# RTB Report

## RTB

## Innovation Catalog

## Method and Work Plan

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RESEARCH PROGRAM ON Roots, Tubers and Bananas

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**RTB Report**

# RTB INNOVATION CATALOG – METHOD AND WORK PLAN

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The CGIAR Research Program on Roots, Tubers and Bananas (RTB) is a partnership collaboration led by the International Potato Center (CIP) implemented jointly with the Alliance of Bioversity International and the International Center for Tropical Agriculture (CIAT), the International Institute of Tropical Agriculture (IITA), and the Centre de Coopération Internationale en Recherche Agronomique pour le Développement (CIRAD), that includes a growing number of research and development partners. RTB brings together research on its mandate crops: bananas and plantains, cassava, potato, sweetpotato, yams, and minor roots and tubers, to improve nutrition and food security and foster greater gender equity especially among some of the world's poorest and most vulnerable populations.
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# Contents

# Summary

This document describes the method for building RTB's Innovation Catalog. We start by defining the objectives of this research, the problems and the challenges we are addressing.

Most CGIAR innovations are documented in a way that does not favor their wider use. This has limited the contribution of CGIAR innovations to the developmental challenges that CGIAR investors demand.

The goal of this research is to contribute to the CGIAR innovation management system that will enable the deployment of innovations faster, at a larger scale, and a reduced cost, having a more significant impact where they are needed the most.

The purpose of the Innovation Catalog is to document RTB innovations, in a way that is easily accessible, and understandable. The Catalog will be user-friendly (see definition in Section 6.2). Technical terms, indicators, and categories will be standardized. The type of language and depth of information will be tailored to different types of users.

The RTB Innovation Catalog will be developed using a **tailor-made Scaling Readiness framework**.

Individual RTB innovations are the building blocks of the Innovation Catalog. Contextual information and connection to innovation packages will be documented for a few of the innovations.

# Acknowledgments

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# RTB Innovation Catalog - Method and Work Plan

## 1. INTRODUCTION

This document describes the method for building RTB's Innovation Catalog.

The specific problem we are addressing is related to how innovations are currently documented within the CGIAR system. Innovation is here defined as a "new idea, product, service, and/or solution capable of facilitating impact through innovation systems involving multiple partners and enablers."

Leaders of agricultural research for development (AR4D) in low- and middle-income countries often highlight the need not only for "new innovations," but also the possibility of using and adapting existing ones. This criticism is often voiced by global intergovernmental organizations and donors, as well. This perception presents the need to make better use of existing solutions in the agricultural sector while developing new ones.

As a global leader in agricultural research, creating technical, capacity development, policy and institutional innovations, the CGIAR has great potential to address this need for improving and expanding the use of agricultural innovations.

## 2. GOAL AND SPECIFIC OBJECTIVE

CGIAR innovations tend to be documented in a way that does not favor their wider use, limiting their contribution to the CGIAR Strategy and Results Framework and to Sustainable Development Goals (SDGs).

The goal of this research is to contribute to the development of a CGIAR innovation management system, which will enable the deployment of innovations faster, at a larger scale, and at lower costs, to achieve a greater impact on smallholder farms in developing countries.

The specific objective is to develop an Innovation Catalog to document RTB innovations. Based on the lessons learned in this exercise, the method could be extended later on to all CGIAR innovations, in consultation with the CGIAR System Management Office.

In addition to showcasing the RTB innovations, the Innovation Catalog will:

- guide researchers and developers to address local demands and engage in fit-for-purpose partnerships

- contribute to setting quality standards for design, development, and dissemination of solutions
- facilitate plugging into existing innovation exchange mechanisms for RTB solutions
- contribute to developing an innovation mindset conducive to handing over solutions to co-development and scaling partners.

# 3. EXPECTED OUTPUT

The main output of the research activity will be a catalog of at least some of the innovations generated by RTB (about 160) for future initiatives.

Some innovations, selected in consultation with the RTB PMU, will be discussed in greater depth, to include critical elements useful for the CGIAR Performance and Results Management Framework 2022-2030 (PRMF) operationalization and data collection under One CGIAR.

# 4. PROBLEM ANALYSIS

Documentation of innovations within CGIAR has been ad hoc, i.e. for specific uses, at different levels, for different purposes, and target audiences.

- Levels
    - Projects and programs
    - CGIAR centers
    - CGIAR System Office
- Purposes:
    - Internal knowledge sharing (building corporate knowledge)
    - External knowledge sharing and communication
    - Project management (planning, monitoring, reporting, evaluation, impact assessment, and learning)
    - Accountability and transparency
    - Uptake by partners and research users
- Target audiences
    - General public
    - Research partners, users, and practitioners
    - Donors
- Channels
    - Websites and portals (the CGIAR Results Dashboard, MEL, etc.)
    - Journal articles, technical reports, studies, evaluations, etc.
    - Seminars, meetings, webinars, etc.
    - Informal channels (working groups, communities of practice, innovation platforms, etc.)

The CGIAR Results Dashboard attempts to create a standardized approach to reporting innovations to the general public. Another inventory presenting selected CGIAR innovations to the public is the Innovation Explorer of the CGIAR@50 campaign. Yet, these approaches do not adequately respond to the One CGIAR ambition to

deploy innovations faster, at a larger scale, and a reduced cost, having a more significant impact where they are needed the most.

## 4.2. SPECIFIC PROBLEMS TO BE ADDRESSED

Problems which affect how innovations are documented within the CGIAR system include:

- Standardization
    - Insufficient standardization of how innovations are categorized, e.g., innovation type, scale, and Scaling Readiness;
    - Lack of targeting language and details concerning specific uses and audiences;
    - Low interoperability with other information systems limiting the interactions of CGIAR and its contribution to AR4Dinnovation systems.
- Quality assurance
    - Inadequate transparency about quality assurance (QA). A robust QA system for documenting innovations would enhance CGIAR's role as a trusted global leader in the agricultural R&D;
- Functional connectivity with the CGIAR monitoring, evaluation and learning system
    - Lack of linkages between documenting innovations and programs' theory of change.
    - Lack of documentation of innovations delivered by CGIAR in the past and tracking their use, adaptation and evolution;
    - Lack of strategy for embedding innovations into organizational knowledge;

It will not be possible to address all of these problems through this study, which will focus instead on prioritizing the ones to be addressed, taking into account RTB and One CGIAR's needs, and available resources and time.

# 5. CHALLENGES

The team will not be able to address all of the challenges that we will face while developing the Innovation Catalog. However, we should keep these challenges in mind when designing the Catalog.

**The complexity of taking a Food Systems approach.** Taking a Food Systems approach involves dealing with complex environmental, social, and economic problems, which are highly interconnected and interdependent with other complex problems. It also means dealing with private, public, and civil society actors from different sectors, including agriculture, health, the environment, and trade. Scales are nested and interconnected, from communities to public policies and international agreements.

**The nonlinearity of innovation processes.** Documenting an innovation means taking a snapshot at a given time along the innovation process. Innovation processes are nonlinear in the pace of progression, direction, and messiness. Innovations should be documented to capture their dynamic evolution.

**The complexity of innovation processes in a matrix-based organization.** Agriculture innovation does not happen in closed laboratories, but interacting with multiple players spurs ideas. CGIAR is an organization that

includes centers, projects, programs and partnerships. This implies a diversity of roles, responsibilities, and accountabilities. Establishing a single Innovation Catalog at the system level, to serve different users, poses challenges in standardization and ownership.

# 6. METHOD

The RTB Innovation Catalog will be developed using a **tailor-made Scaling Readiness framework**, taking into account the limited time and resources to fully use this approach.

Individual RTB innovations are the building blocks of the Innovation Catalog. Contextual information and connection to innovations packages will be documented for a few of the innovations.

## 6.1 DEFINITIONS

The Catalog will use the following definitions (adapted from a recent CGIAR effort https://cgspace.cgiar.org/handle/10568/110632):

- **Innovation** - A new idea, product, service, and/or solution capable of facilitating impact through innovation systems involving multiple partners and enablers.
- **Innovation developer/manager** – People/organizations leading the process for developing an innovation.
- **Innovation package** - The combination of innovations that are needed for scaling in a specific location or context.
- **Innovation system** - The interlinked set of people, processes, assets, and social institutions that enable the introduction and scaling of new ideas, products, services, and solutions capable of facilitating impact.
- **Innovation use** – Use of an innovation by partners and stakeholders.
- **Scaling** - A deliberate and planned effort to enable the use of innovations to have positive impact for many people across broad geographies.
- **Scaling readiness -** The combined score of innovation readiness and innovation use. Scaling readiness reveals the potential and key bottlenecks in an innovation package for a specific scaling objective and context.
- **Solution** - A way to address a food systems-related problem by using innovations.

## 6.2 PRINCIPLES FOR DOCUMENTING INNOVATIONS IN THE CATALOG

The information included in the RTB Innovation Catalog should be:

- User-friendly - The information should be easy to understand. The catalog functions should be intuitive, with easy-to-use search tools, allowing the extraction of basic statistical information;
- Standardized - Terminology, indicators, and categorizations should be standardized as much as possible.
- Targeted – The type of language and depth of information should be target-specific and based on the three main groups of innovations presented above.

## 6.3 INNOVATIONS TO BE INCLUDED IN THE CATALOG

According to the draft CGIAR Performance and Results Management Framework 2022-2030 (PMRF), examples of CGIAR innovation types that may form interrelated components of an innovation package include:

- Capacity development: the contribution to the increased know-how and capacities of individuals, firms, organizations, and networks to design, test, validate and use innovations. New ideas or solutions in capacity development can be considered innovations that can lead to impact. These include novel tools, products, practices in technical assistance, training, coaching, and mentoring, such as training-of-trainers, training programs with public- and private-sector partners, connecting public-private networks, Ph.D. and MSc training with universities, institutional support to national partners, particularly national agricultural research and extension systems (NARES), and decision support for policymakers.
- Policies and institutional innovations: the public policy, legislation, public and private delivery, and business strategies that create an enabling environment in which innovations can move to scale or which in themselves are innovations that can lead to impact. These include support of effective public-private-partnership models, support to the design and testing of (novel) policy arrangements and instruments (e.g., seed systems, certification, subsidy programs, market, finance, and regulatory mechanisms), engagement in policy dialogue at all levels, as well as policy analysis, foresight and providing a global architecture for collaborative international agricultural research; institutional innovations such as new marketing arrangements, multi-stakeholders platforms, etc.
- Technologies: the varieties, machines, management practices, products, and tools – including big data and information tools – the use of which can lead to benefits, gains, or efficiencies. When used at scale they can lead to impact. Activities include breeding, agronomy, post-harvest, participatory design, testing, and validation of crop and animal management practices.

## 6.4 DOCUMENTING INNOVATIONS

Innovations will be documented in the Innovation Catalog at three levels of increasing complexity, following the Scaling Readiness approach:

1. **Innovation Profile Module** including a brief description of each innovation, its impact relevance (Re: CGIAR Impact Areas and SDGs), by whom, where, and when it was designed, developed, delivered, and the stakeholder types involved in the design, development and delivery. It addresses the W questions (what, why, where, when, how and who) of the innovations in the RTB portfolio. It targets the needs of CGIAR scientists, project managers and the System Office. It will cover the whole range of innovations in the RTB portfolio.

2. **Innovation Readiness Module** including information about the value the innovation adds to existing solutions, a complete list of its novel components, their Innovation Readiness and a small repository of key evidence sources supporting its Readiness as identified by the developers and champions of the innovations. It discusses the maturity of the innovation. It makes a business case for the innovation and targets investors within and beyond CGIAR. It will cover a subset of the innovations in the RTB portfolio, to be selected from following sources: (Golden Eggs, innovations tagged by SMOs for inclusion in WIPO GREEN, innovations included in the Scaling Fund, postharvest technologies and innovations proposed by FP4. The process for selecting these innovations will be discussed and agreed with the RTB PMU.

3. **Innovation Use Module** including information about the use of the innovations in diversified contexts, their use levels in these contexts, a repository of key evidence sources supporting the use claims of the innovation identified by the developers and champions of the innovations and a list of complementary innovations which contributed to its effective use at scale (innovation package). It also provides a Scaling Readiness Graph of the innovation for a selected context. It describes how the innovation is used (and how much). It presents the potential impact at scale performance of selected RTB innovations for specific contexts and targets the design and development of future interventions on these innovations. It will be done for one example technology, capacity development, and policy innovation from the RTB portfolio. These example innovations will be selected in consultation with the RTB PMU.

# 7. WORK PLAN

| Task | Description | Activity | Deliverables | Deadline | Lead | Comments |
|---|---|---|---|---|---|---|
| 0 | This task includes the initial activities deemed necessary to develop the RTB Innovation Catalog | 0.1 Refine the methodology for the activity and individual tasks | Report on refined methodology and work plan | 21/05 – Draft report<br><br>28/05 – Final report | Team Leader<br><br>Innovation Analyst | Feedback expected from PMU and FP leaders |
| | | 0.2 Assess selected databases | Assessment of selected databases against agreed aspects (Spreadsheet + document with bullet points summarizing main findings) | 02/06 - Final assessment report | Innovation Analyst<br><br>Digital solution expert (done) | No Feedback anticipated (this is an internal output, functional to subsequent steps)<br><br>A restricted number of databases are selected according to the following criteria: relevance to the work of SMO, relevance to Scaling Readiness, and innovativeness.<br><br>The databases are assessed against their metadata and |

| Task | Description | Activity | Deliverables | Deadline | Lead | Comments |
|---|---|---|---|---|---|---|
| | | | | | | functionalities - the assessment of their metadata is pending on the approval of the methodology<br><br>Preliminary analysis show that there are a vast amount of metadata variables |
| | | 0.3 Define the set of directly observable descriptive metadata variables that will be used to prepare the dataset of RTB innovations and the Innovation Catalog | Enhanced template for the description of innovations to be proposed for One CGIAR<br><br>(Excel file for all three Modules and Brief Narrative file only for Module 1, Innovation Profile) | 07/06 – Draft report<br><br>14/06 – Final report | Innovation Analyst<br><br>Digital solution expert | Feedback expected from PMU and SMO<br><br>The enhanced template will be discussed with PMU and others (SMO, CAS, etc.) |
| | | 0.4 Analyse metadata and functionalities of existing databases (Based on activity 0.2 analysis of | Report on preliminary analysis of metadata | 07/06 Draft Report | Innovation Analysis | Feedback expected from PMU and SMO |

| Task | Description | Activity | Deliverables | Deadline | Lead | Comments |
|---|---|---|---|---|---|---|
| | | databases and 0.3 define set of metadata variables) | and functionalities of existing databases | 14/06 Final Report | Digital solution expert | This report should elaborate on the rationale for selecting/excluding variables of the enhanced template, and potential users<br><br>The report is based on the assessment of existing databases and on the analysis of metadata of RTB innovations, included in MEL |
| 1 | Build an enhanced dataset on RTB innovation<br><br>The task includes work on documentation and review of all RTB Innovations<br><br>Information will be complemented with the organization and implementation of interview sessions with innovations developers and actual/potential users. | 1.1 Document and review RTB innovations, based on existing information (MEL), and using the enhanced template developed in Task 0<br><br>1.2 Interview approx. 50 innovations developers and actual/potential innovations users to collect additional supporting evidence<br><br>1.3 Provide support to FP4 collect additional supporting documentation | Enhanced dataset on RTB innovations | 01/07 - Draft dataset (Level 1)<br><br>10/07 - Draft dataset (Level 2 and 3)<br><br>17/07 Final | Innovation analyst | Feedback expected from PMU<br><br>Innovations will be documented at three levels:<br>- Level 1 - The Basic Profile for all RTB innovations in MEL<br>- Level 2 - Innovations with the additional Readiness Module – The process for selecting these innovations will be |

| Task | Description | Activity | Deliverables | Deadline | Lead | Comments |
|---|---|---|---|---|---|---|
| | | on selected FP4 post-harvest innovations | | | | discussed and agreed with the RTB PMU<br><br>- Level 3 - Three selected innovations among Golden Eggs with the Use Module - The process for selecting these innovations will be discussed and agreed with the RTB PMU |
| 2 | Build on the gathered information, analyze the information and organize the innovations under categories defined by their scalability and adoption requirements, goals, the innovation packages they can be a part of, clients' priorities and other categories agreed by PMU and the team. | 2.1 Review and classify RTB innovations and define innovation packages they could be part of | Analysis and classification of innovations included in the dataset developed under Task 1 (report) (Innovation analyst)<br><br>Digital Catalog: excel information presented into a pdf with editorial review (editor and designer) | 06/08 Draft Analysis Report<br><br>12/08 Final Analysis Report | Innovation analyst | Feedback expected from PMU |

| Task | Description | Activity | Deliverables | Deadline | Lead | Comments |
|---|---|---|---|---|---|---|
| 3 | Collection and review of good practices around RTB innovations, and development of guidelines for producing strategies for using Scaling Readiness principles for each of the selected innovations categories. | 3.1 Develop good practices and guidelines that can inform the development of strategies for further RTB innovation development or uptake using Scaling Readiness principles | Synthesis report on good/promising practices based on RTB Innovations<br><br>Guidelines for producing strategies using Scaling Readiness principles (innovation analyst) | 23/08 Draft Synthesis Report<br><br>30/08<br><br>Final Synthesis Report | Innovation Analyst | Feedback expected from PMU and FP leaders and cluster leaders |
| 4 | Knowledge dissemination | 4.1 Design and test a database (new or adapted) structure, and user interface.<br><br>4.2 Migrate data collected into the new or adapted database | New/adapted database on RTB selected innovations suitable for One CGIAR | End of September<br><br>More details about deadline to be agreed later on, depending on progress of work | Innovation Analyst<br><br>Digital solution Expert | Feedback expected from PMU and FP leaders |
| | | 4.3 Write 2 blogs on the new Catalog on the methodology, and on early findings in relation to future CGIAR use of the cataloguing methodology | 1 Blog on the methodology for the Innovation Catalog<br><br>1 blog on early findings in relation to future | End of September<br><br>More details about deadline to be agreed later on, | Team leader<br><br>Strategic advisor | Feedback expected from PMU |

| Task | Description | Activity | Deliverables | Deadline | Lead | Comments |
|---|---|---|---|---|---|---|
| | | | CGIAR use of the cataloguing methodology | depending on progress of work | innovation and scaling | |
| | | 4.4 Write 1 policy brief | 1 Policy brief on the importance of the properly documenting innovations for their wider dissemination and use | End of September<br><br>More details about deadline to be agreed later on, depending on progress of work | Strategic advisor innovation and scaling<br><br>Team Leader | Feedback expected from PMU |
| | | 4.5 Organize 1 webinar for CGIAR, RTB-MC, and Initiative leaders | Webinar for CGIAR, RTB, and Initiative Leaders on the RTB Innovation Catalog | Mid October<br><br>More details about deadline to be agreed later on, depending on progress of work | Strategic advisor innovation and scaling<br><br>Team Leader | To be organized in close consultation with PMU |
| | | 4.6 Document work and main results to develop the RTB Innovation Catalog | Final Activity report | End of October<br><br>More details about deadline to be agreed later on, | Team Leader<br><br>Strategic advisor | Feedback expected from PMU |

| Task | Description | Activity | Deliverables | Deadline | Lead | Comments |
|---|---|---|---|---|---|---|
| | | | | depending on progress of work | innovation and scaling | |

RESEARCH PROGRAM ON Roots, Tubers and Bananas

CGIAR

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