Evaluation of Results-Based Management in CGIAR

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Robert Vandenberg (Team leader)
Seerp Wigboldus

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A. General Introduction to RBM pilot case studies

Piloting RBM within CGIAR research programs

In early 2013, the CEO of CGIAR requested CRPs to submit proposals for piloting RBM. Results Based Management (RBM) was considered a new approach for CGIAR, and it was therefore considered important to pilot RBM within CGIAR Research Programs (CRPs) committed to experimenting with it at an early stage. Pilots were expected to provide new insights on RBM.

In total, there were RBM pilots in five CRPs. Seven CRPs submitted proposals to the Consortium Office (now System Management Office), and through a selection process, five were allocated a budget for piloting RBM. The key criteria for proposal selection were 1) high quality proposal (coherent, convincing, and aligned with piloting RBM), and 2) evidence of commitment by the CRP. In total USD 4 million was made available in 2014 for the five CRPs piloting RBM. Additional funding to further support RBM was planned for 2015. However, this extra budget could not be secured and therefore this became a one-time system-level RBM support initiative.

CGIAR piloting of RBM by CRPs took place in 2014 and partly in 2015. Reporting requirements from the CRPs to the Consortium Office for this initiative included: main achievements, views on prerequisites for RBM, views on successful RBM, and lessons learnt from the experience[1].

Methodology used for the case studies

Three case studies of RBM pilots were selected: a sample of three units within a total population or sampling frame of five. The three pilots examined as case studies took place within the Climate Change and Agriculture Food Systems (CCAFS), Roots, Tubers and Bananas (RTB), and Global Rice Science Partnership (GRiSP) CRPs. RBM was also piloted in the Humidtropics and Aquatic Agricultural Systems (AAS) CRPs but these two additional pilots were not included as case studies for this evaluation. Instead, the three case studies included in this evaluation were those which were most extensively documented.

The evaluators relied primarily on input received from interviewees plus data extracted from documents available online or directly from those interviewed. The lists of potential interviewees was provided through evaluation focal points or key contacts of the respective CRPs. In the end, seven people were interviewed for GRiSP, seven for RTB and eight for CCAFS. The interviews were semi-structured and followed a template of 12 open-ended questions designed for the case study. The documentation on all three pilot was extensive and interviews were used to get mostly personal perspectives of key people who have been involved. Key documents consulted for the case studies are referenced in an Annex to each case study.

These case studies are primarily summary descriptions of documentation already provided earlier by the CRPs, refined and further elaborated through information provided by key informants involved in

[1] Recommendations to the Consortium Board on supplementary allocations of funds to selected CRP-RBM Pilots for 2014. Consortium Office, November 27, 2013.

the pilots. These case studies are not evaluations of the RBM pilots (and certainly not of related CRP implementation). Instead, they are a way of tapping into the rich learning that took place during the pilots, and to use this as input into the wider evaluation of RBM in CGIAR.

B. Case study of RBM pilot within the Global Rice Science Partnerships (GRiSP)

1. Introduction

1.1. GRiSP

This case study examines the RBM piloting supported by Consortium Office funding that took place in 2014 within the Global Rice Science Partnership (GRiSP) CRP. As summarized in Table 1, GRiSP brought together three CGIAR research Centers plus three non-CGIAR institutions as core partners. The three research Centers that participated in the 2014 RBM piloting included IRRI, AfricRice, and CIAT. Together with about 900 other partners worldwide, GRiSP engaged in impact-oriented research designed to contribute to CGIAR system-level objectives. GRiSP was first approved in 2011 with a five-year budget of USD 593 million - in terms of budget, the largest of the 15 CGIAR Research Programs.[2] For CRP II, GRiSP was redesigned, renamed RICE since 2016, and approved for another five years.

Table 1 – GRiSP's Six Core Research Partners and their Participation in RBM Pilot

Acronym	Full Name	Member Status	Participant in RBM Pilot
IRRI	International Rice Research Institute	CGIAR research Center	Yes
AfricaRice	Africa Rice Center	CGIAR research Center	Yes
CIAT	Centro Internacional de Agricultura Tropical	CGIAR research Center	Yes
JIRCAS	Japan International Research Center for Agricultural Sciences	Non-CGIAR institution	No
IRD	Institut de recherche pour le développement	Non-CGIAR institution	No
CIRAD	Centre de Coopération Internationale en Recherche Agronomique pour le Développement	Non-CGIAR institution	No

[2] Evaluation of the CGIAR Research Program on Global Rice Science Partnership (GRiSP), January 2016.

1.2. History and readiness for the RBM pilot

The RBM piloting built on GRiSP's already defined impact pathway[3]. GRiSP submitted a proposal to the Consortium Office for a RBM pilot project that would design and test an effective system to collect and evaluate quantitative and qualitative indicators of progress toward its Intermediate Development Outcomes (IDOs) within a 2-year time frame, with approved funding for the first year (2014) of USD 600 000[4]. The pilot connected to on-going work, namely an ex-ante assessment of the potential impact of GRiSP, and the systematic, quantitative analysis of production constraints, impact of technology options, and R&D priorities for rice which was meant to give an evidence-based indication of the overall impact potential of GRiSP[5].

In January 2013, an M&E assessment survey was conducted by email to eleven GRiSP Global Theme Leaders and other key participants in IRRI, to assess their perceptions, current usage of results-based M&E, and their level of satisfaction with GRiSP's current M&E framework[6]. This inturn informed training needs for a workshop to develop an integrated impact pathway and M&E framework which took place in February and March 2013. The event brought together GRiSP's theme leaders, focal persons, and core staff to collectively map out their major themes into GRiSP's impact pathway, theory of change, and a clear monitoring and evaluation strategy. The workshop led to an integrated strategic framework for GRiSP's later discussions on work program strategy, staffing and budgets[7].

In the three participating Centers, IRRI, AfricaRice and CIAT, there was experience working with a results orientation even before before the RBM pilot. For example, AfricaRice had an outcome-oriented 2011-2020 strategic plan, the implementation of which started in 2012. In 2012-2013 a baseline survey was completed to help monitor this strategic plan. Already then, AfricaRice had decided to make results a management focus. It was decided at that time that the traditional manual system of inputting data would need to be replaced by a computer-based management information system.

In summary, there was already a lot to build on when the RBM pilot supported by the Consortium Office started: a generic ToC, impact pathways, tentative definition of IDOs, a GRiSP gender strategy, and planned impact assessments, plus initial ideas on indicators[8]. Also, as early as April 2013, a draft M&E plan for GRiSP had been developed[9]. This meant that the RBM pilot connected well to relevant on-going processes.

[3] GRiSP's overall and thematic impact pathways and theories of change are documented in *GRiSP Results Based Management Framework* (April 1, 2013). GRiSP's Intermediate Development Outcomes (IDOs) and proposed M&E indicator framework are documented in *GRiSP IDO and Impact Pathway* (August 19, 2013).

[4] 3rd GRiSP Oversight Committee (OC) Meeting. 26 October 2013. Yaoundé, Cameroon

[5] GRiSP RBM Pilot Proposal, October 2013

[6] Developing an integrated impact pathway and monitoring and evaluation framework for the Global Rice Science Partnerships (GRiSP). Ai Chin Wee, 2013.

[7] Ibid

[8] GRiSP RBM Pilot Proposal, October 2013

[9] Monitoring and Evaluation Plan for the Global Rice Science Partnership (GRiSP, CRP 3.3). DRAFT, April 29, 2011

1.3. Motivation and focus of the pilot

In its instructions to CRPs (November 2011)[10], the Consortium Office noted that past M&E systems of CGIAR had relied on multiple indicators, some of which were difficult to link to performance, overly complex, time consuming, and expensive to measure. The Consortium Office therefore asked CRPs to develop monitoring systems that would:

- provide a transparent, credible, and rigorous frame for assessing progress (or lack thereof) in the delivery of results at both CRP and CRP portfolio levels;
- facilitate lessons to be drawn from M&E to further improve performance;
- satisfy donors' minimum requirements for reporting results; and
- provide overall coherence and reasonable standardization in approaches across CRPs.

The instructions go on to say that such a system should be capable of:

- demonstrating accountability vis-à-vis donors and other stakeholders;
- advocating strategies, using evidence from findings;
- documenting results and creating an institutional memory of knowledge and learning;
- involving stakeholders through participatory monitoring; and
- enhancing understanding of the results of programs and policies.

Developing outcome indicators and other metrics for GRiSP was necessary to track progress, to demonstrate the impact pathways and theory of change, to assess and attribute the impact, and to satisfy donors' requirements. Indicators were said to be needed by donors, policy makers, and by GRiSP itself to demonstrate evidence of impact[11].

GRiSP had developed an outline for the CRP II phase, based on a draft set of IDOs and overall thematic impact pathways and theories of change. This needed to be followed-up by designing an effective M&E system to collect data for IDOs indicators. Realising that the whole concept of IDOs was new, it was considered necessary to design novel systems. As preparation for the implementation in GRiSP phase II, the pilot project aimed to design and test an effective system to collect and evaluate quantitative and qualitative indicators of progress toward IDOs. Initially, the idea was to do this in a 2-year timeframe (2014-2015) involving a total investment of around USD 2.7million. Part of this was expected to come from the special RBM piloting funds made available by CGIAR[12].

1.4. Design and start-up process

The Consortium Office approved a RBM proposal from GRiSP with a USD 600 000 budget for 2014 with the expectation that the same amount would be available for 2015. GRiSP would also allocate funds from its program coordination budget to supplement the Centers' M&E activities. This meant that overall approximately USD 1 million per year would be spent on conducting M&E training, workshops,

[10] Recommendations to the Consortium Board on supplementary allocations of funds to selected CRP-RBM Pilots for 2014. Consortium Office, November 27, 2013.

[11] Computer-Aided Personal Interview (CAPI) and Monitoring and Evaluation (M & E) Meeting, 2-3 December 2013, Bangkok, Thailand

[12] GRiSP RBM Pilot Proposal, October 2013

buying hardware, conducting surveys, and other activities[13]. The RBM pilot project was referred to as the *Metrics and Indicators for Tracking in GRiSP* (MISTIG) project[14].

Planned MISTIG activities included:

- wide consultation on proposed IDOs and progress targets;
- finalize a set of progress indicators that GRiSP would monitor IDOs;
- design a monitoring system for progress indicators and training of staff to implement the monitoring system; and
- implementation of the monitoring system at pilot sites (test running), then fine-tuning based on evaluation, and preparing a prototype ready for implementation by the start of GRiSP Phase II (RICE CRP)[15].

The pilot plan included strategies to:

- further synthesize and make use of large data sets and household baseline surveys;
- explore GIS and remote sensing (RS) to get baseline data (target domains, etc) and track through time and eventually measure reduction in yield gap;
- analyze larger impact-oriented projects, extract the targets, and map them geographically;
- design a mechanism to update information and identify domains where technologies were useful; and
- agree on IDOs and related indicators, and how to collect them systematically[16].

In December 2013, a workshop was held on Computer-Aided Personal Interview (CAPI) and Monitoring and Evaluation (M&E). This can be considered as the formal start of the RBM piloting. Different CAPI systems were compared as used by CIAT, IRRI, and AfricaRice. This was considered the first-ever comprehensive overview of all the GRiSP partner M&E systems. It also presented the issue of connecting data from different systems since at GRiSP level, the interest was in systematically collecting and aggregating what is coming from various projects. The idea was to identify at the program level a set of key indicators, and to come up with at most 4 IDOs with 3 or 4 indicators per IDO to keep things manageable. The consensus was that CAPIs would speed up and automate data collection, reduce risk of errors, reduce the time for data processing (no more manual transcriptions), and ease data transfer and analysis. For GRiSP, the move to CAPIs, and possibly one or a few CAPIs only, was considered to be of great advantage for M&E purposes and overall GRiSP management and evaluation. More M&E related-workshops were envisaged to create a community of practice for M&E. An M&E specialist, based at IRRI, was contracted to spearhead the RBM-related activities, funded 50:50 between GRiSP and IRRI[17].

GRiSP's M&E framework was proposed to be supported by three interconnected streams of data:

[13] Ibid

[14] GRiSP annual report 2014 (April 2015).

[15] GRiSP RBM Pilot Proposal, October 2013

[16] Computer-Aided Personal Interview (CAPI) and Monitoring and Evaluation (M & E) Meeting, 2-3 December 2013, Bangkok, Thailand

[17] CAPI & M&E workshop (Dec 2013, Bangkok), MISTIG (Metrics and Indicators for Tracking In GRiSP) project 'kick-off' notes by Bas Bouman

- metrics Flow 1 - Focusing on the level of individual projects or hubs, mainly through socio-economic surveys (households, village, value-chain actors, consumers) and on-station and on-farm biophysical experimentation (experimental platforms, on-farm and participatory R&D):
- metrics Flow 2 - Focusing on larger spatial scales using tools such as remote sensing, GIS, modeling, and inter-national statistics:
- metrics Flow 3 - Focusing on the level of GRiSP themes and IDOs, these metrics were meant to be meaningful for GRiSP management, limited in number, cover the three main stages of GRiSPs impact pathway (product development, product pilot testing, and product upscaling and large-scale delivery), and be collectible at a number of key sites (benchmark sites) and potentially at all 'action sites' of GRiSP[18].

These three flows of data were meant to be interconnected and mutually supportive. Targets in relation to indicators would allow management of progress. At Metrics Flow 3, targets for IDOs and supporting indicators would need to be developed with GRiSP partners. This can be done at regional, national, or sub-national level. But since IDOs are defined as outcomes 'at scale', the setting of targets needs to involve many partners. GRiSP therefore planned to engage with these partner countries to get a systematic overview of such strategies, to quantify R&D goals as much as possible (target setting), and to develop a joint system of collecting and monitoring GRiSP indicators[19].

Key planned follow-up activities were defined as:

- developing and putting in place a system of indicator-based data collection, aggregation, analysis, and assessment;
  - nationally, with national partners, setting indicator targets, and aspirational outcomes,
  - regionally, collecting indicators in key target areas (surveys using tablets, measurements, local statistics and data bases),
  - globally, aggregation and synthesis of the above; and
- through monitoring and evaluation (M&E), using progress indicators to evaluate and guide GRiSP[20].

2. The Pilot Process

Results-framework related

The focus was to develop a robust M&E framework and system for tracking progress along the impact pathway from outputs (rice research products) to intermediate development outcomes (IDOs). The IDOs have several indicators that were formulated to be monitored at three levels: global, national, and at action sites. A start was made to develop monitoring plans for the IDO indicators at those three levels with an emphasis on the national and action site indicators[21].

[18] Ibid

[19] Ibid

[20] 3rd GRiSP Oversight Committee (OC) Meeting. 26 October 2013. Yaoundé, Cameroon

[21] Metrics and Indicators for Tracking in GRiSP (MISTIG) Project Report 2014. Hope Webber.

National rice R&D related

The MISTIG project was implemented by CIAT in collaboration with the Latin American Fund for Irrigated Rice (FLAR in Spanish). Three CIAT/FLAR meetings were held in 2014. The first meeting took place in Uruguay (March 2014), the second in Colombia (September 2014), and the third in Panama (November 2014). Participants at these meetings were FLAR administrative groups and technical steering committee members. They agreed in principle to implement the MISTIG project collaboratively. Participants also selected and defined 20 indicators for monitoring GRiSP IDOs at the national level[22].

AfricaRice, in collaboration with the Coalition for African Rice Development (CARD), conducted a similar workshop for a national rice development strategy in 2009[23]. In 2014, AfricaRice organized a hub-vision stakeholders' workshop representing 24 African countries. The objective was to form partnerships and work collaboratively in the rice hub areas to support rapid achievement of impact[24].

In 2014, the Council for Partnership on Rice Research in Asia (CORRA) and the Global Rice Science Partnership (GRiSP) conducted two workshops to initiate a systematic inventory of national rice research and development strategies (NRDS) in Asia. The first workshop took place in Malaysia in May 2014 and was attended by eight Southeast Asian countries and one West Asian country. The second workshop took place in Hyderabad, India, in December 2014 and five South Asian countries participated. GRiSP IDOs and indicators, and the NRDS of the participating countries were presented, compared, and discussed in group sessions[25].

Action site baseline survey related

Action sites are areas within countries where GRiSP flagship projects are actively being implemented. At IRRI in 2014, a computer-assisted personal interview (CAPI) questionnaire was used to collect baseline data to monitor GRiSP IDOs at action sites. The survey was conducted in five Asian countries: Bangladesh, India, Myanmar, the Philippines, and Vietnam with a total sample size of 11,254 rice farmers. This was followed by data quality checking and cleaning and analysis of IDO indicators (which has still not been completed). A monitoring plan for the action sites was designed after 2014 in consultation with IRRI theme leaders and key staff working on the IDOs. The idea was to conduct a similar survey every three to five years, but currently (2017) this is not considered feasible and doing this every 5-6 years is thought to be more realistic.

The main activity undertaken at CIAT and FLAR action sites is research on impact assessment. In 2013, a nationally representative survey was conducted in Bolivia and the data was analyzed in 2014. A similar survey with qualitative methods to deepen gender analysis was implemented in late 2014 by CIAT and Ecuador's national agricultural research institute (INIAP). In 2014, AfricaRice conducted a hub baseline survey in two new African countries: Uganda and Democratic Republic of Congo. The baseline survey is part of the ongoing M&E activities to collect quantitative and qualitative data to monitor GRiSP (now RICE) IDOs. Other activities conducted were the rice production survey, technology diffusion survey, and a hub vision stakeholder workshop[26].

[22] See report on CIAT MISTIG project, 2014, for details

[23] The reports can be downloaded from www.riceforaafrica.org/index.php/nrds-page.

[24] Metrics and Indicators for Tracking in GRiSP (MISTIG) Project Report 2014. Hope Webber.

[25] Ibid

[26] Ibid

MIS-related

A management information system (MIS) for managing data and reporting on GRiSP milestones, outputs, IDOs, and impact assessment was developed. Several software tools were used. The MIS has modules for planning, budgeting, monitoring, evaluation, and impact assessment. GRiSP Centers (IRRI, AfricaRice, and CIAT) and partners are meant to be able to log in and enter data online. Data on IDO indicators at global, national, and action site levels would be displayed online for public viewing, searching, and downloading. AfricaRice developed an offline web-based M&E application called MLAX. The system is designed to provide data on AfricaRice and project implementation progress and effectiveness in Africa. It can document and generate information on CRPs, projects, task forces, and hub outputs and outcomes. Tablets and smartphones are used to automate data collection. The system is stored in a cloud server that is accessible anywhere in the world, with backup at AfricaRice.

Since most Centers have their own management information systems, the challenge was to make them interoperable. That involved harmonizing key tables, fields, and data types for transferring only required GRiSP data from the partner databases to the central MIS database at IRRI (the host Center of GRiSP)[27].

3. Reflections on the Pilot Process

Guidance

In the early 2013 workshop on developing integrated impact pathways and a monitoring and evaluation framework, consultants helped clarify core aspects of RBM. Several other workshops followed which served to create shared understanding among GRiSP partners, particularly in the field of M&E-related concepts and processes. The Bangkok meeting of December 2013 was the first following the approval of the RBM pilot proposal. The System Management Office left the arrangement of guidance for GRiSP to sort out, which they did. External consultants played a limited role in this.

Plans were outlined and then implemented. The main adaptation that took place related to MIS complications and the choice to work with simpler versions. Piloting led to the realisation that the learning orientation of RBM had to significantly improve if RBM were to make a difference beyond an ability to report. The pilot could build on earlier experience with RBM, and be embedded in ongoing efforts to practise RBM.

How was piloting received

It was a big change to start collecting data at outcome level. In the beginning, many had no notion about RBM. Training was needed and data collectors needed guidance to work with a different type of data and to master new systems. The automation of the data collection system helped. Tablets started to become more widely used to collect and input data. Performance in relation to working from this new approach also had to be monitored.

Creating a baseline as such was not considered a big technical challenge, but changing the organizational culture, orientation, and mindset required more effort. NARS partners are now starting

[27] Ibid

to understand what is meant by results-oriented M&E and results reporting is starting to improve. Some still lack discipline and motivation and incentive to input data at field level.

MIS issues

Two of the three GRiSP CGIAR Centers had already invested in a management information system: AfricaRice had developed its own, and CIAT would use MARLO, whereas IRRI did not have a MIS at all. It was decided that IRRI would develop its own MIS, and that IT specialists would assure that the three systems could communicate with each other. The IRRI MIS was eventually developed, but the cross-talk capability never happened - and was never needed. A few years ago, AfricaRice stopped using its MIS. It was considered too complex for staff, and data entered into the system was rarely used. At IRRI, the MIS never really got implemented beyond an early pilot. In summary, complicated MISs don't work in practice: too cumbersome, time-consuming, irritating for most staff who enter information but never get anything useful back that they need, and overall not particularly useful. Smaller, dedicated and task-specific systems may be more appropriate (e.g. a system for indicators, a system for financial management, etc.). Some interviewees suggested that simple but transparent and flexible Excel spreadsheets can work fine.

After the initial full-scale surveys, smaller-scale surveys have been done. Initially the idea was to repeat the baseline survey every 3-4 years to measure changes, but that was not feasible. Now the idea is to do it once in 5-6 years. However, it is not just about having a baseline; the data as such also provides a view on what is the state of affairs in rice production and as such supports decision-making in terms of areas of attention, needed research, etc. It is just too expensive to do this type of survey regularly, so now they do update surveys involving 200 HH per year per action site (within a country). They are randomly selected, so there is no continuity in the group of HH involved in the surveys.

Another key source of data is the World Rice Statistics using data acquired by USAID, FAO and the World Bank. These data sets can show progress at country level. That makes outcome-level data collection a lot easier for a rice-related CRP. Other CRPs do not have that advantage.

The community of practice on monitoring, evaluation and learning (MELCoP) is trying to harmonize indicators across CRPs. What is becoming clear is that certain key concepts, such as food security, are understood differently. This tends to lead to different ideas on what indicators are needed.

Leadership and incentives

There has been significant investment in workshops to establish a shared understanding about RBM. Most of these have been about M&E. This included interaction with other CRPs in the cross-CRP workshop on M&E (bringing together Dryland Cereals, Grain Legumes, GRiSP, MAIZE, and WHEAT). The GRiSP director and M&E specialist (both based at IRRI) provided direction and support. The main incentive for participation was, at least initially, the realisation (and this was communicated clearly by the CRP director), that GRiSP needed to improve its results reporting. This was understood to be about results beyond the direct influence of researchers, and that this would need to involve ongoing interaction with partners in relation to IPs, indicators, and reporting processes. Incentives in terms of time and funding to be able to adequately follow up e.g. analysis of baseline data and reporting requirements, has been one of the challenges.

CRP and Center level linkages

In the case of GRiSP, the interaction between CRP and Centers is not considered very complex, because involved Centers did most of their rice-related work through GRiSP: IRRI 90%, AfricaRice 85%, and CIAT

100%. For CIAT, however, rice is just one of the crops they work on, which means they related differently to GRiSP than AfricaRice and IRRI. There is a risk of doing things double: at Center level and at CRP level. GRiSP has been conscious of this and tried to address this risk when developing information and reporting processes. This also relates to the bilateral projects which must comply with donor requirements. In many cases, this created two different reporting streams. This meant there was a need for flexibility across the three Centers (CIAT, IRRI, AfricaRice) apart from what needed to be standardized in relation to GRiSP.

In the end, the approach adopted was that the set of data needed by GRiSP was defined and that each Center would find out its own way of providing this (through different systems) e.g. one may choose to use MARLO and another may not.

A start was made with training senior staff at GRiSP on RBM principles as early as 2013 (developing ToC and impact pathways, and general RBM skills). Since then, every year there has been a 3 to 5-day combined workshop on M&E, gender, and impact assessment. Support from Center leadership (Director General and Deputy Director General for Research) was that they gave the CRP director all freedom to pursue RBM, and provided 'passive support', but did not engage themselves nor institutionalize RBM beyond what GRiSP was doing. This raises questions about the institutional sustainability of RBM outside the scope of CRPs. Currently, both IRRI and AfricaRice have new senior leadership which some feel is less supportive of RBM.

4. Main Achievements and Challenges

4.1. Main reported achievements

The main achievement of the RBM pilot has been the development of a M&E framework and implementation system for tracking progress along the impact pathway from outputs (rice research products) to IDOs. This enhanced readiness of GRiSP to develop appropriate plans for CRP II (RICE). In concrete terms, the process led to an agreed set of GRiSP goals, IDOs, regional targets, a set of progress indicators, a prototype monitoring system, and trained staff to implement the monitoring system[28]. Work related to these early achievements is on-going. And not these achievements were related strictly to the piloting process, since that was in 2014 and work has continued since then. This was also in line with the requested CRP commitment by the System Management Office when proposals were submitted. GRiSP showed that there was commitment by continuing work on M&E though less intensively due to RBM funding limitations. Annual M&E and learning, impact assessment, and gender meetings continue in which RBM-related work can be exchanged. Some interviewees indicated that they would have preferred more regular exchange.

The experience of CIAT illustrates what the achievements meant for rice-related research for development partnerships: M&E was not much of a focus for rice research in Latin America. It was new to develop a M&E framework and to build this with involvement of stakeholders. CIAT developed indicators at three levels: global, national, and site-specific. Rather than developing just their own capacity to gather data, they connected to the various partners of FLAR to obtain the data. They then provided the service of putting all data “under one roof” (centralised information) and offered basic analysis services. Because CIAT worked with FLAR for data gathering and delivery capacity, much could

[28] GRiSP RBM Pilot Proposal, October 2013

be done with relatively little money. In short, the pilot could be seen as capturing a potential which was not used before. This was greatly appreciated by participating partners in FLAR. The MIS provides CIAT with an overview of what is going on in the field of rice production while also supporting partners in FLAR. When RBM funds stopped to provide this centralised data house and related analysis, seven-eight countries decided they wanted to continue this service and each provide 20% of full-time-equivalent for a research assistant to keep the service going. Presently they plan to go further with more advanced analysis.

4.2. Main reported challenges

Indicators

Data for many indicators – both to document baselines and to track progress – has been and is being collected at the individual project level. The immediate challenge was (and still is) that of aggregation, which has a quantitative and a qualitative component. Related to this is the 'logistical' challenge of extracting needed information systematically from individual reports and diverse M&E systems that the individual projects operate[29]. The qualitative component refers to different dimensions of indicators, each with their own units of measurement that cannot be simply added up. For example, indicators for environmental footprint or for resource use efficiency can have many dimensions: water-use efficiency, greenhouse gas emission, biodiversity, etc. Here, the challenge is to show how the different indicators contribute to the same IDO. These indicators are usually collected in specific projects only and cover a small domain[30].

Related to the above, selecting indicators came with the intention of having common measures allowing for portfolio-wide aggregated reporting. It started with a just a small set of indicators, but the list became longer and longer. In the end donors helped to define a more manageable set. However, little thought went into how related information would need to gathered, processed, aggregated, etc. Indicators on capacity development and other qualitative processes such as strength of partnership, are difficult to establish. But capacity and partnerships are the very basis for an ability to achieve results (outcomes) and contribute to impact. In short, interviewees accept that there is a need for a coherent system but too much was expected. Implementation has been difficult.

Relevant complexity

The Consortium Office (now System Management Office) sometimes appeared (appears) to approach CRPs as projects. However, they are a conglomerate of all kinds of projects, involving all kinds of partners, involving all kinds of management systems. This affects what is and isn't possible in the field of RBM. It requires consensus and moving forward slowly. RBM cannot be set up top-down. This also relates to the global reach of GRiSP, where donors, the former Consortium Office (and the current System Management Office) seem to expect that measurement can be of "everything everywhere". The attempt to define and collect system-wide indicators appears to remain a fundamental challenge. Some argue that attempts have proven to be elusive and costly to date.

[29] CAPI & M&E workshop (Dec 2013, Bangkok), MISTIG (Metrics and Indicators for Tracking In GRiSP) project 'kick-off' notes by Bas Bouman

[30] CAPI & M&E workshop (Dec 2-3, 2013, Bangkok) MISTIG (Metrics and Indicators for Tracking In GRiSP) 'running document'. Bas Bouman

A complication in reporting is also the fact that there are basically two streams: one is reporting in relation to bilateral funding, and the other, reporting for the CGIAR system. There is some overlap in terms of the type of indicators involved, but largely it means having two separate MIS systems, one for bilateral and another for CGIAR system reporting. The initial idea was to merge the two systems, but now the idea is to have a consolidated MIS for all CRPs (MARLO). And if it is tuned to the CRPs, it will not be possible to also have it serve for bilateral reporting.

Learning

Several informants reported how learning was a challenge in GRiSP. Strategic learning was practised in only a limited way. There was too little reflection on findings, even to the extent that articles were published on strategic learning, while management decision-making did not reflect this learning.

MIS

A lot of work has been done to develop MIS (electronic systems) that can handle comprehensive data sets related to finance, human resources, and core data. But in the end, they are often not used because they are too complex and too difficult to work with. Some still prefer the Excel sheets which can be easily adapted.

Competencies

MISTIG required good technical skills for developing related information systems. This needed to be complemented with good content-matter knowledge about rice and rice growing conditions. It turned out to be a challenge to put together a team which could combine good technical skills with good content-matter knowledge in developing reliable and accurate systems. It pointed to the need for a combination of competencies in M&E, including both technical and content know-how.

From data collection to informing management decision making

There was agreement that planning for results-oriented M&E was often overambitious. For example, questionnaires were too heavy. There were some situations where questions were not relevant or meaningful in some countries. Such data collection (surveys) is not new, but now in one season, and across 6 countries in Asia, everything had to be done. This created too much of a rush. Data acquired through MISTIG was too exhaustive. It takes a long time to process all this raw data. 5 scientists in the action sites worked on this, but they also had their other work. It was an extra obligation that seriously slowed down the process of working with the data.

Funding

Funding was a major concern. An initial indication of available budget was given, but in the end, budgets were cut and some of what was planned could not be implemented. Funding dynamics in CGIAR are important to consider in relation to RBM and any system changes. Much of the work needs to be pre-financed by Centers and by the time final budgets from the System are approved, the amounts could be less than initialling signalled. By then it is too late to adjust spending. Uncertain funding conflicts with the setting of targets and expecting commitments to achieving them.

5. Lessons Learned

5.1. Main reported lessons learned

Learning environment

Creating a safe environment for learning and improving was often lacking. Some interviewees felt that not enough attention for that was given by the Consortium Office. What seemed to matter more was figures and success stories. Enhancing learning (leading to adaptive management and better outcomes for farmers and wider society) was considered by these interviewees as more important than steering towards set targets.

RBM is focused on results and learning. In GRiSP (and currently in RICE) a need was defined to do more reflection. A lot was invested in setting up the ToCs and IPs and the related systems. After that effort, time needs to be set aside for reflection and review. This then must lead to adjusted plans so that RBM does not restrict adaptive management. That applies to CRP, flagship and cluster levels.

Engagement with scientists can be further optimised. Results are presented annually. More effort should be made to gain understanding of how results compare to intentions as shown in a respective ToC and its IPs. There is a need to do more reflection at the CRP and flagship project levels on the theory of change, indicators, assumptions and risks, and learn lessons for improving the program. A CRP sponsored mid-term evaluation should be encouraged. This would respond to the need for earlier sense-making and seeing how the CRP is doing in view of its ToC. This could also be an externally supported self-evaluation to make it serve the purpose of enhancing a shared learning environment.

Enabling environment for RBM

There is a danger that targets will always be achieved but only on paper. Key to RBM is an enabling environment for results orientation, including realistic time frames for making a transition and institutionalising such results orientation.

Development of capacity to support RBM takes time. The focus of the pilot was on developing structures and less on developing a conducive environment for results orientation. It takes time and interaction (workshops) to work towards common perspectives and selection of the most important indicators. You need to invest in that.

RBM: between blessing and burden

You need to give people who are “up to their knees in the mud” room to do their work, while at the same time helping them to learn more strategically. In other words: don’t impose strict targets and systems, but create an enabling environment. If RBM becomes mainly an incentive mechanism which rewards those who meet targets and punishes those who do not, this may limit its potential.

Rice not representative for all CRPs

Rice is a crop with a relatively simple way to model supply-demand processes. That makes it a bit easier to comply with target-orientations and indicator measurement. For other CRPs, this may be more challenging.

Indicators

A major lesson learned was that we need to keep indicators simple, measurable, and doable. Informants considered that they were overambitious in relation to M&E. RBM needs to be kept practical. The challenge is to focus on a small set of indicators. That requires good preparations. It is easier to come up with long list of indicators than with a well-thought-out short list. It is important to take time to develop a common indicator-based monitoring framework which is coherent and useful and relates to relevant information needs.

Principles of good practice in M&E

One needs to start from what information is going to be of use in the end and then work back from that in terms of indicators. Some have raised concerns about what they consider to be too simplistic ToCs underpinning the design of results frameworks. This points to the need of actively working with the ToC and updating and improving it over the years rather than working with it as a fixed point of reference.

Considering diversity in research

Often the focus of RBM is on short-term issues, for example, introducing new varieties. But the long-term process of breeding requires a different assessment approach. Scientists focus more on long-term research processes. Therefore, there is a need to reconcile the short-term and long-term issues appropriately in RBM. The ToC can help connect those different time frames.

Overfocusing on delivery may come at the expense of losing the unique identification as research organisation. Discovery and delivery need to be combined and the ToC should not be reduced to delivery. A right balance needs to be found to sustain CGIAR's unique identity and not become a kind of development organisation.

Addressing issues in reporting complexities

There may be different reporting needs in the same CRP depending on donor requirements but also related to different setup of Centers. It is important to find a way to handle this appropriately through frameworks which both encourage and support commonality and provide space and flexibility for variation in requirements.

MIS

The automated system developed was very ambitious. It had to be made more realistic and simplified. A minimum of data needs to be the focus. Presently, RICE is moving more towards an Excel-based system of spread sheets which is easier to manage. "Keep things simple", was often heard.

Capacity

Embracing RBM is a long-term process, and there needs to be more champions to institutionalize it. Not everything can be done through paper instructions and frameworks – the human factor is needed to bring RBM to life. At the same time, care should be taken who can champion RBM from an integrated perspective of both accountability and learning. The way in which RBM gets implemented may be more technically-driven due to the type of people who provide guidance.

RBM needs to be owned at all levels, include institutional buy-in, and involve a shared understanding about RBM essentials. Senior scientists may tend to delegate RBM to M&E and other staff and by doing so convey the message that it is merely a technical function to be implemented. That limits a more comprehensive view of RBM.

Training is important. CRPs require RBM but scientists are not trained for that. RBM is a different way of thinking and working and this requires training.

5.2. Use of learning

There are many documents available on GRiSP's implementation of RBM. These have been shared among GRiSP partners. A report on the RBM pilot was submitted to the Systems Office, and it in turn informed a section in the 2014 CGIAR portfolio report. Lessons learned have mainly trickled through informally, for example, through the involvement of GRiSP staff in the MELCoP, and the Task Force on Indicators (TFI). The MELCoP and TFI mainly focus on the technical part of devising a system to link indicators at various levels and information systems. There has been no exchange between CRPs that implemented other RBM pilots. A report on this pilot was submitted to the Consortium but no response or feedback was received by GRiSP. Although learning from the pilot was never fully reported, those involved in it have used it to design CRP II and in its current implementation.

RBM piloting significantly informed the development of the online monitoring, evaluation and learning (MEL) platform for RICE. RICE continues strengthening its RBM practice, mainly in M&E, but also strengthening strategic learning and adaptive management. MEL is rich source of information on M&E, but also on GRiSP and its related efforts and projects in general.

The idea is, e.g. to each year get flagship leaders together and focus on internal learning. Various informants indicated the importance of an internal learning focus to create more openness to consider what did not work out as planned for and what needs to change. Currently (mid-2017), RICE is working on revised ToC and IP and IDOs. There is a set of 17 draft indicators. The aim is to keep this set of indicators limited. In the process of developing the baseline, they learned many things, because of which they will be able to do the second baseline survey faster (intended after four-five years).

6. Conclusions

GRiSP strengthened the results orientation of its research and the impact culture of its scientists. The pilot helped formalise M&E in relation to a common ToC/IP for GRiSP. It has developed guiding theories of change although more work is needed for scaling up site-specific management technologies and value chain research. It is generally on track toward achieving planned outputs and outcomes[31]. The pilot clearly helped GRiSP to get ready for RICE. A major concern that came out of the piloting process (also looking at what happened since then) is an alleged overemphasis on alignment of indicators and targets which may in the end not be meaningful but in the process, puts an administrative burden on researchers. It may even undermine motivation if the main performance assessment is done along the lines of a set of limited targets, where some will be tempted to make numbers match, but only on paper. The pilot raises the issue of balancing RBM-related reporting requirements with an environment which is conducive to results-oriented motivation and practice since in the end it is about an ability

[31] Evaluation of the CGIAR Research Program on Global Rice Science Partnership (GRiSP), January 2016.

and capacity for results-oriented practice and only secondly about the ability to report about this (not the other way around).

In fact, GRiSP found this out in the RBM pilot. They realised that in the process they put emphasis on developing products (ToC, impact pathways, targets and indicators, and MIS), but had put "learning and feedback" on a later track and made very little progress on this so far. Some consider this currently the greatest bottleneck in RBM in RICE, and creating a learning and feedback environment together with tools and methodologies is one of the foci in RICE.

The pilot also highlighted that similar levels of dedicated funding for RBM practice as was available in 2014, is needed for on-going RBM practice. Too much, development and maintenance of RBM capacity was considered as a project responsibility after which it would automatically become part of CRP implementation.

The evaluation of GRiSP does mention issues related to monitoring, evaluation and learning, but does not pay attention to the (MISTIG) RBM pilot nor to the role that RBM played or was meant to play for GRiSP. Another interesting point is that neither in documents nor in interviews was the issue of downward accountability raised. The (possibly induced?) focus was always on upward accountability.

Annex A: Selection of consulted documents which are the ones we quote from:

1. Computer-Aided Personal Interview (CAPI) and Monitoring and Evaluation (M & E) Meeting, 2-3 December 2013, Bangkok, Thailand
2. CAPI & M&E workshop (Dec 2013, Bangkok), MISTIG (Metrics and Indicators for Tracking In GRiSP) project 'kick-off' notes by Bas Bouman
3. Metrics and Indicators for Tracking in GRiSP (MISTIG) Project Report 2014. Hope Webber.
4. 3rd GRiSP Oversight Committee (OC) Meeting. 26 October 2013. Yaoundé, Cameroon
5. GRiSP annual report 2014 (April 2015).
6. Evaluation of the CGIAR Research Program on Global Rice Science Partnership (GRiSP), January 2016.
7. GRiSP RBM Pilot Proposal, October 2013
8. CAPI & M&E workshop (Dec 2-3, 2013, Bangkok) MISTIG (Metrics and Indicators for Tracking In GRiSP) 'running document'. Bas Bouman
9. DEVELOPING AN INTEGRATED IMPACT PATHWAY and MONITORING AND EVALUATION FRAMEWORK for the GLOBAL RICE SCIENCE PARTNERSHIP (GRiSP), Ai Chin Wee, 2013.
10. Recommendations to the Consortium Board on supplementary allocations of funds to selected CRP-RBM Pilots for 2014. Consortium Office, November 27, 2013.
11. Monitoring and Evaluation Plan for the Global Rice Science Partnership (GRiSP, CRP 3.3). DRAFT, April 29, 2011

C. Case study of RBM pilot within Roots, Tubers, and Bananas (RTB)

1. Introduction

1.1. RTB

This case study pertains to the RBM pilot in the RTB CRP. The CGIAR Research Program (CRP) on Roots, tubers and bananas (RTB) is led by the International Potato Center (CIP) and brings together the RTB crop-related work of CIP, Bioversity, the International Center for Tropical Agriculture (CIAT), the International Institute of Tropical Agriculture (IITA), and the Agricultural Research for Development (CIRAD) as well as about 300 partners[32]. As summarized in Table 2, four of these CGIAR Centers participated through RBM sub-pilots: Bioversity in the RBM pilot related to Banana Xanthomonas Wilt disease control, CIP in the RBM pilot related to seed potatoes, IITA in the RBM pilot related to cassava processing, and CIAT in the RBM pilot on Nextgen. Details of the subpilots are discussed below.

Table 2 – RTB's Core Research Partners and their Participation in RBM Pilot

Acronym	Full Name	RBM Sub-pilots
CIP	International Potato Center	Lead Center for the RTB CRP, and RBM pilot related to seed potatoes
Bioversity	Bioversity	RBM pilot related to banana wilt disease control
CIAT	International Center for Tropical Agriculture	RBM pilot related to Nextgen
IITA	International Institute of Tropical Agriculture	RBM pilot related to cassava processing
CIRAD	Agricultural Research for Development	RBM pilot related to cassava processing

1.2. History and readiness for the RBM pilot

The detailed RTB proposal (2011) already showed a vision for RBM by including a generic ToC[33]. In 2012 RTB initiated a structured process for shifting from an output-focused research agenda to RBM.

An RBM framework was meant to improve program performance, enhance achievement of outcomes, and increase value for money through evidence-based impacts. RTB subscribed to the 2009 description of RBM by the United Nations Development Group (UNDG) and a visual of an RBM cycle for RTB was developed[34]. Already in March 2013 there was an RBM workshop in which representatives of CIP, CIAT,

[32] Evaluation of the CGIAR Research Program on Roots, Tubers and Bananas (RTB). Volume 1 – Evaluation Report, December 2015.

[33] Planning for greater impact: current thinking. 15 October 2013.

[34] Ibid

Bioversity, IITA and other partners, comprising the CGIAR Research Program on Roots, Tubers and Bananas (RTB), got together to establish the foundations for RBM and to improve impact of RTB[35]. During the workshop, RTB further defined theories of change for a set of flagships and linked impact pathways. This was shared with stakeholders, primarily funding agencies, in June 2013, who found the framework credible and convincing[36]. In summary, RTB was ready to pilot RBM. Conceptually, a foundation had been laid in the years before the pilot started.

1.3. Motivation and focus

RBM in RTB aimed to optimize research-for-development outcomes and enhance value for money. Key reasons for further embrace of RBM were defined as (1) improving program performance; (2) strengthening a results-oriented culture for the planning, managing and assessment of research for development interventions; (3) supporting adaptive management, organizational learning and informed decision-making at all levels; and (4) promoting greater accountability, transparency and value for money[37]. It was also noted that there had been limited participation of upstream research partners and downstream R&D partners into the development of ToC with its shared and nested accountability structure. Therefore, it was considered essential during the piloting phase to improve ToCs with broader stakeholder participation. Also, it was found that systematic M&E at the program level for both upstream and downstream research was yet to be formalized[38].

1.4. Design and start-up process

In 2014 RTB received supplementary funds from the Consortium Office to pilot the development and the implementation of its new RBM system: Potatoes (Kenya, Ethiopia, Rwanda), Bananas (Uganda, DR Congo), Cassava (Nigeria), and NextGeneration breeding (global)[39]. A piloting fund of USD 700 000 was approved by the Consortium Board for 2014[40]. RTB complemented this from existing budgets.

Strengthening outcome thinking at all management levels was considered to require program members to be fully engaged and collaborative. In RTB this was facilitated by the Program Management Unit (PMU), which started the RBM pilot by training a group of process coordinators. The members of this group played a central role in designing the workshops and have been acting as "change agents" within their teams, familiarizing them with new concepts and tools[41].

RTB focused RBM at the cluster level because they were considered, more than the project level, to present interdisciplinary synergetic research, multi-level and cross-country interventions, and a broad set of research and development partners who form part of an impact pathway[42].

[35] March 2013 Workshop report: RTB Results Based Management. Cali, Colombia.

[36] Piloting Results Based Management in RTB. 31 October 2013.

[37] RTB Proposal 2017–2022.

[38] Piloting Results Based Management in RTB. 31 October 2013.

[39] Reporting to the Consortium Office Results Based Management Pilot 2014-15

[40] Recommendations to the Consortium Board on supplementary allocations of funds to selected CRP-RBM Pilots for 2014. Consortium Office, November 27, 2013.

[41] Brief 01, 2015. Co-constructing impact pathways with stakeholders for results-based management.

[42] Reporting to the Consortium Office Results Based Management Pilot 2014-15

2. The Pilot Process

Clusters of activities were selected to pilot the introduction of RBM. They focused on:

- refinement and validation of the clusters construct, in particular, the research products and the impact pathways, in collaboration with key stakeholders;
- definition of the conceptual framework for the M&E system and identification of an appropriate platform to run a M&E system jointly with partners;
- setting up of a governance and management structure for the new RBM system[43].

Below, these RBM sub-pilots are described more fully.

2.1. Banana wilt disease control

This was about a programme in Flagship 3 on Banana Xanthomonas Wilt disease control (BXW) in Eastern and Central Africa, led by Bioversity International. This RBM pilot aimed at improving a theory of change for BXW with broader stakeholder participation, including engagement with national and regional organizations and the CGIAR Centers. The principal focus was on revised IPs and indicators sets, as well as further steps towards the establishment of a monitoring, evaluation and learning (MEL) system. Interactive stakeholder workshops played an important role, and a broad group of partners and clients were connected to the RBM process, including researchers, farmers and farmer organizations, extension staff, SMEs, local governments, and the media[44]. The main methods used to introduce RBM were workshops, presentations, field visits, group sessions and plenary sessions. Following the workshops, several stakeholder visits and consultations were made, targeting key informants such as NARS scientists, NGO partners, local government officers, farmers and representatives of farmer organizations to seek buy-in and collect the required information[45].

The first workshop in 2014 was important for establishing a common outlook on what RBM was about. The development of an impact pathway and involvement in that process helped to create an overview of different roles played and contributions to be made. It helped to get initial buy-in. With time, engagement improved further. Already from early on it was clear that for Uganda and DRC (implementation in these two countries) the process would be different. Uganda was more ready to engage with RBM than DRC was. In Uganda, there was already a certain level of readiness in relation to M&E and long-term collaboration with partners which was generally absent in DRC.

2.2. Nextgen

This was about a programme in Flagship 1 on Next Generation Breeding for Roots, Tubers and Bananas led by CIAT. This RBM pilot focused on 1) linked theory of change and action plans agreed with partner organizations for implementation; 2) sub-system M&E for one discovery flagship linking genetic gain with intermediate metrics; and 3) proposition for embedding RBM in government and management structures for RTB[46].

[43] Ibid

[44] RTB 2014 RBM Report BXW

[45] Ibid

[46] RTB 2014 RBM Report Nextgen

A workshop to develop a M&E system for genetic gains in RTBs took place in 2014 in Colombia at CIAT. A range of stakeholders were involved, including breeders and geneticists of the four CGIAR participating Centers of the RTB, National Agriculture Research Institutes (NARIs), its strategic partner CIRAD, as well as advanced research institutes and industry from Europe, United States, Canada and Australia. There was input from social scientists (gender), economists, post-harvest specialists, and from other biological sciences such as plant pathology and entomology. The workshop aimed to develop a RBM system to assess next generation breeding[47].

Further work was done on 1) consolidation and interpretation of key data gathered during the Next Generation Breeding - RBM workshop in Cali on metrics and indicators for monitoring progress on RTB genetic gains, 2) sharing findings on metrics and indicators through a survey to validate the conclusions with RTB breeders, and 3) reaching agreement on metrics and indicators for M&E of NextGen cluster of activities[48].

2.3. Seed potato

This was about a programme in Flagship 2 on Seed Potato for sub-Saharan Africa, led by CIP.

To scale up promising work achieved at that point in time, CIP/RTB invited partners to review the business plan for going to scale with quality seed potato and put in place a shared framework for RBM to maximize the value of investment in potato research. National partners from the public and private sectors in Kenya, Rwanda and Ethiopia, and staff from CGIAR were brought together in RBM planning workshops in 2014 and 2015. These workshops helped develop medium and longterm goals for seed potato-related interventions, and elaborated impact pathways to achieve these goals[49].

The RBM pilot involved partners consisting of NARI's, extension services, farmers associations national, private sector and international NGO's, which included developers and users of outputs[50]. The improved impact pathway developed in participation with stakeholders was used to formulate smarter indicators and targets, always considering next and end users and how outputs from each linked product lead to outcomes and support IDOs. The RBM pilot facilitated the seed potato cluster to establish a reporting system to collect data from program-related interventions. The goal of this reporting system is continuous monitoring of targets to assess progress towards achieving cluster targets.

RBM was not new to this programme, and for this reason they could provide input to the initial workshop (development of common approach) in RTB which was useful for the other pilots as well.

This was the first time to discuss the full programme and to help partners see how their work fitted in that bigger picture. That motivated staff and partners in different parts of the programme.

Initially 25 indicators were identified, which were later reduced to 5 which all projects had to report on. These were indicators that pointed to something significant and were expected to be not too difficult to track. This created a common structure and outlook on the programme, creating opportunities for synthesis that were not there before. It helped document what was going on rather

[47] Ibid

[48] Ibid

[49] RTB 2015 RBM Report Potato

[50] Ibid

than just picking out some loose data and random "success stories" from here and there. This supported a more comprehensive perspective on what was happening across the programme.

2.4. Cassava processing

This was about a programme in Flagship 4 on raising incomes and improving the health and safety of small and medium-scale cassava processors, especially for rural women led by IITA. Both the outbreak of Ebola and elections in Nigeria meant that the piloting was limited to less than a year.

A capacity development workshop was conducted in April 2015, at IITA, Ibadan. The workshop was attended by 21 people, mainly IITA scientists and representatives from RTB, CIAT, and CIRAD. The objectives of the workshop were (i) to bring RTB scientists together to exchange and gain knowledge around the new RTB program structure, impact pathways, ToC, and RBM concepts; and (ii) to strengthen capacities for applying RBM concepts at the cluster level, in particular, for designing and implementing the planning, monitoring and evaluation system[51].

A planning workshop on raising incomes and improving the health and safety of small and medium scale cassava processors, especially for rural women was conducted in May 2015[52]. It aimed to achieve a joint commitment to a plan for research and development to raise income and improve the health and safety of small and medium cassava processors, especially for rural women, and put in place a shared framework for M&E. It led to 1) a consolidated vision that by 2025, processors and farmers improve their incomes, food security, and nutrition through a growing number of efficient and profitable small and medium-scale cassava processing Centers; 2) an agreed indicators framework for cassava processing in Nigeria, and 3) a commitment from partners to assist in collecting the needed data for achieving the objectives of the program. The indicators for M&E that were developed were reviewed, refined, and validated during a workshop that was held December 2015, at IITA, Ibadan. Participants to the workshop were those that participated in the stakeholder's workshop[53]. Due to the late start of this pilot (resulting from reasons beyond the project's control), this could not be fully followed up. The RBM piloting in 2014-2015 gradually transformed into preparations for CRP II.

3. Reflections on the Pilot Process

Guidance, leadership and incentives

There were no clear guidelines for RBM piloting and it was not even clear what was meant by RBM. RTB had the freedom to define their focus as long as it would connect to work on IDOs. The launch workshop organized by the CRP helped improve understanding of impact pathways and ToC. Though guidance for how to do baseline assessments was limited, this did not present a major limitation.

At CIP, the programme management unit (PMU) played a central role in supporting the RBM pilot. The PMU clarified RBM concepts and helped to translate concepts to practicalities. This was an important factor in successes achieved through the pilot and was often connected to the stated importance of

[51] RTB 2015 RBM Report Cassava

[52] Planning Workshop: Raising incomes and improving the health and safety of small and medium scale cassava processors, especially for rural women. IITA, Ibadan, Nigeria, 4 – 6 May 2015.

[53] RTB 2015 RBM Report Cassava

RBM champions. That is why the PMU started the RBM pilot by training a group of process coordinators. The members of this group played a central role in designing the workshops and have been acting as "change agents" within their teams, familiarizing them with new concepts and tools[54].

Though there was limited guidance provided from system level, there was solid guidance provided through CRP level support - particularly through the launch workshop that ensured that everyone was on the same page. Consultants helped as workshop facilitator and in providing general support throughout the RBM pilot, a role which was found to be critical.

How received/perceived

During the stakeholder workshop, although the concepts of impact pathways and RBM were new to many participants, most of them were said to appreciate the methodology and participated actively in group sessions[55]. Considering next and end users in developing impact pathways was a key lesson learned during the workshop. It was found that a participatory approach gives responsibility and ownership to each implementing stakeholder[56].

This process was reported to help different staff with different roles to see their contribution in a bigger picture. Some informants mentioned that natural scientists, at least initially, saw RBM as something related to social science and not suitable for them. This means that one would get a different response when asked about the usefulness of RBM in RTB ("it depends on who you talk to"). In general, one may say that RBM was, intellectually speaking, appreciated. Staff involved especially appreciated opportunities for interacting with partners in new ways: "What is scaring some away and creating resistance is when RBM is seen as something that will make them responsible for something they cannot control in ways as seems required". The development of agreement on strategic objectives was generally considered important. It was found to make it easier to start working in the same direction.

MIS/M&E systems

Joint software development across cases and related interoperability with other systems (financial, knowledge management) was found to be important. This requires flexibility and customizable workflows. MEL (CRP online platform) deals with and integrates these different logics to provide services while satisfying the CRP management requirements. It was hoped that the new MEL system may work towards this end, with the caveat that other CRPs are using a different platform (MARLO).

CRP and Center level linkages

IITA and Bioversity were fully involved (in Uganda and DRC) in the BXW piloting. The launch workshop also involved the Centers, which helped to develop a common understanding about RBM. This type of exchange was considered very important in the process. In the case of potatoes, only CIP was involved which means processes were less complicated than would have been the case if more Centers were involved.

Documentation mentioned that the two management structures (CIP and RTB) have similarities and the presentation may sometimes appear redundant. Nevertheless, RTB needs an adaptive structure

[54] Brief 01, 2015. Co-constructing impact pathways with stakeholders for results-based management.

[55] RTB 2014 RBM Report BXW.

[56] RTB 2014 RBM Report Potato

fitting with management levels defined by the Consortium Office for CRPs and with enough flexibility to integrate internal rules and functions of all the Centers (Bioversity, CIAT, CIP, CIRAD, IITA)[57].

Centers are considered to play a crucial role in CGIAR: around 80% of funds for the projects and clusters related to the CRP comes through Centers (W3 and bilateral funding). This was reported as creating quite a challenge. The CRP cannot just sit down and plan a programme and develop a results framework with indicators and M&E processes that neatly pulls everything together. They also have limited influence on what projects Centers plan. Centers often set priorities. Some planned projects may work well in the CRP focus and objectives, but some less so: "…it is much like putting a complex jigsaw puzzle together to make this work".

It was said that at the project level RBM is easier since funding is usually available through dedicated funding streams. They have their own IP/ToC. However, the idea is to make these projects and clusters work together through flagships towards CRP objectives (sub-IDOs). It is about aggregation, and the push for coherence and synergies. That makes RBM at CRP level much more difficult than at project level.

Setting things in motion

The RTB piloting of RBM brought out an important dynamic. The RBM processes involved facilitating stakeholder meetings and development of shared visions and a shared set of indicators to track. This set things in motion in stakeholder groups which went beyond what the project, cluster, and CRP could track.

For example, in the case of BXW, NARO (Uganda) was instrumental in getting the government to adopt certain indicators to monitor, which in turn would feed into policy-making and wider decision-making processes. The cassava pilot could only start later due to elections and Ebola which led to some frustration: "we stopped at a point when we wanted to get in to it deeper with stakeholders but funds were depleted by that time; that was the end of RBM to some extent". The idea was to have a second meeting to further talk about national programmes. Outcome indicators were developed so partners could collect and info: "but we could not make that second step so that things could be incorporated in national systems".

RBM in a bigger picture

The choice of focus of RBM also relates to the question of what "quality research" stands for. That was not really addressed through this pilot. Furthermore, there is the issue of time frames. Some things take time to ultimately contribute to impact, for example, some impact reported in 2017 may relate to the introduction of new varieties 15 years previous. In other words, there are delayed effects. This timeline is important to incorporate in RBM. This may imply a disconnect between research achievements (reported on annual basis) and aspirational targets.

[57] Results-based monitoring and evaluation system. Defining the global concept. 23 January 2015.

4. Main Achievements and Challenges

4.1. Main reported achievements

The main achievements reported revolved around

- Enhancing internal coherence and stakeholder engagement towards common outcomes through participatory (multi-stakeholder) workshops in which impact pathways and collaborative mechanisms were co-constructed.
- Designing the general concept for the M&E system for three clusters through presentation in participatory workshop obtaining feedback to refine it. This includes the exploration of options for web-based platform that could facilitate coordination, communication & learning as well as data management related to planning, monitoring and evaluation.
- Drafting roles and responsibilities for implementing an M&E system. It was indicated that further elaboration of this is needed but beyond the pilot[58].

RBM helped to consolidate and improve the coherence of RTB interventions by making explicit how efforts can be understood in a bigger picture. Research outputs, even when obtained through different projects, were better understood as part of a coherent package contributing, together with other interventions led by different stakeholders, to medium and long term goals[59]. "It changed how we now can articulate what we do. It is not so much that we work differently, but we can now validate effects rather than just estimate it on the basis of trials, and we became more keen on data as a basis for decision-making". Though data coming in was not always exactly in the measure that was anticipated, it helped create a synthesis perspective on the programme, some reported. Through this experience, it became clear how important it is to have access to good data to base management on appropriate evidence. Having such evidence was crucial. "The pilot allowed us to get to grips with that. Before there was no clear sense of how will we evaluate ourselves?".

The pilot involved next and end users in developing impact pathways which was considered an improvement in the design of program components. Key questions arose to better analyze the ways in which research outputs would translate into research and development outcomes[60]. As a result, in the case of BXW, sophisticated impact pathway were developed[61]. "The interaction with stakeholders and the introduction of wider RBM processes has already led to a transformation in understanding the role of research". It was found that a participatory approach for designing interventions gave responsibility and ownership to each implementing stakeholder[62].

The piloting process was of key importance for developing well-informed plans and business cases for seed potatoes, BXW management, and cassava to become part of CRP II.

In the case of cassava, it was the first time to connect stakeholders along the value chain, which was unique and a significant achievement. It created a potential that could unfortunately not be fully

[58] Reporting to the Consortium Office Results Based Management Pilot 2014-15

[59] Ibid

[60] Ibid

[61] RTB 2014 RBM Report BXW.

[62] Reporting to the Consortium Office Results Based Management Pilot 2014-15

harnessed beyond informing CRP II project plans (in which it played a major role): "we have better project proposals in CRPII because of this significant stakeholder engagement".

4.2. Main reported challenges

Use of evidence

It was and still is a challenge to make systematic use of evidence (impact assessments, evaluation of innovation processes) to substantiate the theory of change, definition of assumptions and inclusion of these assumptions in the monitoring framework, definition of the right level of expected outcomes in the right timeframe.

Impact pathway complexity

Measuring results along the impact pathway related to different interventions that are in different stage of implementation, needs a well organized and harmonized system for data collection and sharing across projects and Centers. It was found that developing M&E frameworks based on impact pathways can be a challenging exercise especially given the current dispersion of M&E principles and models across many bilateral projects[63].

A principal challenge of the RBM pilot was the definition of impact pathways and M&E for discovery research, where the next users are mainly the scientists working in the Delivery Flagship Projects. Impact is typically separated by several to many years from the development of a product. M&E must be carried out on intermediate or even very upstream products, and then linkage made to their ultimate effect on breeding progress[64]. Also, metrics to track achievements must address a range of aspects (example NextGen and relation to discovery research)[65]. It is important to find ways to link RBM to discovery and delivery research in appropriate ways. Feedback coming from delivery research can be input to discovery research. The ToC is important to connect the two. Not all discovery research will be a success but it is important to be able show how it fits into the bigger picture of a ToC.

Some of the higher-level objectives (development outcomes) set for the CRP are far away from what the projects feels directly accountable for. Changes in potential of potato cultivation cannot be directly translated to changes in livelihoods. Some informants expressed how they are struggling with this. They reported to have inadequate resources to do appropriate impact assessments, which means that they have to resort to significant projection of effects.

MIS

In the seed potato pilot the development of MIS was found to be challenging, for example, data submitted was not always what was needed, figures were provided, but not the raw data, etc. It underscores the often-heard comment that it takes a long time before RBM practice becomes something more routine.

[63] Ibid

[64] RTB 2014 RBM Report Nextgen

[65] 2014 Workshop report: Accelerating genetic gains for Next Generation Breeding for Root, Tuber and Banana crops: approaches for Results Based Management (RBM). Cali, Colombia.

Alignment challenges

Adopting an RBM approach requires a good alignment between M&E plans and results-oriented budgets to ensure accountability in resource utilization. For example, Centers do not use the same Enterprise Resource Planning system (ERP)[66]. RTB depends for its implementation on cross-Center coordination. Currently performance evaluation follows line management through Centers. Improving the quality of implementation and delivery requires performance evaluation of teams which cuts across organizational boundaries[67].

As management strategy, RBM needs to be embedded in a management structure with relevant financial and human resources available and roles and responsibilities clearly defined. In the RTB context, where the cluster level is a new management level that will be fully implemented in the second phase, the shift from the old to the new program structure was a challenging issue during the pilot, as flagship project and cluster leaders had not been designated.

Partnering and RBM

Adoption of RBM principles in public-sector research is highly variable, and uncommon for many RTB partners. Organising related multi-stakeholder interaction involved a major effort, including the logistical side of it. Now that Centers rely heavily on W3/bilateral they may effectively become competitors of local partners. They compete for funds their partners are also aiming for. This sometimes creates an uneasy situation.

It was found difficult to mobilize enough resources beyond the pilot to ensure a good level of participation at the cluster and flagship level where multiple Centers, partners and countries are involved. Now that pilot funds are no longer available, resourcing continued partnership interactions is difficult.

5. Lessons Learned

5.1. Main reported lessons learned

Integrated approach to RBM

The management strategy must be linked with, support, and be influenced by the research agenda to ensure that scientists perceive RBM as an opportunity for learning and improvement and not as an administrative and bureaucratic burden. Management structures and processes need to be revised and aligned to the RBM logic to avoid discrepancies between conceptual construction and operational arrangements[68]. The recommendation was to use RBM guiding principles, and integrate these in work processes rather than seeing RBM as an add-on.

[66] Reporting to the Consortium Office Results Based Management Pilot 2014-15

[67] Piloting Results Based Management in RTB. 31 October 2013.

[68] Reporting to the Consortium Office Results Based Management Pilot 2014-15

Role of the ToC

It may seem obvious, but it is critical to work with a sound theory of change which considers all results levels (i.e. outputs, outcomes, impact) to identify and validate expected research outputs and to identify shared responsibilities and synergies with partners for achieving outcomes[69]. RBM helps to test the ToC; it helps to test related hypothesis and underpinning assumptions.

Application of change management principles

Financial and human resources available and roles and responsibilities need to be clearly defined. Where relevant, a shift from the old to the new program structure (related to RBM) needs to be supported. Management processes should be kept as simple as possible and focus on what is useful. A stepwise and user-oriented approach is needed[70]. Reservations towards RBM should be addressed through training, and exchanges with scientists who are not familiar with RBM. Be aware that introducing RBM is a time and resource demanding change process[71].

A change process needs to be managed and supported: the RTB PMU adopted a support-intensive approach during the pilot phase. With its direct participation, and by mobilizing supplementary funds allocated for the pilot, RTB PMU organized trainings and supported the realization of workshops and the establishment of M&E frameworks. Nevertheless, the structure of RTB for its second phase counts on more than 20 clusters and this approach won't be sustainable without allocating additional funds[72]. An RBM process is intensive in terms of the time, human and financial resources to be invested. Further expansion of RBM across the RTB portfolio needs to be mindful of limitations to this type of investment in times of scarce resources. Rather than attempting to quickly expand RBM across the whole portfolio, it is worth considering a staggered approach where the emerging experiences and insights from the pilots will lead not only to continuous learning and improvement of the respective M&EL systems, but also allow for a gradual scaling across the portfolio of RTB delivery flagships and clusters[73].

RBM in field realities

In the implementation of the RBM approach, it emerged that certain technical recommendations would not work for all households, communities or production systems. This required a deeper understanding of the socioeconomic strata and household typologies of the target beneficiaries, to design best-fit (as opposed to best-bet) options per the varying realities and needs of the targeted beneficiaries[74]. Field realities can be quite different and relate to different levels of difficulty to work along the lines of RBM. That may have to do with country contexts as well as programme contexts. This requires adaptive and tailor-made planning in relation to working through RBM.

Need for continued engagement with stakeholders

Even though things were developed with different interest groups, you may find that after some time there can be other institutional priorities which do not align with envisaged pathways. Partnership

[69] Ibid

[70] Ibid

[71] Ibid

[72] Ibid

[73] RTB 2014 RBM Report BXW.

[74] Ibid

therefore is a continuous process of interactively defining and redefining such pathways, and not a one-time design event at the start of a programme. The BXW pilot reported the importance of establishing relationships of trust between researchers and a broad range of stakeholders over years through joint work on BXW management and control in Uganda and, more recently, DR Congo[75].

Information systems

Information management systems must be in place to support technical, operational and financial information circulating more easily, thereby supporting timely decision-making and reporting. The geographical dispersion of interventions, and interactions among several CG Centers and partners is a challenge for effective communication. An information management system must be in place to support RBM.

Learning orientation

There is need for developing mechanisms for facilitating horizontal learning and support among cluster teams[76]. There is a need for a clear approach regarding what makes for effective learning conditions. Mere success stories can be meaningless if you cannot show what they exactly relate to.

Learning, in relation to RBM, is not only about relevant change processes. It may also involve the need to learn new skills. Working with RBM also involves soft skills e.g. in terms of networking, stakeholder collaboration and interaction, and partnerships. In other words, it involves other skills than just being a researcher.

Connecting to relevant context

Situations in which RBM is put into practice will be different in terms of both relevant livelihood challenges and institutional context. MEL systems will need to be tuned to the specifics of these environments. Differences in the enabling framework and the livelihoods of households require a differentiated approach to RBM when designing and implementing M&E and learning systems. There is no one-size-fits-all approach. Some recommend presenting RBM in a less conceptual manner, and defining RBM in more practical terms. This could help prevent an overcomplication of RBM[77].

5.2. Use of lessons

The RBM pilot at RTB produced many workshop and progress reports which are readily available. To illustrate, this is just the BXW case-generated documentation for RBM piloting:

- 2 stakeholder workshop reports;
- 12 monthly reports for the period July 2014 to December 2015;
- 2 country-specific baseline reports;
- 2 annual reports; and
- 1 end-of-project report.

[75] Ibid

[76] Reporting to the Consortium Office Results Based Management Pilot 2014-15

[77] RTB 2014 RBM Report Potato

Additionally, work was started on peer-reviewed journal articles using the baseline data[78]. In other words, there is no lack of documentation on the RBM pilot in RTB. That said, there has been no clear follow-up of this at system level and there has been no formal exchange of lessons learned between the RBM pilots.

For RTB, the pilot played a crucial role in preparing for CRPII, notably for the flagship clusters participating in the piloting. More than before, active partnerships have developed to enhance readiness to contribute to impact at scale.

No significant formal follow-up of the RBM pilot took place beyond RTB itself, nor connecting the piloting to the wider community of CRPs. However, through participation of staff who were involved in the RBM pilot in the MEL CoP and the Task Force on Indicators there has been follow-up beyond RTB. This appears to focus on aspects related to indicators and alignment of objectives, targets and reporting structures across organisational levels.

RTB is also co-leading MEL (mel.cgiar.org) (which was started by the Dryland Systems CRP), a platform which enables better RBM among partners, including knowledge sharing and learning amongst different groups of stakeholders (donors, partners, CG Center and scientists), within and across CRPs and bilateral projects.

6. Conclusions

RTB worked on RBM pilots in several different settings which created possibilities for learning in different contexts. RBM was not so new for some of the related cluster programmes, such as seed potato, while it was new for other cluster programmes such as cassava in Nigeria. In short, the piloting of RBM at RTB led to a wide range of lessons learned in a variety of contexts. It played a key role in preparing RTB for CRPII, in particular, the flagships and clusters involved in the piloting. Though RTB topped-up funds provided by the System for piloting RBM, after the pilot it was difficult to maintain an enabling environment for RBM in the respective clusters, let alone in other parts of RTB. It remains challenging to provide appropriate support for RBM practice. Efforts to develop information systems to support M&E alignment within the CRP and across CRPs is on-going.

Annex A: Selection of consulted documents which are the ones we quote from:

1. Brief 01, 2015. Co-constructing impact pathways with stakeholders for results-based management.
2. Reporting to the Consortium Office Results Based Management Pilot 2014-15
3. RTB Proposal 2017–2022.
4. Piloting Results Based Management in RTB. 31 October 2013.
5. Planning for greater impact: current thinking. 15 October 2013.
6. Results-based monitoring and evaluation system. Defining the global concept. 23 January 2015.
7. RTB 2014, 2015 and 2016 RBM Reports BXW.
8. RTB 2014 and 2015 RBM Reports Nextgen
9. RTB 2014, 2015, and 2016 RBM Reports Potato

[78] RTB 2016 RBM Report BXW

10. RTB 2015 RBM Report Cassava
11. 2014 Workshop report: Accelerating genetic gains for Next Generation Breeding for Root, Tuber and Banana crops: approaches for Results Based Management (RBM). Cali, Colombia.
12. March 2013 Workshop report: RTB Results Based Management. Cali, Colombia.
13. Evaluation of the CGIAR Research Program on Roots, Tubers and Bananas (RTB). Volume 1 – Evaluation Report, December 2015.
14. Recommendations to the Consortium Board on supplementary allocations of funds to selected CRP-RBM Pilots for 2014. Consortium Office, November 27, 2013.
15. Planning Workshop: Raising incomes and improving the health and safety of small and medium scale cassava processors, especially for rural women. IITA, Ibadan, Nigeria, 4 – 6 May 2015.

D.Case study of RBM pilot within Climate Change, Agriculture and Food Security (CCAFS)

1. Introduction

1.1 CCAFS

This case study looks at the RBM pilot which was undertaken by CCAFS. CCAFS is a CGIAR Research Program (CRPs) which operates at global scale. It unites the work of 15 CGIAR Centers in the domain of climate change science. CCAFS is led by the International Center for Tropical Agriculture (CIAT), a CGIAR Center based in Colombia. CCAFS was one of the first CRPs that were approved by the CGIAR Fund Council (now System Council) and started operating as a CRP in 2011, as a continuation of a previous Challenge Program. CCAFS is one of the largest CRPs, with annual budgets[79] ranging between USD 60-70 million. After completion of its first phase, CCAFS is currently in the process of implementing a second phase (2017-2022).

1.2 History of RBM in CCAFS

Since its start in 2011, CCAFS has been moving towards a stronger focus on RBM and developing an in-house evaluative culture. Aspects of RBM that have been improving over time included: a) using a theory of change (ToC) and impact pathway approach, b) strategic portfolio management and c) M&E.

CCAFS has developed an overall program level ToC with impact pathways (IPs), plus ToC and IPs for Flagship Projects (former research theme) and for regional programs consistent with the matrix management structure of CCAFS.[80] It has identified expected Intermediate Development Outcomes (IDOs) which were formally introduced in CCAFS's 2015 CRP extension proposal. These IDOs have been largely derived from the initial version of CGIAR's Strategy and Results Framework (SRF).

Although the CCAFS monitoring and evaluation (M&E) Strategy was only published in July 2014, CCAFS, from its start, it implemented M&E at program level. For example, it was one of the first CRPs to conduct a variety of CRP commissioned evaluations and reviews. Furthermore, logical frameworks were developed and baselines conducted across its five target regions.

Initially the CCAFS project portfolio was largely influenced by what the Centers chose to map based on perceived relevance to climate change. CCAFS experimented with performance-based allocation of W1/W2 funding to gradually increase the strategic coherence of its overall research programme. For example, in 2013 this was done using 10 criteria against which each of the participating Centers would be assessed. These criteria[81] (under four different categories: strategy, reflection of CCAFS principles,

[79] from different funding sources: W1/2 core funding and W3 funding directed to specific Centers as well as bilateral funding

[80] Because there are regional programmes as well as scientific themes and flagship projects, CRPs are designed using a matrix to identify cross links between geographic areas and technical approaches.

[81] From Minutes of CCAFS 3rd ISP meeting.

ambition, and administrative efficiency), however, initially did not include aspects of past performance in terms of output or outcome delivery.

All these initiatives point towards program management that has been taking RBM seriously. Evidence examined by the evaluation team suggest that CCAFS accepted the challenge of introducing RBM tools in a multi-layered, multi-partner, matrix management programme.

1.3 Motivation

CCAFS had already been in the process of implementing RBM, so the pilot aligned well with the general management direction of CCAFS. Thornton et al (2017) states it was "largely in response to a desire to refine the project portfolio". For a multi-Center programme like CCAFS, which comprises the work of many different Centers, there was a real need to streamline and prioritize. Since CCAFS is dedicated to delivering development outcomes, it was considered strategic to prioritize at the outcome level. Interviewees stated that it was obvious that CCAFS would participate in an RBM trial given that it was a program that "wants to be at the forefront of things" and be transparent about its progress towards outcomes.

Apart from CCAFS' internal motivation, there has been a CGIAR system level push towards RBM, which mostly manifested itself through the CRP level reporting requirements.

1.4 Design and start-up process

Following the request for RBM pilot proposals from the Consortium Office (CO), CCAFS submitted an 8-page proposal which estimated USD 8 million to be the annual budget required for its RBM pilot, of which CCAFS expected USD 1.5 million to come from the Consortium's RBM piloting budget.

As confirmed through the interviews, there was a clear intention to move towards a Theory of Change approach throughout CCAFS and to link it to performance assessment at the level of outcomes. The idea was also to introduce and roll out the ToC approach at project level, which until then was mostly used at the overall program level.

It was decided to implement the trial with selected projects which were all part of the Flagship (FP) 4: Policies and Institutions for Climate-Resilient Food Systems. The reason why FP 4 was selected was not given in the proposal document. However, interviewees explained that the FP 4 leader was previously the research theme leader for "Integration for Decision Making", dealing with CCAFS wider M&E issues. This points to a rational choice to build on existing M&E capacity. Furthermore, some interviewees suggested that the FP dealing with policy research might have lent itself more to measuring outcomes, since they are easier to track and measure, because changes occur at the level of institutions and policy makers instead of large numbers of farmers.

A key feature of the proposal was performance assessment, which would integrate achievement of outcomes with some other measures. The plan was to pay bonuses based on these performance assessments, and for this USD 370 000 was set aside.

The CCAFS proposal was forwarded to the Consortium Board and was ranked as first among proposals received. The Consortium liked that CCAFS had M&E supporting systems in place, made a commitment to self-funding a large part of the trial, and had followed a transparent process to come up with the pilot projects (described below).

Selection of participating projects

When the proposal was submitted, six pilot projects which were to participate in the RBM trial already had been selected (Table 3):

Table 3: Selected RBM trial projects

Initial Title of RBM Pilot Projects	Lead Center	Contributing Centers	Region
Influencing and linking policies and institutions from national to local level for the development and adoption of climate-resilient food systems	IITA	CIAT, Bioversity, ICRISAT, IFPRI, ICRAF, ILRI	East Africa (Kenya, Uganda Tanzania)
Transforming climate adaptation into a bottom-up development opportunity for West African smallholders	ICRISAT	ILRI, IWMI, ICRAF, IFPRI	West Africa (Ghana, Mali, Senegal)
Scaling up climate smart agriculture through policies and institutions: Linking it with national agenda of food security	IFPRI	None	South Asia (India, Bangladesh, Nepal)
Addressing the Impacts of Climate Change in the Philippine Agriculture Sector	IFPRI	None	Philippines
Policy Information and Response Platform on Climate Change and Rice in ASEAN and its Member Countries (PIRCCA)	IRRI	None	Vietnam and Myanmar
Relevant Climate Change Information meets Decision-Making to influence Policy and Institutions for Climate Resilient Food Systems	CIAT	Bioversity, CIP	Latin America (Colombia, Nicaragua, Peru)

Source: CCAFS Proposal for an RBM pilot

The selection was done through a review of concept notes received from 15 different Centers. The concept notes had to include descriptions of how the RBM pilot project would contribute to the FP 4 ToC and to CCAFS IDOs. The documentation suggests that this was done through a transparent process by different groups (an evaluation committee, peers, and the management team). However, it was also ensured that the six projects would cover the different CCAFS focus regions and therefore a concept that was not highly rated (within the top 6) was still chosen as one of the 6 to go forward because CCAFS wanted a project in each region.

2. The Pilot Process

The boundaries between the pilot and other CCAFS initiatives that took place at the same time are not always clear and therefore this section might include information on activities not directly funded by the RBM piloting budget. Annex A contains a timeline with pilot-specific and general CCAFS RBM activities and milestones.

The main focus of the pilot was to develop project Impact Pathways and Theories of Change and to be able to measure results at the outcome level. It was decided that this be done at country and sub-regional level with some projects having a regional focus and some a country focus.

2.1 Process in brief

The pilot started with a meeting of representatives of all selected projects in Washington in 2014[82] in which Impact Pathways were refined. IPs were developed at various levels, starting from the FP level to regional level and then to project level. After that projects were asked to finalize their RBM frameworks (outcomes and indicators) and implement their M&E systems. At the end of the year projects submitted their reports and were assessed.

2.2 Capacity building and guidance

Capacity was very uneven with regard to applying the ToC approach. Simply put, people had to learn and reach a common agreement on what an output was, what an outcome was and how to develop an impact pathway. There was supervision from FP management, but also a number of external consultants were hired to support the process. A "CCAFS Theory of Change Facilitation Guide" (June 2014) was developed and later revised (December 2014) to help project managers design their ToC.

Development of P&R Platform

An early electronic planning and reporting (P&R) platform had already been developed and put in place before the RBM pilot started. This P&R Platform was set up in Phase I (2011-2014) and initially was based on a logframe approach and included activities, milestones and higher level multi-annual outcomes which were to be reported on only in specific years. During the pilot, a conceptual model for a newer version of the P&R platform was developed to reflect a shift towards an " outcome-focused research program for development"[83]. The newer version was implemented in the CRP Extension Phase (2015-2016) which followed the 2014 RBM pilot. Currently, the P&R platform exists as the further adapted Managing Agricultural Research for Learning and Outcomes (MARLO) platform.

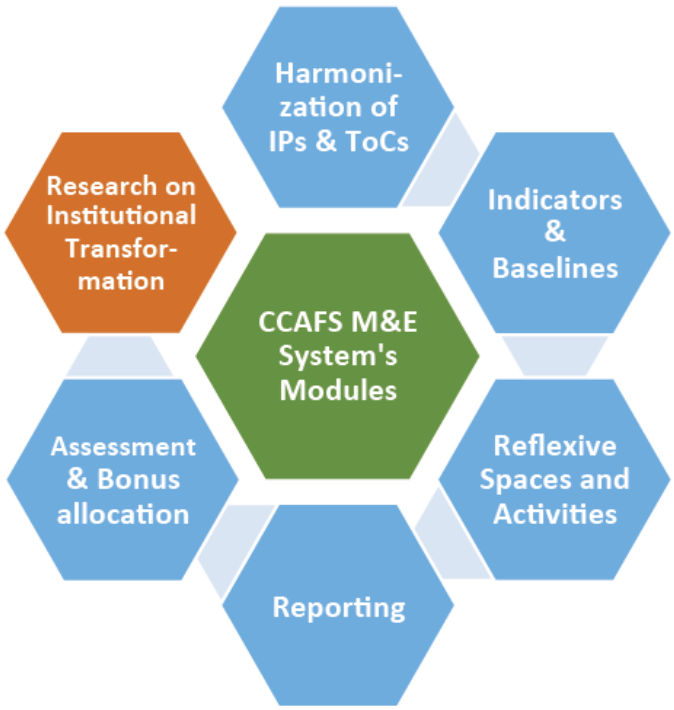
M&E

The M&E component consisted of indicators, baseline data, mechanisms for reflection and learning, performance evaluation and other support mechanisms. Although baseline data was requested from projects, at the time of the start of the trial it was already quite late to collect or identify relevant baseline data. A key milestone which happened at the time of the pilot was the launch of the "CCAFS Monitoring and Evaluation Strategy" (Jul 2014). This strategy reflects the overall approach taken during the RBM trial and consists of 6 different integrated modules (Figure 1).

[82] CCAFS FP 4 RBM pilot launch meeting, 23-24 January 2014

[83] Förch, W, Schuetz, T, Abreu, D, Tobon, H, Thornton, P, (2015) Building an online platform in support of outcome-focused results-based program management.

Figure 1: CCAFS Monitoring and Evaluation System Modules



Source: CCAFS Monitoring and Evaluation Strategy (Jul 2014).

Performance assessment

A key feature of the pilot, which was described clearly in its original proposal, was the introduction of performance assessment along the following weighted criteria:

- progress towards outputs, 25%
- progress towards outcomes, 35%
- reflection of CCAFS principles (quality of partnerships, communications, gender), 20%
- response of team to the unexpected, ability to adapt and self-reflect, 20%

Initially the idea was to allocate additional funding (USD 370 000, thus 10% of the overall RBM piloting budget received by CCAFS) to the highest scoring projects. However, due to budget cuts at overall CCAFS level this performance prioritization exercise was not applied. In times of declining W1/2 funds it was rather seen as a means to transparently make strategic funding cuts. Of course this meant that for some Centers the drawback was larger than for others and naturally they were less happy with these changes.

3. Reflections on the Pilot Process

Cultural change

The move towards outcome orientation, although not new, was pronounced during the pilot period. Scientists are more used to reporting on outputs, for example, number of publications. As one

interviewee explained: "It [RBM] was a new way of working for people". Not all were happy about this new way and some "just wanted to do science". CCAFS management was fully aware of this organizational challenge. A lot of emphasis was put on convincing staff of the usefulness of using ToC for research projects. The consultants that were hired to support the process were aware of the change process required and repeatedly explained where CCAFS wanted to head.

ToC approach

Essential to the pilot was the focus on Theories of Change and learning and adapting. The ToC was conceived and communicated as a dynamic tool. Key elements, which were later summarized by Thornton et al (2017)[84] in a scientific paper, were flexibility, learning, effectiveness and incentives. The focus was not on creating a perfect ToC, but rather on co-developing them with partners and establishing ownership through that process. The second ToC how-to guide[85], adapted from a first version, was simplified, and was found by interviewees to be more user friendly.

Center level

Half of the six pilot sub-projects within the larger CCAFS RBM pilot were implemented by one Center (IFPRI) whereas the other half were consortia with a specific lead Center. The idea was to encourage Centers to work together in implementing the RBM trial, which worked well in the beginning. However, when CRP budgets were cut, in most cases only the lead Centers remained with their budgets: "We killed those consortia", was how one interviewee put it quite drastically. Here it has to be noted that multi-Center collaboration and coordination can be costly and therefore measures like this just aim to assure that the intended outcomes can still be achieved.

Even though the sub-projects were led by Centers, the RBM related initiatives all came from CCAFS. The capacity and level of engagement from the different Centers varied. There seems to have been a champion, a laggard, and the remaining Centers fell somewhere in between. From interviews, it was clear that the RBM roll out process during the pilot was almost exclusively supported at the level of CCAFS management. There were few noteworthy Center-led initiatives to support RBM bottom up at that time.

Learning about RBM from the piloting

CCAFS saw the pilot as an opportunity to learn before rolling RBM out across its whole portfolio. A wikispace was set up to share information about the pilot. Furthermore, a variety of learning briefs were produced:

[84] Thornton et al (2017): Responding to global change: A theory of change approach to making agricultural research for development outcome-based.

[85] Schuetz, T., Förch, W., Thornton, P., 2014a. Revised CCAFS Theory of Change Facilitation Guide. CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), Copenhagen, Denmark.

Title	Year
Lessons in theory of change: experiences from CCAFS. Learning Brief No. 6.	2014
Lessons in theory of change: CCAFS Southeast Asia Research for Development Workshop. CCSL Learning Brief No. 8. CCAFS, Copenhagen, Denmark.	2014
Lessons in theory of change: monitoring, learning and evaluating Knowledge to Action. CCSL Learning Brief No. 9	2014
Lessons in Theory of Change from a Series of Regional Planning Workshops. Learning Brief No. 11.	2014
Lessons and Insights from CCAFS Results-Based Management Trial. Learning Brief No. 12.	2014
CCAFS reporting and evaluation in a RBM framework. Learning Brief No. 15.	2015
Building an online platform in support of outcome-focused results-based program management. Learning Brief No 16.	2015

The effort that was made to reflect on and to document the RBM piloting process helped CCAFS to make longer-term adjustments. It later fed into a variety of RBM tools, like the P&R platform (and now MARLO), the M&E strategy, and the ToC Guide. From the interviews, however, it was not obvious what was done to facilitate RBM learning across the projects. There was a "kick-off" workshop in the beginning and five regional workshops. There was the wiki, but this was more of a repository than an active learning initiative.

4. Main Achievements and Challenges

The RBM piloting did not act in isolation of other CCAFS RBM related measures and therefore this summary of achievements and challenges comes from both:

4.1 Main achievements

Move towards outcome-oriented culture

Although still evolving, interviews confirmed that there has been a shift towards thinking more about outcomes and impacts. Even some of the scientists who had initially been sceptical seem to embrace RBM and find it useful to increase relevance of their research and adapt in order to have more impact.

Performance based funding allocation

CCAFS today allocates its funding through a competitive process which is based on performance of projects. The message is that "if you don't produce you don't get more money". CCAFS management now has a better overview of its portfolio and can prioritize research based on expected outcomes and on alignment with its overall program-level Theory of Change and the CGIAR level Strategy and Results Framework.

Engagement with next users and partners

While ToC was used at the program level to engage and communicate with partners, it was also used at project level. Project leaders consistently found that involving partners in their ToC design helped them establish better relationships. This is also true for funders who use ToC to relate how CCAFS research fits into their objectives.

4.2 Main challenges

Outcomes measurement

Measuring results at the outcome level does not only involve setting targets but also collecting the underlying data to monitor progress towards them. Data on outcomes is not as straight forward as data on activities, and outputs. It comes at a higher cost. Another issue is the reliability of outcome data. Projects report on outcomes, but there needs to be some mechanism to assure the quality of the underlying data. The CCAFS reporting system required Centers to provide evidence of their outcome claims and this was done through external consultants. However, such a process is costly and this needs to be factored in when budgeting for RBM.

Moving targets - "Nothing is fixed anymore".

The focus on adaptive management recognized the complex environment in which CCAFS operates. The ToC approach has to be flexible, but some interviewees stated that issues can arise when assumptions and impact pathways are constantly moving. A project or programme itself can become something like a moving target. A balance needs to be found between being allowed to make changes, and at the same time being able to measure performance in a transparent way.

Learning from learning

The adaptive Theory of Change model is based on reflection and learning. Even in the P&R platform (now MARLO) project leaders are supposed to document when they have made changes and why. Therefore, a lot of qualitative information is being captured that needs to be analysed and processed before it can be used for CRP-wide learning. This is a challenge. "I don't see what is happening with all that [qualitative] information". Even if this is just a perception, it is not encouraging the documentation of lessons learned throughout the reporting platform.

5. Lessons Learned

5.1 Main lessons

Holistic approach to RBM

Starting from the beginning of the RBM pilot, RBM was introduced as a holistic approach that covered various aspects: planning with Theory of Change, monitoring outcomes, evaluating progress, an online reporting platform, as well as use of incentives through the performance bonus. This was important since the move to increased outcome orientation was actually supported by new systems. This was referred to as "walk the talk" in one of the interviews.

Recognition of change management

CCAFS management seems to have been very conscious that introducing RBM is not just a matter of imposing processes on its team. The leadership recognized that this is about shifting the mindset of people and introducing a "new way of business". This was done with consistent messages, patience, capacity development of staff, and also some degree of "hand holding" in the form of capacity development (workshops, technical support, etc.).

Considering the diversity of Centers

CCAFS unites 15 different CGIAR Centers and this complex organizational structure makes implementation of RBM across the full portfolio difficult. Some Centers have embraced RBM, and others less so. The performance assessment systems used by the Centers are not completely aligned to the kind of targets that CCAFS sets, and instead, are usually based on scientific outputs. The stake that Centers have in CCAFS is also different. Some Centers don't have a lot of projects mapped to CCAFS and are less motivated to change. For them committing to this approach might simply not be worth it. In the end, it will depend on the individuals involved in CCAFS; they are the ones driving it and can act as change makers in their Centers. Furthermore, the participating Centers have an important role to play, since they also need to embrace RBM for it to become a real management practice.

5.2 Use of learning

There are examples of RBM learning from CCAFS which has been applied in a wider context; not only within this CRP but beyond:

- CCAFS set up a wikispace to document learning and produced high-quality, detailed learning briefs to support dissemination and learning;
- the lessons from the pilot informed the further development of the P&R platform (now MARLO) which is presently being used by eight CRPs, 2 platforms and one Center;
- the ToC Guide has been used to guide ToC development for Phase II proposals; and
- informal exchange of knowledge where CCAFS was approached to provide advice to other Centers and CRPs.

6. Conclusions

The pilot cannot be seen in isolation to CCAFS' efforts to move towards RBM across the whole programme. It was very much aligned and went together with other non-pilot initiatives. One person interviewed said: "The RBM pilot was a kind of catalyst for CCAFS to shift to the RBM approach".

CCAFS rolled out the trial in a participatory manner, recognizing the cultural change that was necessary, and through that, ensured that the people involved developed ownership of the process and did not perceive it as a top-down directive. It was interesting that despite the underlying accountability focus (performance measurement), it was not perceived as a threat. This was probably because it was presented as a tool for adaptive management, learning and reflection.

In a process like this there will always be winners and losers, especially when it comes to cutting funding based on past performance. However, overall – and this was confirmed by a CCAFS online

survey of pilot participants[86] – participants seemed to be satisfied with their progress towards outcomes. The constraints are not so much about people not finding RBM useful, but rather relating to the level of technical capacity as well as time needed for it, especially in the beginning.

CCAFS conceived the trial as an opportunity to learn about how best to roll out RBM across its full portfolio. It seems that CGIAR has picked up some of the lessons and tools that came out of CCAFS piloting of RBM. However, it is not clear what role the Consortium Office (now System Management Office) had in this. Was the intention to see what CRPs would come up with and then have the CRPs and Centers pick and choose what they thought was useful? CCAFS has a reputation of being an innovator, an early mover, but shouldn't there be a clearer RBM agenda also from the System?

Annex A: Documents reviewed for case study

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Thornton, P, Schuetz, T, Förch, W., Campbell, B. (2014): The CCAFS Flagship Program 4 Trial on Results-Based Management: Progress Report to Consortium Office

[86] Schuetz T, Förch W, Schubert C, Thornton P, Cramer L. 2014. Lessons and Insights from CCAFS Results-Based Management Trial. Learning Brief No 12.

Annex B: Timeline

CCAFS general	Timeline	Pilot specific
Phase 1	Jul 2013	Call of concept notes to participate in the pilot
	Aug	Meeting in London with Centers who had concept notes
	Sep	Selection of concept notes
	Jan	Two-day workshop in Washington for selected proposals
	Mar 2014	Finalization of project documents
CCAFS M&E strategy released	Jul	
Phase 1	Sep – Nov	Regional workshops for ToC and IP development
	Nov	Online survey of participants
Extension Phase	Jan 2015	Progress report
	Jan	Project performance evaluation