR4D actors, including those of CGIAR, can be mapped to one or more of these pathways.

This second framework is summarized in paragraph 3.5 along these three AR4D pathways.

The capacities represented in the framework reflect those considered of significant importance for the respective pathway and highlight those for which specific capacity development needs have been identified in literature.

Our second framework represents a *partial* theory of change because it focuses on *capacities* and does not attempt to enumerate all other assumptions and conditions needed for the functioning of its pathways, for example infrastructure, financial resources, or stable governance. The reason for this restriction is the focus on capacity development of this evaluation.

As mentioned before, our second framework does not lend a central driving role to capacity development interventions but instead understands them as *contributing to, influencing and enabling* AR4D processes, actors and systems beyond their control. In other words, the framework sees capacity development as *endogenous supporting factors* in the principal AR4D impact pathways.

Importantly, the second framework does not require the AR4D pathways to necessarily start with CGIAR research outputs. Rather, it views these pathways as general AR4D impact pathways that describe agricultural research and how it is linked to development outcomes. This is important as it allows the evaluation to address the fundamental question of the nature of CGIAR's capacity development mandate: a broad mandate for capacity development as general support to AR4D actors and systems in developing countries versus a more focused mandate of capacity development as targeted support for dissemination, adoption and usage of CGIAR research products.

### 2.3.3. Applying the Frameworks

We will use the two frameworks introduced above to guide and structure our evaluation work. During the evaluation, we will also complete and refine them further as needed. This section summarizes how we will use the frameworks and already introduces our set of evaluation tools that is described in more detail in the next section.

Overall, the first framework guides the effectiveness analysis of capacity development interventions up to the level of acquired capacities, whereas the second framework places acquired capacities into a broader context and thus informs analysis of relevance and farther-reaching effects increased capacities contribute to.

We will assess **relevance** by further establishing and verifying capacity needs along each principal AR4D pathway in the second framework. To this end, we will be commissioning several *technical papers* from international experts, synthesize relevant publications, and conduct a series of interviews with key stakeholders within but mostly beyond CGIAR.

We expect the second, systemic framework to both guide this analysis and to be updated and validated by it. The resulting landscape of capacity development needs along each principle AR4D pathway will then be compared to the overview of capacity development activities in CGIAR which we will assemble from CGIAR documentation and interviews with CGIAR staff.

In addition, several specific evaluation tools used in the effectiveness analysis (see below) also harvest stakeholder feedback on perceived relevance of selected capacity development interventions that will be used to verify and triangulate the former findings.

We will also assess relevance by synthesizing capacity development good practices through literature review and expert input and compare them with capacity development strategies and their implementation in CGIAR, looking at enabling factors as well as taking into account opportunities and limitations due to CGIAR's operating environment.

Related to the last point, when evaluating relevance, it will be important to take the political economy and operative environment of CGIAR into account. If good capacity development practice cannot be adopted because of external constraints imposed on the system, its Centers, or its CRPs, conclusions drawn and recommendations issued will take these constraints into account.

We will assess **comparative advantage** in a similar manner along each principal AR4D pathway in the second framework by means of a series of technical papers from international experts, through desk review, and through interviews.

**Past and future effectiveness** of CGIAR capacity development will be assessed based on both frameworks.

We will assess the effectiveness with which CGIAR capacity development activities have led to outputs, behavior change and strengthened capacities along the first framework, and we will investigate if and how these strengthened capacities contributed to further-reaching changes along the principal AR4D pathways of the second framework.

Importantly, and in line with the formative nature of this evaluation, we will *not* attempt a representative empirical assessment of the effectiveness of CGIAR capacity development. Instead, we will focus our attention on understanding what has worked, what has not, and why. To do this, we will collect experiences from key stakeholders and CGIAR staff on perceived effectiveness and on underlying reasons for various types of capacity development. We will also employ two specific evaluation tools to achieve in-depth understanding of selected capacity development interventions, of the effects they contributed to, and on how it was done:

- On the individual level, we collect information from a large number of individual participants in CGIAR capacity development interventions through an online survey tool and follow this up with selected interviews. By *tracing individual participants* in this way, we obtain a broad overview of perceived quality and effectiveness (and relevance) of capacity development, including its influence on career development, professional performance and contributions to organizational performance.
- On the organization and system level, we analyze selected *system cases* that examine to what extent and how different capacity development interventions, over time, have contributed to observed changes at the organizational and system level and how relevant and effective selected CGIAR capacity development programs, hubs, platforms or networks have been.

The analysis of effectiveness will follow a simplified *contribution analysis* approach. When concrete capacity development interventions are considered we will assess to what extent observed capacity increases and further change can be associated with the capacity intervention by collecting positive supporting evidence and by examining rival explanations. A contribution approach is chosen because of the support nature of capacity development interventions. Usually, interventions have some control over outputs and behavior change and influence on capacity strengthening results (the steps in framework 1) but are one among many contributing causes for development outcomes and impacts (framework 2). Hence, the latter cannot usually be attributed to specific capacity development interventions and we will consistently use contribution rather than attribution language and thinking in this evaluation.

We will evaluate the **sustainability** of CGIAR capacity development by reviewing to what extent developed capacities have remained accessible and in place, and are likely to do so in the future without CGIAR support. We do this through the set of tools used in the effectiveness analysis. We will also assess if capacity development has strengthened the self-sufficiency of AR4D system actors, i.e. their capacity to maintain and strengthen their own capacities.

**Resources, management and efficiency** will be analyzed by means of organizational and process analysis of capacity development functions in CGIAR and their human and financial resources, based on desk review and interviews with CGIAR staff. We will assess whether resource issues have influenced the intensity and prioritization of capacity development along the principal AR4D pathways of the second framework. We will analyze monitoring, evaluation and reporting of capacity development based on desk review of reports and through interviews with CGIAR staff.

We will assess the relevance and effectiveness of **partnerships for capacity development** as part of the relevance, effectiveness and the managerial analyses outlined above, and through interviews with experts and stakeholders within and beyond CGIAR. Capacity development partners comprise several framework 2 actors but can also include capacity development and education providers not included in that framework.

We assess the degree to which **gender** is mainstreamed into – and gender analysis has informed – capacity development as part of the relevance, effectiveness and the managerial analyses outlined above, through a dedicated technical paper, and through interviews with experts and stakeholders within and beyond CGIAR.

Capacity development partnerships and the integration of gender into capacity development will be evaluated in close coordination with the teams of the thematic evaluation on partnerships and gender that are conducted in parallel to this evaluation.

### 2.4. Evaluation Tools

In this evaluation, we will employ two basic tools (explained directly below) and a mix of more specific evaluation tools (summarized in Annex D) for obtaining evaluative evidence. Our basic tools are:

1. **Interviews.** We will access **tacit knowledge and experience** through **interviews** with a wide range of CGIAR internal and external stakeholders and experts. We will conduct interviews as part of the mix of evaluation tools and beyond, to collect feedback and to inform the evaluation on specific issues. Early interviews will be explorative and then move to a semi-structured, hypothesis-driven format. For some tools we will employ fully structured

interviews to increase comparability. We will also use interviews to collect stakeholder feedback at various stages and to reality-check emerging conclusions and recommendations.

2. **Desk review.** We will synthesize **explicit knowledge and experience** through **desk review** of relevant documents. Desk review will inform most evaluation questions in addition to interviews and the other evaluation tools. Since we expect to review a large number of diverse documents ranging from proposals and reports to evaluations and scientific publications, we establish and manage online repositories for documents and document syntheses and use review templates for benchmarking desk review results for same-type documents across Centers and CRPs (e.g. CRP phase II proposals).

In addition, we will employ several more specific evaluation tools. We will investigate the relevance and the effectiveness of capacity development on the individual and organization/system level by two separate tools:

3. **Tracing Individual Participants.** We will systematically survey a large number of participants in training and academic education programs of CGIAR. We will first invite participants to submit their experiences by means of an online tool, and then follow up with selected participants through follow-up interviews. In both cases, the capacity development Theory of Change (Table 2) will guide our investigation. Our approach is described in more detail in Annex E.
4. **System Cases.** We will conduct a limited number (10-15) of system case studies based on desk review, interviews and, whenever feasible, field visits. We will conduct some case studies from a recipient perspective, i.e. we will investigate aggregated effects of capacity development over time on selected AR4D actors along any of the three principal impact pathways of CGIAR (Figure 1). Other cases will be conducted from a CGIAR perspective by reviewing selected CGIAR projects or programs with a pronounced capacity development component, and by studying selected innovation and capacity development platforms and networks (co-) established by CGIAR (Annex F).

In order to obtain an overview of how capacity development is organized and managed in CGIAR, we will conduct an:

5. **Institutional Mapping.** With this tool we analyze how – and how effectively and efficiently – the capacity development function is organized and managed in CGIAR Centers, CRPs, and at the CGIAR system level, through interviews and desk review (Annex G).

Finally, to adequately include various perspectives into this evaluation, we will commission technical expert papers and consult with stakeholders:

6. **Technical Papers.** We will commission several senior experts to write “issue papers” on the landscape of actors and systems, their capacity development needs, alternative providers, and the comparative advantage of capacity development by CGIAR along all three impact pathways (Figure 1) for Africa, Asia and Latin America. These papers are evaluative products that lie in-between full evaluations and expert opinions. They go beyond opinion editorials (op-eds) that simply make the case for the expert’s opinion on the issue but will clearly explain the reasoning applied and evidence used to come to the conclusions presented.
7. **Stakeholder Consultations.** We will organize interviews and group discussions at relevant international meetings, presenting the evaluation and emerging findings and collect feedback

and input from stakeholders. In preparation of this inception report, the team has already conducted such consultations: focus group discussions with representatives of different Centers at ICRAF (including ICRISAT and CIMMYT representatives) and ILRI (including CIAT and CIP representatives) in Nairobi, and has participated in various sessions and conducted interviews at the 7<sup>th</sup> Agricultural Science Week held by FARA in Kigali.

A full evaluation matrix linking evaluation questions, means of verification, and information sources is provided in Annex D.

In addition, our approach to analyzing the gender-related evaluation questions is summarized in Annex H.

## 3. Evaluation Management

### 3.1 Evaluation Team

The evaluation team is composed of three experienced evaluators:

- Dr Markus Palenberg (Team Leader)
- Dr Ganesh Rauniyar
- Dr Paul Thangata

The team is supported by Ms Manuela Bucciarelli, evaluation analyst at the CGIAR Independent Evaluation Arrangement. Team members have been selected after a public international application and search process by the Independent Evaluation Arrangement of CGIAR to ensure a relevant background in global program evaluation, experience in evaluating of capacity development, and sufficient familiarity with CGIAR institutions and their work. Short bios of all team members are provided in Annex I.

The evaluation team is supported by a group of thematic and regional experts that have been identified after a public international application and search process to reflect in-depth expertise on a number of specific issues. These experts will author technical papers on subjects identified by the evaluation team and also be available for discussions with the team. Additional experts may be identified while the evaluation is under way.

### 3.2 Organization of the Evaluation

#### 3.2.1. Evaluation Governance

The evaluation is conducted and the evaluation report is produced as a joint effort by the evaluation team. The evaluation team leader delegates and coordinates evaluation activities and bears ultimate responsibility for the end products.

The Independent Evaluation Arrangement of CGIAR commissions, supervises and supports the evaluation. It selects and contracts evaluation team members and experts, provides logistical and travel support to the team and seconds one staff member to the evaluation team.

#### 3.2.2. Stakeholder Involvement

The evaluation will involve stakeholders in and beyond CGIAR in several ways. Those stakeholders outside of CGIAR whose capacities are aimed to be developed will be of critical importance for this evaluation. An initial list of types of stakeholders and their role and interest in the evaluation is included in the terms of reference of this evaluation (Annex C).

*Key external stakeholders* are CGIAR research partners, partners for the implementation of capacity development interventions, and individuals and organizations directly or indirectly affected by CGIAR capacity development – or by the lack of it (see actors listed in the framework at the end of this report). These groups are widely cast and cover organizations and individuals operating at the international, regional, national, subnational and local level, such as universities and international research institutions, NARS and extension systems, development agencies, NGOs, and farmers and other ultimate beneficiaries and their associations

With limited resources, the evaluation will attempt to access a wide range of these stakeholders in a cost-effective way during meetings the 7<sup>th</sup> Africa Agriculture Science Week that has already been attended, the fifth biannual conference of RUFORUM<sup>7</sup> in October 2016, the 5<sup>th</sup> AAAE Conference<sup>8</sup>, and other relevant meetings across Africa, Asia and Latin America.

In addition, in-depth interviews with selected representatives of these groups will be conducted as part of this evaluation. In addition to generating evaluative evidence, these interviews will also serve to listen to and incorporate input from these important groups into the design and conduct of the evaluation, to verify findings, and to test the real-world applicability of emerging recommendations.

*Key internal stakeholders* for this evaluation are CGIAR Centers, their boards, management and staff, the CRPs with their governance, management, and research functions, and CGIAR system level institutions and bodies.

For this evaluation, Centers and CRPs have nominated 20 focal points that, together, providing systematic coverage of and access to the 15 CGIAR Centers and the 15 first phase CRPs. The CapDev Community of Practice will be kept informed about this evaluation and used as an important source of information and expert knowledge. As a first interaction, the team leader and staff from the Independent Evaluation Arrangement have attended a workshop of the CapDev Community of Practice held in January 2016 in Montpellier. Internal stakeholders will be interviewed while this evaluation is implemented and, as in the case of external stakeholders, these interviews will also serve to listen to and incorporate input, to verify findings, and to test the implementability and usefulness of emerging recommendations.

### 3.2.3. Quality Assurance

The Independent Evaluation Arrangement of CGIAR will assure the quality of this evaluation. It will provide the evaluation team leader and the team with regular feedback and ensure that the evaluation is conducted according to high professional standards and that the evaluation report is of high quality and relevance.

The Independent Evaluation Arrangement may also convene a peer review expert panel that will provide a second opinion on the evaluation draft report.

## 3.3 Timing

The evaluation is divided into three main phases:

- A preparatory and inception phase that will end with the finalization of this inception report, after circulating it for feedback;
- An inquiry phase until September 2016 that ends with a presentation of emerging main findings; and
- A reporting phase until December 2016 that ends with the finalization of the evaluation report after collection and incorporation of feedback.

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<sup>7</sup> The Regional Universities Forum for Capacity Building in Agriculture.

<sup>8</sup> 5<sup>th</sup> International Conference of the African Association of Agricultural Economists (5<sup>th</sup>ICAAAE), Ethiopia, September 2016.

In 2017, a fourth phase during which the findings and the report are presented and distributed and during which management responses are produced will follow.

The evaluation will be conducted along the timeline laid out in the terms of reference (Table 3).

**Table 3. Evaluation timeline and end products.**

Phase	Period	Main outputs	Responsibility
<b>Preparatory Phase</b>	Dec 2015 – Feb 2016	Final ToRs evaluation team recruited	IEA
<b>Inception Phase</b>	March-June 2016	<b>Inception Report</b>	Evaluation Team
<b>Inquiry phase</b>	April 2016 – September 2016	Various reports and analysis products as defined in Inception Report	Evaluation Team
Presentation of preliminary findings	Sep 2016	Presentation of preliminary findings Feedback from main stakeholders	Evaluation Team IEA
<b>Reporting phase</b>			
Drafting of Report	Sep 2016 – Nov 2016	<b>Draft Evaluation Report</b>	Evaluation Team
Final Evaluation Report	Dec 2016	<b>Final Evaluation Report</b>	Evaluation Team

## 3.4 Reporting and Dissemination

The Evaluation Report will be the main deliverable of the evaluation. The outline of the final report will be agreed between the team and IEA at the start of the inquiry phase.

A draft report will be compiled as the inquiry phase progresses, with contributions from each team member. The final evaluation report will be compiled after the inquiry phase. The team leader will coordinate the report writing with guidance from IEA and according to standard requirements for evaluation reports. All team members will contribute to the analysis and text.

The recommended length of the final report is maximum 80 pages, excluding the executive summary and annexes. The report will describe the findings and conclusions that are informed by the evidence collected within the framework defined for the evaluation criteria and issues and for addressing the specific evaluation questions. It will present a set of recommendations that are prioritized, focused and actionable, indicating the stakeholders that are responsible for their implementation. The main findings, conclusions and recommendations will be summarized in an Executive Summary.

In the context of the current transition discussions, it is expected that the System Management Office will coordinate the preparation of a system-wide response, in consultation with the System Management Board, and present this system-wide response (with specific identification of recommendations that are fully accepted, partially accepted, or otherwise) for consideration and decision of the System Council of CGIAR.

3.5 Description of Framework 2: Principal AR4D Impact Pathways

Impact pathway 1: Genetic improvements of crops, livestock, fish and trees		
<b>Description of pathway</b>	Improved varieties and species are integrated into the seed, farming, food and fodder systems of developing countries. This ultimately reduces poverty and improves food and nutrition security for health, with a special focus on women.	
<b>Key actors</b>	<p><b>Research</b></p> <ul style="list-style-type: none"> <li>• Agricultural research institutes and universities in developing countries</li> <li>• Advanced international research institutes and universities (e.g. CGIAR Centers)</li> <li>• Local and international private sector research units (e.g. in seed companies)</li> </ul> <p><b>Marketing, intermediaries and extension</b></p> <ul style="list-style-type: none"> <li>• Agriculture and animal input and output marketing organizations</li> <li>• National extension systems and state-owned development organizations</li> <li>• Cooperatives and farmer based intermediaries</li> <li>• Agricultural/animal husbandry and community related NGOs</li> </ul> <p><b>Policy and coordination</b></p> <ul style="list-style-type: none"> <li>• District and national government and agencies (e.g. seed subsidies, market development, biotech policy)</li> <li>• National coordinating body or mechanism (e.g. variety release process and release committee)</li> <li>• Regional coordinating bodies, development programs and processes, e.g., the Regional Universities Forum for Capacity Building in Agriculture (RUFORUM) and the Alliance for a Green Revolution in Africa (AGRA), the World Bank Agricultural Pull Mechanism (AGPM) Initiative (AgResults)</li> </ul>	
<b>Capacities required along this pathway</b>	<b>Individual level</b>	<ul style="list-style-type: none"> <li>• Breeding of plants and animals, including modern approaches (e.g. marker-assisted selection)</li> <li>• Biotechnology, including IP rights, patent management, biosafety and regulation</li> <li>• Management of genetic resources</li> <li>• Seed production, seed systems, agricultural markets, agri-business, extension, food systems, value chains</li> <li>• Crop and livestock production, protection and post-harvest handling</li> <li>• Gender (e.g., role of women in farming, nutrition, smallholder business)</li> <li>• Publication performance of researchers in developing countries</li> <li>• Analytic problem analysis and solution skills</li> <li>• Professional skills (e.g. communication and facilitation, partnership negotiation, management and leadership skills)</li> <li>• Use of ICT (e.g. search and data analysis) and use of research and decision tools</li> <li>• Management of agricultural research for development and extension</li> <li>• Monitoring and evaluation</li> </ul>
	<b>Organization level</b>	<ul style="list-style-type: none"> <li>• Flexible, demand-oriented and high-quality training and degree programs on various technical capacities (see individual capacities above)</li> <li>• Woman participation in education, research, professional practice and leadership</li> <li>• Retention of senior staff in research organizations</li> <li>• ICT hardware, access and use</li> <li>• Fundraising</li> </ul>
	<b>System level</b>	<ul style="list-style-type: none"> <li>• Availability of qualified researchers and other professional staff (see individual capacities above), including long-term financial support</li> <li>• Effective plant and animal breeding and release frameworks, including biotechnology regulatory and legal frameworks</li> <li>• Application of ICT solutions to strengthen networks and partnerships</li> <li>• Relevant and effective university collaboration and partnerships</li> <li>• Increased system capacity for innovation by effective collaboration of research, extension and agricultural higher education and linkages to the private sector and the international scientific community</li> </ul>

<b>Impact pathway 2: Integrated approaches for sustainable agriculture</b>					
<b>Description of pathway</b>	Improved agricultural practices are adopted by a wide range of farmers in developing countries and integrated approaches for sustainable agriculture are adopted by AR4D actors. This ultimately reduces poverty, improves food and nutrition security for health and improves the management of natural resources, with a special focus on women.				
<b>Key actors (similar types as in first pathway)</b>	<p><b>Research</b></p> <ul style="list-style-type: none"> <li>• Agricultural research institutes and universities in developing countries</li> <li>• Advanced international research institutes and universities (e.g. CGIAR Centers)</li> <li>• Local and international private sector research units (e.g. in timber companies)</li> </ul> <p><b>Marketing, intermediaries and extension</b></p> <ul style="list-style-type: none"> <li>• Agriculture and animal input and output marketing organizations</li> <li>• National extension systems and state-owned development organizations</li> <li>• Cooperatives and farmer based intermediaries</li> <li>• Agricultural/animal husbandry and community related NGOs</li> </ul> <p><b>Policy and coordination</b></p> <ul style="list-style-type: none"> <li>• District and national government and agencies (e.g. on input subsidies, property rights, public extension)</li> <li>• National coordinating body or mechanism (e.g. variety release process and release committee)</li> <li>• Regional coordinating bodies, development programs and processes, e.g., for Africa, the Regional Universities Forum for Capacity Building in Agriculture (RUFORUM), the African Union Commission (AUC) the New Partnership for Africa's Development (NEPAD), the Comprehensive Africa Agriculture Development Program (CAADP), the Common Market for Eastern and Southern Africa (COMESA), Economic Community of Central African States (ECCAS), the Conference of Ministers of Agriculture of West and Central Africa (CMA/WCA), the Economic Community of West African States (ECOWAS), and the Southern African Development Community (SADC), the World Bank Agricultural Pull Mechanism (AGPM) Initiative (AgResults)</li> </ul>				
<b>Capacities required along this pathway</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%; vertical-align: top;"><b>Individual level</b></td> <td> <ul style="list-style-type: none"> <li>• Agricultural practices and integrated approaches (e.g. conservation agriculture, integrated pest management, agroforestry landscapes, integrated soil fertility management, payment for environmental services, climate-smart agriculture, silvopastoral systems)</li> <li>• Social science (e.g. agronomics, environmental economics, systems research, value chains)</li> <li>• Specific agricultural research and professional disciplines (e.g. plant and animal production and protection, weed and pest science, forestry, agroforestry, agricultural engineering, food science and technology, biometrics, aquaculture and fisheries monitoring and evaluation)</li> <li>• Gender (gender rights and policies, gender-disaggregated research, role of women in farming, nutrition and smallholder business, property and tenure traditions and rights)</li> <li>• Use of ICT (e.g. search and data analysis, remote sensing and mapping) and use of research and multi-stakeholder decision tools</li> <li>• Agricultural seed and food systems, markets, and their integration (e.g. cropping systems, farming systems, national agricultural research institutions, national agricultural research and extension systems, national agricultural knowledge information systems, agricultural innovation systems)</li> <li>• Professional skills (e.g. analytic problem analysis and solution skills, partnership negotiation and management, communication and facilitation, management and leadership skills)</li> <li>• Publication performance of researchers in developing countries</li> <li>• Management of agricultural research for development, extension, and systems</li> </ul> </td> </tr> <tr> <td style="vertical-align: top;"><b>Organization level</b></td> <td> <ul style="list-style-type: none"> <li>• Flexible, demand-oriented and high-quality training and degree programs on various technical capacities (see individual capacities above)</li> <li>• Woman participation in education, research, professional practice and leadership</li> <li>• Retention of senior staff in research organizations</li> <li>• ICT hardware, access and use</li> <li>• Fundraising</li> </ul> </td> </tr> </table>	<b>Individual level</b>	<ul style="list-style-type: none"> <li>• Agricultural practices and integrated approaches (e.g. conservation agriculture, integrated pest management, agroforestry landscapes, integrated soil fertility management, payment for environmental services, climate-smart agriculture, silvopastoral systems)</li> <li>• Social science (e.g. agronomics, environmental economics, systems research, value chains)</li> <li>• Specific agricultural research and professional disciplines (e.g. plant and animal production and protection, weed and pest science, forestry, agroforestry, agricultural engineering, food science and technology, biometrics, aquaculture and fisheries monitoring and evaluation)</li> <li>• Gender (gender rights and policies, gender-disaggregated research, role of women in farming, nutrition and smallholder business, property and tenure traditions and rights)</li> <li>• Use of ICT (e.g. search and data analysis, remote sensing and mapping) and use of research and multi-stakeholder decision tools</li> <li>• Agricultural seed and food systems, markets, and their integration (e.g. cropping systems, farming systems, national agricultural research institutions, national agricultural research and extension systems, national agricultural knowledge information systems, agricultural innovation systems)</li> <li>• Professional skills (e.g. analytic problem analysis and solution skills, partnership negotiation and management, communication and facilitation, management and leadership skills)</li> <li>• Publication performance of researchers in developing countries</li> <li>• Management of agricultural research for development, extension, and systems</li> </ul>	<b>Organization level</b>	<ul style="list-style-type: none"> <li>• Flexible, demand-oriented and high-quality training and degree programs on various technical capacities (see individual capacities above)</li> <li>• Woman participation in education, research, professional practice and leadership</li> <li>• Retention of senior staff in research organizations</li> <li>• ICT hardware, access and use</li> <li>• Fundraising</li> </ul>
<b>Individual level</b>	<ul style="list-style-type: none"> <li>• Agricultural practices and integrated approaches (e.g. conservation agriculture, integrated pest management, agroforestry landscapes, integrated soil fertility management, payment for environmental services, climate-smart agriculture, silvopastoral systems)</li> <li>• Social science (e.g. agronomics, environmental economics, systems research, value chains)</li> <li>• Specific agricultural research and professional disciplines (e.g. plant and animal production and protection, weed and pest science, forestry, agroforestry, agricultural engineering, food science and technology, biometrics, aquaculture and fisheries monitoring and evaluation)</li> <li>• Gender (gender rights and policies, gender-disaggregated research, role of women in farming, nutrition and smallholder business, property and tenure traditions and rights)</li> <li>• Use of ICT (e.g. search and data analysis, remote sensing and mapping) and use of research and multi-stakeholder decision tools</li> <li>• Agricultural seed and food systems, markets, and their integration (e.g. cropping systems, farming systems, national agricultural research institutions, national agricultural research and extension systems, national agricultural knowledge information systems, agricultural innovation systems)</li> <li>• Professional skills (e.g. analytic problem analysis and solution skills, partnership negotiation and management, communication and facilitation, management and leadership skills)</li> <li>• Publication performance of researchers in developing countries</li> <li>• Management of agricultural research for development, extension, and systems</li> </ul>				
<b>Organization level</b>	<ul style="list-style-type: none"> <li>• Flexible, demand-oriented and high-quality training and degree programs on various technical capacities (see individual capacities above)</li> <li>• Woman participation in education, research, professional practice and leadership</li> <li>• Retention of senior staff in research organizations</li> <li>• ICT hardware, access and use</li> <li>• Fundraising</li> </ul>				

	<p><b>System level</b></p>	<ul style="list-style-type: none"> <li>• Availability of qualified researchers and other professional staff (see individual capacities above), including long-term financial support</li> <li>• Access of researchers and professionals to relevant national and regional for a (e.g. see list of key regional actors above)</li> <li>• Effective plant and animal breeding and release frameworks, including biotechnology regulatory and legal frameworks</li> <li>• Application of ICT solutions to strengthen networks and partnerships</li> <li>• Relevant and effective university collaboration and partnerships</li> <li>• Increased system capacity for innovation by effective collaboration of research, extension and agricultural higher education and linkages to the private sector and the international scientific community</li> </ul>
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<p><b>Impact pathway 3: Evidence-based policy advice</b></p>	
<p><b>Description of pathway</b></p>	<p>Research on sustainable agriculture, gender, natural resource management, climate change mitigation and adaptation and biodiversity conservation generates evidence that positively influences national and global policies. These policies, once implemented, ultimately reduce poverty, improve food and nutrition security for health and improve global and local management of natural resources, with a special focus on women.</p>
<p><b>Key actors</b></p>	<p><b>Research</b></p> <ul style="list-style-type: none"> <li>• Agricultural research institutes, universities and NGOs in developing countries</li> <li>• Advanced international research institutes and universities (e.g. CGIAR Centers)</li> </ul> <p><b>Access to policy</b></p> <ul style="list-style-type: none"> <li>• Policy researchers, analysts, and advisors</li> <li>• Governmental, ministerial advisors and advisors to parliamentarians</li> <li>• Scientific journals</li> <li>• Print, online, radio, TV journalists/producers/anchors</li> <li>• Websites and new media platforms (e.g. CGIAR CRP websites)</li> <li>• Local, national and international NGOs</li> <li>• Stakeholder and interest groups, and industry associations</li> <li>• Regional policy networks, e.g., for Africa, the Food, Agriculture and Natural Resources Policy Analysis Network (FANRPAN)</li> <li>• Multilateral development banks and foundations (e.g. the World Bank, the African Development Bank, the Asian Development Bank, the Inter-American Development Bank, the Bill and Melinda Gates Foundation)</li> <li>• Implementing agencies of global conventions’ financial mechanisms (e.g. the Global Environment Facility (GEF), the Green Fund)</li> <li>• International high-level meetings and bodies (e.g. G7/8, G20, the African Union (AU), Association of Southeast Asian Nations (ASEAN), the Organisation for Economic Co-operation and Development (OECD))</li> </ul> <p><b>Policy-making institutions and mechanisms</b></p> <ul style="list-style-type: none"> <li>• National parliaments and parliamentarian working groups</li> <li>• District and national governments and their ministries and agencies</li> <li>• Regional parliaments (e.g. European Union)</li> <li>• International agreements (e.g. the European Union’s Forest Law Enforcement, Governance and Trade (FLEGT) facility)</li> <li>• Decision-making bodies of global environmental conventions (e.g. United Nations Framework Convention on Climate Change (UNFCCC), United Nations Convention on Biological Diversity (UNCBD), United Nations Convention to Combat Desertification (UNCCD))</li> </ul>

<b>Capacities required along this pathway</b>	<b>Individual level</b>	<ul style="list-style-type: none"> <li>• Policy research on specific topics (e.g. value chains, food security, poverty, and nutrition policy analysis; environmental and natural resource policy analysis; climate change policy analysis, trade policy analysis)</li> <li>• Modeling (e.g. geographic information system (GIS) modeling, computable general equilibrium (CGE) models, multimarket modeling, International Model for Policy Analysis of Agricultural Commodities and Trade (IMPACT))</li> <li>• Social science (e.g. agronomics, environmental economics, systems research)</li> <li>• Climate change mitigation and adaptation (convention, mechanism, approaches)</li> <li>• Conservation of (agricultural) biodiversity (convention, mechanism, approaches)</li> <li>• Professional skills (e.g. outreach, stakeholder engagement, communication and facilitation, analytic problem analysis and solution skills, management and leadership skills)</li> <li>• Monitoring and evaluation (e.g. impact evaluation)</li> <li>• Agricultural systems and markets and their evolution (e.g. cropping systems, farming systems, national agricultural research institutions, national agricultural research and extension systems, national agricultural knowledge information systems, agricultural innovation systems)</li> <li>• Management of policy research and outreach</li> </ul>
	<b>Organization level</b>	<ul style="list-style-type: none"> <li>• Flexible, demand-oriented and high-quality training and degree programs on various policy-related capacities (see individual capacities above)</li> <li>• Woman participation in education, research, professional practice and leadership</li> <li>• Retention of senior staff in research organizations</li> <li>• ICT hardware, access and use</li> <li>• Fundraising</li> </ul>
	<b>System level</b>	<ul style="list-style-type: none"> <li>• Availability of qualified policy researchers and other professional staff, including long-term financial support, and their access to relevant international, regional and national fora</li> <li>• Communication capacity and effective information flows relevant actors of this pathway (listed above), including application of ICT solutions to strengthen networks and partnerships</li> <li>• Increased system capacity for evidence-based policy development</li> </ul>

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