



**PO6311 Independent Evaluation for Promoting Pro-poor  
Opportunities in Commodities and Service Markets (Propcom) Mai-  
karfi Programme, Northern Nigeria**

**2018 Final Evaluation Report**

October 2018

upperquartile



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## List of Acronyms

|          |                                                                                            |
|----------|--------------------------------------------------------------------------------------------|
| ACI      | Agric-project Concept International                                                        |
| CAHW     | Community Animal Health Worker                                                             |
| CBO      | Community Based Organisation                                                               |
| CPP      | Crop Protection Programme                                                                  |
| DAC      | Development Assistance Committee                                                           |
| DCED     | Donor Committee for enterprise Development                                                 |
| DFID     | Department for International Development                                                   |
| EQ       | Evaluation Question                                                                        |
| EWRS     | Electronic Warehousing Receipts System                                                     |
| FGD      | Focus Group Discussion                                                                     |
| GAP      | Good Agricultural Practice                                                                 |
| HEAT     | Hostile Environment Awareness Training                                                     |
| KII      | Key Informant Interviews                                                                   |
| LGA      | Local government Area                                                                      |
| M4P      | Markets for the Poor                                                                       |
| MADE     | Market Development in the North of Ghana Independent Evaluation                            |
| MRM      | Monitoring and Result Management                                                           |
| MSD      | Market System Development                                                                  |
| NCD      | Newcastle Disease                                                                          |
| NGO      | Non-Governmental Organisation                                                              |
| NISRAL   | Nigeria Incentive-Based Risk Sharing system for Agricultural Lending                       |
| NVRI     | National Vaccination Research Institute                                                    |
| OECD DAC | Organisation for Economic Co-operation and Development's Development Assistance Committee  |
| PZC      | PZ Cussons                                                                                 |
| PM-k     | Propcom Mai-karfi                                                                          |
| Propcom  | Promoting Pro-Poor Opportunities through Commodity and Service Markets Mai-karfi Programme |
| PM       | Propcom Project Manager                                                                    |
| RAG      | Red, Amber, Green                                                                          |
| ToR      | Terms of Reference                                                                         |
| UQ       | Upper Quartile                                                                             |
| ToC      | Theory of Change                                                                           |
| VBV      | Village Based Vaccinator                                                                   |
| VFM      | Value for Money                                                                            |
| WAFM     | West Africa Food Markets                                                                   |
| WEE      | Women Economic Empowerment                                                                 |

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## 1. Executive Summary

### Programme Context

For rural Nigerian communities, agriculture is the main means of economic gain, but growth in this area has not occurred at the same rate as other sectors. Propcom Mai-karfi is a programme supported by the Department for International Development (DFID) Nigeria that aimed at increasing the incomes of 650,000 poor men and women in Northern Nigeria. The initiative, which began in 2012, building on the legacy of Propcom 1, aimed at increasing inclusion of poor rural farmers in market systems and stimulating sustainable, pro-poor growth in these markets using the Making Markets Work for the Poor (M4P) approach. The Propcom Mai-karfi programme, completed in March 2018, aimed to stimulate changes to selected market systems and pro-poor growth in two main ways:

- Improving poor farmers' access to input and output markets by improving the commercial relationships between farmers, input and service providers, traders and large processors; and
- Increasing private sector investment in rural markets and increasing the availability of goods and services to poor farmers, entrepreneurs and consumers.

### Purpose of the Evaluation

DFID contracted Upper Quartile (UQ) to conduct an independent **theory-based evaluation** of the Propcom Mai-karfi programme, assessing the programme's impact and relevance to the beneficiaries and the extent to which systemic change (sustainable change at scale) has taken place in the targeted markets. The evaluation spoke to two primary audiences; providing the programme with an opportunity for reflection and refining of the programme approach and providing DFID with an independent view of the programme for accountability purposes. A number of secondary audiences also benefitted from the evaluation; the programme partners with whom evaluation results were shared (with the permission of the programme and DFID) giving them the opportunity to learn from their interventions, and the wider development community focussing on the M4P model, to learn lessons regarding M4P design, implementation and evaluation.

The evaluation was carried out by a team of four independent international consultants with a variety of expertise in M4P and evaluation, a local service provider with whom the international team worked closely in designing and implementing data collection. A professional programme management team supported both of these teams regarding contractual, legal, security, logistical and data analysis and quality control support. Members of the wider evaluation team met regularly with both programme and DFID staff to brief them and provide feedback on evaluation progress.

### Evaluation Design

As an M4P programme, Propcom Mai-karfi followed a dynamic and adaptable process of assessing and implementing interventions across a variety of markets. Guided by the evaluation questions from the Terms of Reference (ToR) which were refined in the inception period, the evaluation design had to reflect a similar dynamic and adaptable nature.

To this end, a more traditional baseline, midline and endline evaluation process across all markets may not have been effective. A variety of evaluation activities, both qualitative and quantitative, were employed to address the dynamic nature of the M4P approach and to investigate a selection of interventions within the Propcom Mai-karfi programme. This allowed the evaluation to adapt to the flexible nature of the programme, choosing to delve more deeply into markets which were more likely to contribute to answering the evaluation questions.

### Methodology

Two main pillars made up the evaluation design;

- Two primary markets were selected for quantitative data collection and analysis. This process allowed the evaluation to determine the extent of quantitative impact of the markets on the selected populations.

Baseline and endline data collection in both markets allowed for comparison both between intervention and control groups as well as comparison over time within intervention or control groups.

- Seven secondary markets were selected for qualitative data collection and analysis. This allowed the evaluation to determine to what extent the M4P process was impacting at different levels of the selected markets. The qualitative studies into these seven markets were supplemented by additional qualitative research in the two primary markets. A flexible data collection approach in these markets allowed the evaluation to examine different the programme's impact with the markets at different levels and at different times.

### **Strength of Evidence**

In the final evaluation, data from both the qualitative and quantitative evaluation activities as well as data from programme itself were synthesised to provide an overview of the overall programme as well as its context, challenges and successes. This synthesis process allowed the evaluation team to determine to what extent different sources of evidence spoke to emerging similarities and differences. The evaluation team then categorised these emerging similarities and differences according to the strength of evidence presented into a Red, Amber, Green (RAG) system, where red indicated that the evidence was inconclusive and green that the evidence was conclusive. This process allowed the team to comment on the strengths or weaknesses in the preparation, design, and implementation of the evaluated market interventions and to comment on their applicability to the wider programme context.

### **Structure of the Report**

The following report is structured as follows; Section 2 sets out the purpose, scope and objectives of first the programme and then the evaluation. Section 3 presents the evaluation methodology, starting with an overall review of the evaluation approach followed by a focus on the final evaluation in particular—the data sources, the synthesis approach, and limitations this final piece of work. Section 4 tests the programme Theory of Change and presents the final evaluation findings and analysis, organised into the Development Assistance Committee (DAC) evaluation criteria of relevance, impact, effectiveness, sustainability and efficiency. Section 5 maps the evaluation analysis to the evaluation questions. Each evaluation question is answered separately, as well as all evaluation questions are clustered according to theme and a comprehensive answer provided to each thematic cluster. Section 6 sets out the evaluation lessons learned and recommendations, both for the Propcom programme and for M4P projects more broadly. Section 6 also reflects the overall conclusions of the evaluation team. This report ends with 16 appendices which include all previous reports, a value for money assessment, and the original evaluation TOR.

### **Key Findings**

The report presents the evaluation findings in two ways; as this was a theory-based evaluation we present them against the programme theory of change, matched to the DAC criteria and then against the evaluation questions, clustered according to theme. In summary, the proposed theory of change holds true with interventions designed to overcome identified market constraints leading to greater access to market related goods and services that positively impact on increased incomes of poor households. This increased income in turn constitutes to the households increasing their resilience and decreasing their levels of poverty.

### **Relevance**

Conclusive evidence showed that the programme interventions were relevant in overcoming both demand and supply side constraints in most of the markets evaluated. Access to information, access to finance and last mile distribution were common demand side constraints. Access to sufficient quantity of suitable quality goods and services were comment supply side constraints.

## Impact

In seven of the nine evaluated markets, incomes of participating households increased. Given the wide range of sources, our evidence is conclusive that the programme interventions contributed to increased household incomes. In Poultry Health, the average increase was by a factor of 2.7 and in the Babban Gona households maize related incomes doubled. Households across all seven markets reported buying assets with their increased incomes, in some cases increasing their involvement in the income producing activity, and in other cases reporting diversifying their income streams. Households also reported spending additional income on school and medical fees and on improving their living standards.

Where women reported being in control of an asset, such as chickens or maize farming, they also reported benefitting from the increased income as a result of increased productivity. This suggests that women who were reached and included in these interventions did experience benefits, potentially to the same level as their male counterparts, however the number of women included varied substantially across the various interventions sampled.

The programme did not achieve its Women's Economic Empowerment (WEE) target of 250 000 women and the evaluation argues that women specific intervention may not be the most appropriate mechanism to achieve this. Instead we suggest that women focussed interventions situated within mainstream market intervention might be more effective and more efficient.

## Effectiveness

In the evaluation, effectiveness speaks to changes within the core (i.e. the household) market. Again, conclusive evidence points to programme interventions that have in many cases, increased awareness which has led to increased demand for the product, stimulating delivery and increasing use of this product. This in turn has led to greater productivity and resulted in increased incomes, increases resilience and decreased poverty.

Not all of the realised benefits might however be attributable to the programme. Increased demand for local produce and the resultant blocking of imported goods has also led to increased prices and therefore will have contributed to increased household incomes.

This being said, increased awareness and increased knowledge of products and services and the resultant increased demand for these, are very likely attributable to the programme. Over the longer term, these behaviour changes increase household resilience which contributes to decreased poverty over the longer term.

## Sustainability

In one set of villages that affected by kidnapping and banditry, displaced villagers who had earlier realised benefits from a programme intervention immediately adopted their changed behaviour on their return to their home village. This speaks to the ongoing uptake of the previously unavailable goods and services, and the behaviour change resultant from programme interventions.

Similarly, conclusive evidence speaks to ongoing delivery of these goods and services due to this increased and ongoing demand, at various levels of the market system. Copying, where one household recognises and adopts an intervention behaviour was observed and reported in numerous market interventions; notably in poultry health, maize farming and Electronic Warehousing Receipts System (EWRS). Crowding in, where market system players adopt and refine a programme business model has been observed and reported on in poultry health. Both of these behaviours are indicative of practices and models that are seen to be proven and profitable and that have traction within the market system.

It is also worth noting that two of the programme markets (fertiliser and mechanisation) are legacy markets from Propcom 1. These two programmes are responsible for over 80% of the programme beneficiaries and for over

60% of the programme's female beneficiaries. Much is often made of M4P's alleged "hockey stick" beneficiary outreach over time, where markets reach exponentially larger numbers of clients over longer periods of time. These two markets, inherited from the earlier iteration of the programme have gained traction over about 15 years of activity resulting in these significant outreach numbers.

### **Lessons and Recommendations**

Lessons and recommendations for different audience groupings are presented in Section 6 of this report. However, in summary we suggest that M4P programmes take note:

- Of both the time period that beneficiaries will need to wait and the amount of money that they will have to invest to realise a return on their investment. It appears that successful interventions have lower investment barriers and shorter periods of return, although the returns may not be the most significant.
- That women can benefit from both women specific interventions as well as from mainstream interventions. However, the former often take longer and cost more to deliver returns and may not reach scale. The latter need to be refined to include strategies that are appropriate for identifying and communicating with women beneficiaries
- That interventions which focus on a partners' strengths are likely to gain traction more easily than those that ask partners to work outside their comfort zones. Interventions that need a variety of competencies might look to involve a range of partners who can then play mutually supporting roles.
- That partners' constraints are also likely to constrain an intervention.
- That longer term M4P interventions are likely to deliver in terms of scale.

The following report is structured as follows: Section 2 sets out the purpose, scope and objectives of, first, the Propcom programme and, second, the evaluation. Section 3 presents the evaluation methodology, starting with an overall review of the evaluation approach followed by a focus on the final evaluation in particular—the data sources, the synthesis approach, and limitations this final piece of work. Section 4 presents the final evaluation findings and analysis, organised into the DAC evaluation criteria of relevance, impact, effectiveness and sustainability. Section 5 maps the evaluation analysis to the evaluation questions. Section 6 sets out the evaluation lessons learned and recommendations, both for the Propcom programme and for M4P projects more broadly. This report contains 16 appendices which include all previous reports, a value for money assessment, and the original evaluation TOR.

## 2. Purpose, Scope and Objectives

This section describes the purpose, scope and objectives of the Propcom Mai-karfi (PM-k) programme and evaluation. It outlines the process undertaken to develop a flexible evaluation approach and concludes with a short summary of the structure of this Final Report.

### 2.1. The Programme

PM-k is a DFID supported programme following a M4P approach. The anticipated impacts of PM-k are increased incomes for poor men and women in Northern Nigeria via their increased inclusion in selected rural market systems which have been stimulated for pro-poor growth and sustainability. DFID funded the PM-k programme to the value of £27 million<sup>1</sup> from December 2011 to June 2018.

PM-k builds on the legacy of the original Propcom<sup>2</sup>, a similarly funded DFID programme which started implementation in 2003. The second, now concluding, Propcom Mai-karfi programme was expected to improve the incomes of 500,000 poor people in Northern Nigeria by March 2018, half of them women, by at least 25% and facilitate the stimulation of at least £100 million of additional public and private investment in support of the agriculture sector. It was anticipated that the number of beneficiaries would increase to 650,000 by 2020, as a result of sustainable, systemic changes in the market places<sup>3</sup>.

The theory of change underpinning the programme, outlined in its Business Case, is a generic M4P theory of change. It asserts that activities leading to outputs would result in better functioning markets and increased market system capacity. The PM-k Guidance Note summarises this, stating that “Propcom Mai-karfi’s work is not designed to directly work with the poor; rather it is aimed at tweaking market systems to benefit the poor”. These interventions would result in improved enterprise performance among, and in turn increased income for, target beneficiaries.<sup>4</sup>

Propcom Mai-karfi, according to its theory of change intended to achieve three linked outcomes<sup>5</sup>:

- Rural market systems selected would work more effectively for poor farmers and small scale rural entrepreneurs;
- Poor women and men engaged in these selected rural markets are less vulnerable to shocks, trends and seasonality; and
- Private investors, government, non-government organisations and development agencies make changes in their approach to Northern Nigeria as a result of the programme’s influence.

The PM-k Business Case<sup>6</sup> provided the following rationale for implementing this type of programme in the particular development context:

- the extent of poverty in Nigeria (particularly in the North), combined with high levels of gender inequality;
- the iniquitous nature of growth in Nigeria, which has failed to reduce poverty;

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<sup>1</sup>Terms of Reference: Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (PrOpCom) Mai-karfi Programme

<sup>2</sup>This first programme is sometimes referred to as Propcom 1. The acronym, in both the former and the current programme stands for Promoting Pro-Poor Opportunities through Commodity and Service Markets.

<sup>3</sup> Upper Quartile, Inception Report - Independent Evaluation of Promoting Pro-poor Opportunities in Commodities and Service Markets (PrOpCom) Mai-karfi Programme, Northern Nigeria, Inception Report, August 2014, p. 10.

<sup>4</sup> It is recognised that given the poverty in the targeted states that there is a very close relationship between the individual and family unit and the enterprise level, that M4P regards as the core market. Parts of the evaluation that are designed to examine core market enterprise level impact take cognizance of this close relationship.

<sup>5</sup> DFID Nigeria, Business Case for Propcom Mai-karfi, November 2012, p. 6.

<sup>6</sup> DFID Nigeria, Business Case for Propcom Mai-karfi, November 2012, p. 7.

- the programme's close fit with the vision, objectives and strategy of DFID in Nigeria, which also reflect the priorities of the Government of Nigeria, and
- the proven feasibility of stimulating sustained increases in incomes for the rural poor by following a market system or M4P approach, as demonstrated by the success of DFID's earlier Propcom project<sup>7</sup>.

The design of the programme coincided with the emergence of the market development approach (often referred to as M4P) which addresses the underlying causes of market under-performance. The usefulness of such programming has been evident in reviews of experiences (e.g. by DFID, the World Bank, the European Commission<sup>8</sup> and the Donor Committee for Enterprise Development<sup>9</sup>) which have found that conventional approaches of direct support have not achieved large-scale sustainable impact. The M4P approach has demonstrated significant achievements in a short time.<sup>10</sup>

## 2.2 The Evaluation

The purpose and scope of this evaluation is set out in the DFID TOR<sup>11</sup> (See Appendix 1). In summary, while PM-k is expected to contribute considerably to DFID's planned results in Northern Nigeria, it is operating in an environment where there is little evidence or research to draw upon about the target population's needs and, therefore, the relevance of interventions used to increase productivity and incomes of these rural populations, especially for women. Furthermore, there is a need to build a body of evidence for use in future decision-making on the most cost-effective programming options in different contexts, including the fragile environment in which this programme operates. Finally, two other primary purposes of the evaluation are, first, accountability and ongoing feedback to enable the programme to improve its operations and, second, incorporating learning from the broader international development community.

This evaluation was carried out by a team of international experts, delivered by UQ in association with WYG International Limited. The evaluation team took into account key linkages between PM-k and other programmes. In the case of the DFID Market Development in the Niger Delta (MADE) and poultry vaccines, for example, PM-k looked to MADE for co-ordinating its approach in dealing with National Vaccination Research Institute (NVRI) for poultry vaccines supply. PM-k inherited the GEMS1 Meat and Leather project and learned from and expanded upon their Feed Finishing intervention. This intervention was later selected for examination as a secondary market in the independent evaluation of the programme. The programme also collaborated with the West Africa Food Markets (WAFM) programme which improved access to warehousing and fertiliser swaps by smallholder farmers. Two of the PM-k private sector partners were grant applicants to WAFM. Further, the Partnership to Engage, Reform and Learn provided learning to Propcom Mai-karfi on fertiliser markets and input subsidies.<sup>12</sup>

As a fragile and conflict-affected state, Nigeria is a difficult environment in which to work as regards both implementation and evaluation, owing to a combination of localised and state-wide conflicts and/or strikes, restricted freedom of movement in some locales and tenuous links between civil society and government. These factors were taken into consideration in the design and timing of field work, with the evaluation primary data collection methodology building in flexibility to account for security risks in specific localities. If the risk in a particular area was deemed excessive (and exclusion would not adversely affect the quality of research) the team reallocated fieldwork to districts and states in which risks (and associated costs) were lower.

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<sup>7</sup>PrOpCom Project Completion Review, December 2011.

<sup>8</sup>"EC programmes have often focused on the direct provision of services for immediate impact, rather than addressing the constraints that preclude correct functioning of the market. [As a result] PSD activities are not designed so as to improve the competitiveness of the private sector in a sustainable manner." Evaluation of European Community support to private sector development in third countries; (2005); EU

<sup>9</sup> <http://www.enterprise-development.org/>

<sup>10</sup> DFID Nigeria, Business Case for Propcom Mai-karfi, November 2012, p. 16.

<sup>11</sup> DFID Terms of Reference for the independent evaluation of Promoting Pro-poor Opportunities in Commodities and Service Markets (PrOpCom) Mai-karfi Programme, Northern Nigeria, p.1-2.

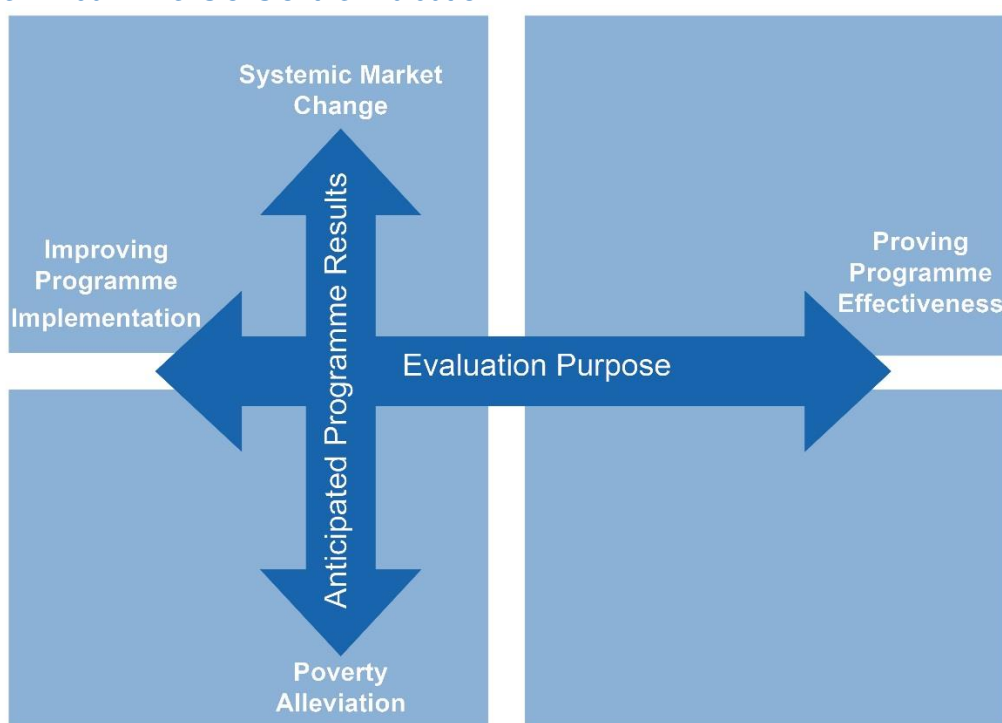
<sup>12</sup> DFID Annual Review, 2017.

The evaluation of this programme aimed to achieve two overarching objectives:

- To answer a broad range of questions relevant to the development of rural markets in Northern Nigeria, and
- To add to the knowledge of what works in M4P programmes.

The evaluation team structured its investigation by mapping these objectives against two exploratory axes. The first weighs evaluating and proving the programme's effectiveness, against improving the programme implementation through provision of feedback to the implementing team (although it is worth noting that, in practice, these are not diametrically opposed). These options are illustrated by the horizontal arrow in Figure 1 below. The team has also debated the purpose and focus of the evaluation in terms of evaluating anticipated programme results; to determine the level of poverty reduction as a result of programme interventions amongst the target beneficiaries as well as to determine the extent of systemic change within the targeted markets. These options are illustrated by the vertical arrow in Figure 1 below. Both dimensions were incorporated into the design of the evaluation framework.

**Figure 1: Dual Dimensions of the Evaluation<sup>13</sup>**



During the inception phase the evaluation team gave careful consideration to how the evaluation of PM-k will be used. The team concluded that its primary uses are twofold:

- To inform DFID,
- To provide ongoing and regular feedback to the programme about the effectiveness of its interventions (learning and accountability).

The ongoing learning and final evaluation is expected to contribute to the growing body of knowledge about what works and what does not for M4P programming, and the underlying contributing factors to systemic market change. The evaluation results are also expected to be used to improve PM-k's effectiveness in the extension phase now underway.

<sup>13</sup> Upper Quartile, Inception Report - Independent Evaluation of Promoting Pro-poor Opportunities in Commodities and Service Markets (PrOpCom) Mai-karfi Programme, Northern Nigeria, Inception Report, August 2014, p. 13.

Throughout the evaluation process, emerging findings were shared with DFID Nigeria and the PM-k team with a view to improving or refining their interventions given the dynamic nature of the programme's M4P approach. In agreement with DFID Nigeria and the PM-k team, the reporting schedule in the evaluation TOR was revised to better fit the programme implementation schedule and provide more frequent reporting to the teams.

The findings of the evaluation are intended to provide:

- DFID, the donor, with an assessment as to whether the programme has achieved its anticipated objectives.
- PM-k with lessons to consider in its extension phase.
- Implementation partners and other interested stakeholders with lessons about their interventions from objective and independent observers to enable them to improve programme implementation.
- The international M4P audience with lessons about where the M4P approach has both succeeded and failed in making Northern Nigerian markets work for the poor.

### 2.3. Flexible Evaluation Approach

As a longitudinal evaluation conducted over the lifespan of the programme, the evaluation was designed to be sufficiently flexible to respond to changes in programme design and implementation—for example, the addition of new market interventions, and increased focus on women's inclusion and empowerment from 2015. Ongoing feedback and interactions with DFID and PM-k management were especially helpful in the market selection process.

The PM-k programme design phase began in December 2011 and implementation in March 2013. The programme intervention activities were completed in December 2017, with the programme closing at the end of March 2018. An extension was granted to the programme, which is now due to complete in 2020.

The independent evaluation of PM-k commenced in October 2013 with the inception phase including an initial visit by the evaluation team to PM-k offices in November 2013. This was followed by initial market assessments by the evaluation team, including data collection and review of secondary data, and the selection and review by PM-k and DFID of primary and secondary market interventions. Baseline and interim intervention evaluations were conducted between 2014 and 2017, and the final evaluation—the findings of which are set out in this report—in 2018.

The original evaluation questions were provided in the DFID Nigeria TOR<sup>14</sup> and were adapted and expanded upon by the evaluation team in the Inception Report. As a theory-based evaluation, all evaluation framework questions are rooted in and are designed to test the Theory of Change (TOC). As such, the key questions considered to what extent, how, and why or why not:

- PM-k succeeded at contributing to systemic change in support markets, i.e. lasting and wide-spread change in the availability of better/new services, inputs and regulation for target farms and enterprises;
- This change contributed to farms and enterprises using these services, inputs and regulations and farmers and entrepreneurs changing their practices;
- This change contributed to better farm and enterprise performance; and
- This change contributed to higher incomes and poverty reduction.
- The programme was effective in meeting its quantitative women targets. This DFID requirement to provide robust evidence regarding the programme's impact, or relevance to beneficiaries' needs, of increased productivity and incomes, especially for women<sup>15</sup>, led to the inclusion of the evaluation question "How effective was the programme in meeting its results promised for women and girls?" in the original TOR

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<sup>14</sup> DFID ToR for an Independent Evaluation, p. 2.

<sup>15</sup> DFID ToR for an Independent Evaluation, p. 1.

Based on DFID's feedback on the initial inception plan and budget limitations, the inception plan for the programme refocused on systemic change at the support market level. This has included consideration of the change in roles and performance of enterprises in the support market (e.g. crop protection suppliers, tiller service providers) which are expected to better serve poor farmers and entrepreneurs, and who are therefore a means of poverty reduction. However, it is important to emphasise that the purpose, scope and objectives of the evaluation have not fundamentally changed from the original ToR.

At the time that the evaluation framework was designed, PM-k was still evolving their own market selection process and was expecting to add additional markets. It was not possible at the inception stage to define which markets the evaluation would investigate in-depth. Moreover, as the programme itself needed to respond in a flexible and agile manner to market needs, it was imperative that the evaluation was able to follow and match these levels of agility and flexibility. It was also agreed with DFID that not all of the programme's interventions could be individually assessed. Some of the interventions were inherited from Propcom1 (e.g. fertilisers) and some interventions (e.g. climate smart and improved cook stoves) were only launched towards the end of the programme and would therefore be difficult to evaluate.

Based on these uncertainties, the evaluation design was built around four waves of evaluation activity: a quantitative baseline, a quantitative endline and qualitative surveys (waves 1 and 2). The baseline and endline quantitative surveys captured the changes and intervention impacts in two primary markets. Qualitative research was carried out through two waves over two calendar years in secondary markets as well as selective qualitative research conducted in the primary markets. Primary markets are those in which the entire impact logic of the interventions was assessed in-depth: from interventions, to systemic market change, to changes at the farm/small enterprise level (outcomes), and finally to changes in income (impact). Secondary markets are those where the focus of the evaluation was on assessing systemic change in-depth at a particular level, for example, at the farm/small enterprise or the income (beneficiary) level.<sup>16</sup> This final evaluation collectively assesses the findings from earlier processes relating to systemic change to determine the extent of PM-k's contribution to systemic change within the markets and the impact on beneficiaries (households) as well as further up the value chain.

## 2.4 The Market Selection Process

The process of market selection was a subjective and iterative process, with seven characteristics<sup>17</sup> selected to act as guiding parameters rather than as strict selection criteria (expanded on in Section 3). In essence there were three selection processes; one for the two primary markets and one for each wave of qualitative market selection:

- Two primary markets were selected for quantitative evaluation with a sample size that provided sufficient statistical power. These surveys were conducted twice for the selected primary markets Poultry Health and Babban Gona, soon after the selection process (baseline: October 2015 and February 2016, respectively) and towards the end of the programme (endline: October 2017 and January / February 2018).
- Secondary markets selected for qualitative interim evaluations in Wave 1 included: Soap and Handwashing, Tillers, a displacement study under Babban Gona intervention, and a Poultry follow-up. Consolidated results were reported in November 2016. The second wave of qualitative studies included: Syngenta's Crop Protection Products (reported in November 2017), Electronic Warehouse Receipting System (reported in October 2017), Feed Finishing (reported in October 2017), Women's Economic Empowerment which included Rice Parboiling and CropLife Crop Protection Products

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<sup>16</sup> Independent Evaluation of Promoting Pro-poor Opportunities in Commodities and Service Markets (PrOpCom) Mai-karfi Programme, Northern Nigeria Inception Report August 2014 p. 2

<sup>17</sup> Market selection characteristics included application of M4P principles in the intervention, data collection potential/feasibility, gender balance/impact on women, likelihood market will continue, potential scale and impact, learnings and insights into M4P paradigm, resilience and vulnerability, and innovativeness of interventions.

(reported in April 2018) and a further study on the poultry vaccine focussing on the role of the Village Based Vaccinator in the supply chains. (April 2018). A brief description of each selected intervention is presented in Appendix 5.

At the time of the Inception Report, the sustainability or viability of some of the planned markets that PM-k was moving into was unclear. Accordingly, the evaluation initially planned for close-out evaluations of markets from which the programme might later withdraw. However, as PM-k did not officially close any of its markets, the evaluation team, reallocated these resources to deepen or widen already planned evaluation activities.<sup>18</sup>

Additionally, the evaluation team produced several dissemination output packages summarising studies of interest to DFID, PM-k and the wider development and M4P community—covering the Electronic Warehousing, Women’s Economic Empowerment, and Poultry Health findings (See Appendix 16a-c). Each dissemination package includes a two-page infographic, a short briefing note, and a PowerPoint presentation with speakers notes. These outputs harmonise with the PM-k dissemination outputs and are designed to be used by DFID, PM-k and relevant market partners.

## **2.5. Applying the Paris Declaration Principles**

The Inception Report for the evaluation of Propcom Main-karfi is informed by the Paris Declaration Principles. The ways in these principles have been applied to the evaluation is presented in Table 1.

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<sup>18</sup>In consultation with DFID, resources allocated to these studies were reallocated to other evaluation components

**Table 1: Alignment of Our Evaluation Framework with Paris Declaration Principles**

| Paris Declaration on Aid Effectiveness Principles                                                                                          | Application within this evaluation                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Ownership</b><br>Developing countries set their own strategies for poverty reduction, improve their institutions and tackle corruption. | Evaluation findings have been shared with the programme and DFID Nigeria on an ongoing basis, throughout the evaluation. The evaluation team has also, with the permission of the programme and DFID Nigeria, shared the findings with the programme partners.<br>On invitation from DFID we will share the evaluation findings with key national stakeholders.                                                                                                                               |
| <b>Alignment</b><br>Donor countries align behind these objectives and use local systems.                                                   | The programme itself is aligned with Nigeria's own poverty reduction strategies and our evaluation findings therefore provide results which are of interest to key stakeholders working on these strategies.<br>As part of this evaluation we have worked closely with a number of Nigerian based companies as our local partners. These partner companies have given valuable feedback and guidance on our suggested data instruments and proposed methods, taking ownership of the process. |
| <b>Harmonisation</b><br>Donor countries coordinate, simplify procedures and share information to avoid duplication.                        | Evaluation results have been shared as widely as permitted by the programme and DFID. This includes the publication of some of the evaluation results on the BEAM exchange.<br>Applications have been made to share the evaluation methodology at a number of evaluation conferences.                                                                                                                                                                                                         |
| <b>Results</b><br>Developing countries and donors shift focus to development results and results get measured                              | We would request that the final evaluation results are made available as widely as possible, especially to other M4P programmes working in Nigeria with which the programme has had a strong working relationship, such as MADE Nigeria.                                                                                                                                                                                                                                                      |
| <b>Mutual Accountability</b><br>Donors and partners are accountable for development results.                                               | The evaluation framework was designed to measure the contribution of DFID and the programme to the results. The evaluation team has shared results with both the programme and DFID on an ongoing basis throughout the evaluation process.                                                                                                                                                                                                                                                    |

## 2.6. The Final Report

This final evaluation report is structured as follows:

- Section 1 Executive Summary;
- Section 2 presents purpose, scope and objectives;
- Section 3 describes the evaluation methodology, research methods and data sources;
- Section 4 provides findings on programme impacts in the context of the Development Assistance Committee (DAC) evaluation criteria and synthesises findings in the context of the Theory of Change; and
- Section 5 specifically answers the evaluation questions.
- Section 6 presents the lessons learned, recommendations and conclusions.

This report includes 18 appendices including the Evaluation Terms of Reference, the Evaluation Inception Report, Summary Matrix of Interventions, Intervention Summary Briefs, the Quantitative Intervention Selection Report, and all quantitative and qualitative reports for the primary and secondary market interventions. Communication products (infographics) and lists of interview respondents and reports/resources not listed elsewhere are also among the appendices.

### 3. Methodology

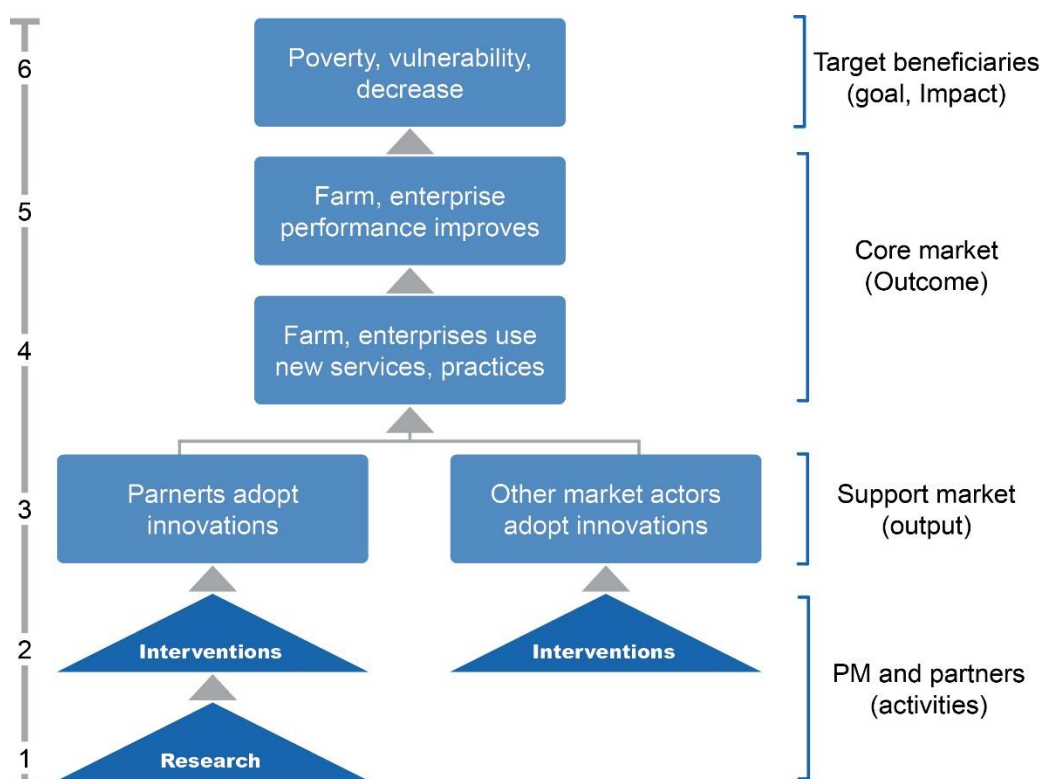
This section describes the overall approach to the evaluation of PM-k, the purpose of and data sources for the theory-based synthesis on which the final evaluation is grounded, and a brief commentary on methodological limitations.

#### 3.1. The Overall Evaluation Approach

As detailed in the Inception Report, the main purposes of the overall evaluation of the PM-k programme are: firstly, to assess whether the programme's theory of change is valid and whether it is therefore delivering the expected benefits to poor women and men in Northern Nigeria; and secondly to contribute to improving PM-k's effectiveness. Key evaluation questions concern the impacts of the programme as well as the different interventions, its effectiveness in delivering promised benefits to women, the extent of systemic change that was facilitated, and the sustainability of these achievements.

To address these evaluation questions, the overall evaluation approach is grounded in theory-based evaluation, whereby the data collection is structured around the TOC underlying the PM-k programme (see Figure 2 below). This type of information provides for a better understanding of how and to what extent PM-k did (or did not) contribute to the observed changes in beneficiary incomes.

**Figure 2: Summary of Propcom Mai-karfi's Theory of Change**



The PM-k TOC was in a fairly generic form at the start of the evaluation and remained at a very high level throughout programme implementation<sup>19</sup>. As such, in order to evaluate the programme's effectiveness robustly,

<sup>19</sup> In the early stages of the evaluation, the evaluation team did work with the implementation team to revise and refine the programme's theory of change. At the time the programme and the contracted implementer were undergoing management changes and this process was not taken beyond initial discussions with the evaluation team. See Appendix 2, Upper Quartile, Independent Evaluation of Promoting Pro-poor Opportunities in Commodities and Service Markets (PrOpCom) Mai-karfi Programme, Northern Nigeria Inception Report August 2014.

the evaluation team expanded on the TOC by linking it to the DAC evaluation criteria (see Section 4).

More specifically, the overall evaluation tested the PM-k TOC in:

- Two select *primary markets* (Poultry Health and Babban Gona) where the entire impact logic of the interventions was assessed in-depth: from interventions to systemic market change to changes in income (beneficiary impact). These assessments included beneficiary-level baseline/endline surveys with a sample size that provides sufficient statistical power as well as qualitative data collected by the evaluation team.
- Seven *secondary markets* (Rice Parboiling, Tillers, Electronic Warehousing, Crop Protection-Syngenta, Feed Finishing, Soap and Handwashing, and Crop Protection-CropLife), where the focus is on assessing systemic change in-depth at the farm/small enterprise level and the income (beneficiary impact) level, primarily based on qualitative data collected by the evaluation team.

The selection of the two primary markets (Poultry Health and Babban Gona) was based on the following criteria:

- Potential to impact on women;
- Application of M4P principles within the interventions;
- Potential scale and size of impact as a result of PM-k interventions;
- Innovation in the intervention; and
- Ability to generate new learning and insights within the M4P paradigm and relevance of such learning to the M4P approach generally

Please see Inception Report for a discussion of these selection criteria and their application.<sup>20</sup>

The selection of secondary markets (i.e., Rice Parboiling, Tillers, Electronic Warehousing, Crop Protection-Syngenta, Feed Finishing, Soap and Handwashing, Crop Protection—CropLife) for qualitative interim evaluations was in some cases after significant market events or to evaluate impacts on women and girls.<sup>21</sup>

At the time of the Inception Report, the sustainability or viability of some of the planned markets that PM-k was moving into was unclear. Accordingly, the evaluation initially planned for close-out evaluations of markets from which the programme might later withdraw. However, as PM-k did not officially close any of its markets, there was no need for close-out evaluations as originally proposed.<sup>22</sup>

In place of the close-out evaluations, the evaluation team carried out several additional studies. This included studies on WEE across Rice Parboiling, Poultry Health, Feed Finishing, and Crop Protection. The team also conducted Value for Money (VFM) assessment at the close out of the programme (see Appendix 15), and an organisational review with programme staff to gain insight into the decision-making process and allocation of resources within the programme and between markets (see Appendix 5). Finally, the evaluation team also produced additional dissemination outputs summarising studies of interest to DFID, PM-k and the wider community—Electronic Warehousing, WEE, Poultry Health, and the final report findings.

A range of quantitative and qualitative data collection methods were used for the evaluation of the nine selected interventions, including quantitative surveys, focus group discussions (FGDs), key informant interviews (KIIs), and case studies. All instruments were shared with PM-k for their input, prior to piloting.

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<sup>20</sup> Independent Evaluation of Promoting Pro-poor Opportunities in Commodities and Service Markets (PrOpCom) Mai-karfi Programme, Northern Nigeria: Inception Report.

<sup>21</sup> See the Selection of Secondary Markets Report, 2016, and Selection of Secondary Markets—Wave 2 Report, 2017, for more detailed descriptions of these criteria and the selection procedure

<sup>22</sup> In consultation with DFID, resources allocated to these studies were reallocated to other evaluation components

### *3.1.1. Primary Markets – Quantitative Studies*

The quantitative studies—in the two primary markets (Poultry Health and Babban Gona)—included both programme beneficiaries and non-beneficiaries; that is, farmers who engaged with PM-k supported interventions and farmers who did not. The overarching purpose of these surveys was to document the changes taking place in the intervention areas, as compared with non-intervention areas. The surveys were administered in two waves: a baseline survey and an impact, or endline, survey. Each wave of surveys involved a different, yet representative, sample of farmers. The advantage of using this approach is that it allowed for over-time comparisons while remaining less vulnerable to respondent attrition (a common issue with most longitudinal survey designs, especially in conflict-affected, fragile zones). The disadvantage was that the surveys did not allow for the evaluation to trace the development of individual farmers, which would be preferable but is impracticable given resources, the circumstances in the field, and the timeframe of the evaluation. The surveys involved sample sizes based on statistical power tests (see Inception Report), random selection of respondents within the specified areas, and achieved consistently high response levels. More detail on these surveys can be found in Appendices 7,8,13 and 14.

### *3.1.2. Secondary Markets – Qualitative Studies*

The qualitative studies include 45 focus groups and over 100 individual interviews across all nine interventions, spanning a broad range of beneficiaries (male and female farmers), non-beneficiary farmers (in comparison areas), programme staff and partners, people knowledgeable of the local economies, and other relevant stakeholders. The purpose and focus points of each qualitative study was shared with DFID in evaluation scoping notes. These notes confirmed the rationale and methodology for each study and outlined the evaluation questions each study would address. While the design of the qualitative studies reflected on and included several of the original independent evaluation questions (as set out in the Independent Evaluation Inception Report, Appendix 3), each evaluation study was designed to speak to the specifics of the market and intervention on which it focused. To facilitate access, principle local partners sought the consent of the village leaders and elders to engage with farmers for the purposes of data collection. This was particularly important for data collection involving female farmers in the communities. The local partners also liaised with other relevant groups (e.g., farmer cooperatives) to identify relevant potential farmers interviewees.

As regards the cultural appropriateness of the evaluation methodology, social and religious norms in most parts of Northern Nigeria does not encourage male strangers to freely speak with women, especially married women. Accordingly, our principal local partner used female researchers to engage with women for the purposes of the data collection. Moreover, the local facilitators, being local to the survey areas, were fluent in the local language (Hausa) spoken by the farmers.

Quality assurance was a key priority throughout the evaluation. To ensure the quality of the data collected, the evaluation team provided training sessions with local enumerators prior to the quantitative surveys to ensure a shared understanding of the selection process of respondents (random sampling of households) as well as of the questionnaire, and to anticipate challenges in relation to sampling, screening, questionnaires and bias. The questionnaires, FGD and KII interview guides were developed and reviewed by the evaluation team, the principal local partner and PM-k programme staff. The questionnaires were piloted before a final version was used in the study. A supervisor from the local partner was in-field during the survey administration. FGDs and KIIs were conducted by high-level experienced researchers. For both the qualitative and quantitative studies, the evaluation team worked closely with the enumerators during data collection and data entry to guide and oversee the data collection process, as well as to resolve any emerging issues. The Standard for Monitoring and Results Measurement of the Donor Committee for Enterprise Development (DCED) was used across the data collection activities. The triangulation of these quantitative and qualitative data sources served to strengthen both the validity and explanatory strength of the evaluation. The broad range of data sources also ensured adequate breadth and depth in the evaluation reports for the purposes of the theory-based synthesis carried out for the final evaluation.

More detail on these surveys can be found in Appendices 9,10,11 and 12a-e.

### **3.2. The Purpose of the Final Evaluation**

The purpose of this final evaluation report is to synthesise the findings from past evaluation activities—both quantitative and qualitative—to provide an overview of the overall PM-k programme, its context, challenges and successes, as well as lessons learned. Lessons reflect on strengths or weaknesses in the preparation, design, and implementation of the nine individual interventions that influence overall programme performance, outcome, and impact.

Towards this purpose, and in line with the overarching emphasis on theory-based evaluation, the evaluation team designed and conducted a theory-based synthesis of findings and data across the nine selected interventions. The use of a synthesis approach was deemed relevant and appropriate given the aim of identifying findings across multiple interventions as well as the general emphasis on theory-based evaluation. This synthesis approach was structured around three successive steps:

1. Summarising main findings (within each intervention);
2. Synthesising lessons learned across all interventions; and
3. Assessing the strength of evidence (for each lesson learned).

The data sources and synthesis steps are described below.

### **3.3 Data Sources for The Final Evaluation**

The final evaluation is based on a theory-based synthesis of findings from the broad range of primary and secondary data sources emerging from the past data collection activities of the evaluation, including past evaluation and market assessment reports (secondary data), the primary data underlying these (raw qualitative and quantitative data), as well as information provided by the PM-k programme management team to the evaluation team (e.g., initial market assessments, interviews with PM-k staff). Table 2 presents the data sources structured according to each intervention. As the table shows, the design, implementation, context, relevant challenges and successes, as well as lessons learned for each intervention has been documented across numerous data sources. Considered collectively, these data sources provided a robust foundation for a synthesis across the nine interventions.

**Table 2: Data Sources (By Intervention)**

| Intervention                           | Data Sources                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                        | Reports                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Poultry Health (Primary Market)</b> | <ul style="list-style-type: none"> <li>Quantitative Poultry Health Market Survey (Baseline 2015, Endline 2017)</li> <li>Interim Phase 2016 Evaluation Report: Poultry Vaccination Follow-Up Study (November 2016)</li> <li>Draft Interim Phase 2018 Evaluation Report – Poultry Vaccination (April 2018)</li> <li>Draft Interim Evaluation Report – Propcom Mai-karfi's Effectiveness in Reaching Women and Women's Economic Empowerment (April 2018)</li> </ul> | <ul style="list-style-type: none"> <li>Baseline survey data among farmers (n=791) in intervention and comparison areas</li> <li>Endline survey data among farmers (n=785) in intervention and comparison areas</li> <li>4 focus groups with vaccine distributors and VBVs</li> <li>2 focus groups with female farmers in intervention and comparison areas</li> <li>3 key informant interviews with programme staff and partners</li> <li>4 key informant interviews with male and female vaccinators</li> <li>Qualitative interviews with 50 comparison group farmers and 8 veterinarians in the comparison group area.</li> <li>1 key informant interview with PM-k Poultry Health Section Manager</li> <li>PM-k progress reports</li> </ul> |
| <b>Babban Gona (Primary Market)</b>    | <ul style="list-style-type: none"> <li>Babban Gona Baseline Presentation— Babban Gona Market Survey (April 2016)</li> <li>Interim Phase 2016 Evaluation Report: Babban Gona Unintended Outcome Study (November 2016)</li> <li>Selection of Secondary Markets – Wave 2: Babban Gona (March 2017)</li> </ul>                                                                                                                                                       | <ul style="list-style-type: none"> <li>Baseline survey data among farmers (n=795) in intervention and comparison areas</li> <li>Endline survey data (n=783)</li> <li>Mini qualitative survey non-Babban Gona farmers (n=90)</li> <li>6 focus groups with non-Babban Gona farmers</li> <li>focus groups with consumers and retailers</li> <li>6 key informant interviews with people knowledgeable about local economy</li> <li>3 key informant interviews with non-BG farmers</li> <li>Information from PM-k staff</li> </ul>                                                                                                                                                                                                                  |
| <b>Rice Parboiling</b>                 | <ul style="list-style-type: none"> <li>Draft Interim Evaluation Report – Propcom Mai-karfi's Effectiveness in Reaching Women and Women's Economic Empowerment (April 2018)</li> </ul>                                                                                                                                                                                                                                                                            | <ul style="list-style-type: none"> <li>3 focus groups with female beneficiaries in the intervention and comparison area</li> <li>2 key informant interviews with women's group leaders</li> <li>2 key informant interviews with rice traders</li> <li>1 key informant interview with PM-k Rice Parboiling Section Manager</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Tillers</b>                         | <ul style="list-style-type: none"> <li>Selection of Secondary Markets Report— Tillers (August 2016)</li> <li>Interim Phase 2016 Evaluation Report: Tillers Study (November 2016)</li> </ul>                                                                                                                                                                                                                                                                      | <ul style="list-style-type: none"> <li>Survey of beneficiary farmers (n=110)</li> <li>4 focus groups with beneficiary farmers</li> <li>7 key informant interviews with PM-k staff</li> <li>PM-k programme documents</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Electronic Warehousing</b>          | <ul style="list-style-type: none"> <li>Selection of Secondary Markets – Wave 2: Electronic Warehousing Receipts (March 2017)</li> <li>Interim Evaluation Draft Report – Electronic Warehousing Receipt Intervention (October 2017)</li> </ul>                                                                                                                                                                                                                    | <ul style="list-style-type: none"> <li>6 focus groups with beneficiaries in treatment and comparison areas</li> <li>6 key informant interviews were conducted with the relevant programme staff, as well as with the staff of programme partners.</li> <li>PM-k progress reports</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

| Intervention                      | Data Sources                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                   | Reports                                                                                                                                                                                                                                                                                                                                                                                                                                             | Data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Crop Protection Syngenta</b>   | <ul style="list-style-type: none"> <li>• Selection of Secondary Markets Report—Crop Protection (August 2016)</li> <li>• Interim Evaluation Draft Report – Systemic Effects and Impact on Farmers and Households of the Crop Protection Products Intervention with Syngenta (October 2017)</li> <li>• Draft Interim Evaluation Report – Propcom Mai-karfi's Effectiveness in Reaching Women and Women's Economic Empowerment (April 2018)</li> </ul> | <ul style="list-style-type: none"> <li>• 4 focus groups with beneficiaries and 1 focus group with female beneficiaries</li> <li>• 2 focus groups with lead farmers involved in the intervention</li> <li>• 1 focus group with Syngenta retailers</li> <li>• 1 key informant interviews with female lead farmer</li> <li>• 2 key informant interviews with women using Syngenta</li> <li>• 2 key informant interviews with Syngenta dealers (2),</li> <li>• 2 key informant interviews with people knowledgeable of the local economy</li> <li>• Interview with the Syngenta account manager</li> <li>• Information from the PM-k programme and Syngenta (e.g., rapid evidence assessment)</li> </ul> |
| <b>Feed Finishing</b>             | <ul style="list-style-type: none"> <li>• Selection of Secondary Markets – Wave 2: Feed Finishing (March 2017)</li> <li>• Interim Evaluation Draft Report – Systemic Effects and Impact on Farmers and Households of the Feed Finishing Intervention (October 2017)</li> <li>• Draft Interim Evaluation Report – Propcom Mai-karfi's Effectiveness in Reaching Women and Women's Economic Empowerment (April 2018)</li> </ul>                        | <ul style="list-style-type: none"> <li>• 4 Focus groups with beneficiaries</li> <li>• 2 focus groups with paravets</li> <li>• 2 focus groups with female beneficiaries</li> <li>• Key informant interviews with 4 women rearing ruminants, 2 dealers for the feed, 2 stakeholders with knowledge of local economy, and 2 partner firms.</li> <li>• 1 key informant interview with Sales/Marketing Representative from Hybrid Feeds</li> <li>• 1 key informant interview with PM-k Feed Finishing Section Manager</li> <li>• Information provided by PM-k staff (annual/intervention specific reports, baseline data, intervention guide).</li> </ul>                                                 |
| <b>Soap and Hand Washing</b>      | <ul style="list-style-type: none"> <li>• Selection of Secondary Markets Report—Soap and Hand Washing (August 2016)</li> <li>• Interim Phase 2016 Evaluation Report: Soap and Hand Washing: A Theory-Based Qualitative Study (November 2016)</li> </ul>                                                                                                                                                                                              | <ul style="list-style-type: none"> <li>• 2 interviews with PM-k staff</li> <li>• 2 key informant interviews were conducted with the staff of programme partners.</li> <li>• Programme documents</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Crop Protection - CropLife</b> | <ul style="list-style-type: none"> <li>• Selection of Secondary Markets Report—Crop Protection (August 2016)</li> <li>• Selection of Secondary Markets – Wave 2: Crop Protection (March 2017)</li> <li>• Draft Interim Evaluation Report – Propcom Mai-karfi's Effectiveness in Reaching Women and Women's Economic Empowerment (April 2018)</li> </ul>                                                                                             | <ul style="list-style-type: none"> <li>• 1 focus group with female beneficiaries</li> <li>• 1 key informant interview with spraying service provider</li> <li>• 1 key informant interview with CropLife Intervention Manager</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

### 3.4. Synthesis Approach for the Final Evaluation

This synthesis approach was structured around three successive steps:

1. Summarising main findings (within each selected intervention);
2. Synthesising lessons learned across all selected interventions; and
3. Assessing the strength of evidence (for each lesson learned).

Each of these three steps is described in more detail below.

#### 3.4.1 Step 1. Summarising Main Findings (Within Each Intervention)

The goal of the first step was to identify main findings within each of the nine interventions.

In order to develop an overview, the main findings for each intervention were organised into a Summary Matrix (see Summary Matrix Template Example in Table 3 below, and in Appendix 4). The matrix was structured according to the overarching TOC for the PM-k programme (as presented in the Business Case), representing four levels of the M4P market development model:

1. Activities,
2. Support Market,
3. Core Market, and
4. Impact (beneficiaries).

Each of these four levels was further specified according to a set of M4P-relevant focus points. To illustrate, the impact (beneficiaries) level was further specified according to six focus points:

1. Resilience (income stream diversity),
2. Income increases,
3. Reinvestment,
4. Women's Economic Empowerment,
5. Unintended/indirect consequences, and
6. Scale.

These focus points were used to structure the identification and discussion of findings within each of the nine interventions.

In this way, the four levels (and their corresponding focus points) served to centre the summary on main findings relevant to both the overall TOC as well as the M4P model underlying PM-k. Moreover, the four levels also ensured that the types of findings identified within each intervention were relevant and comparable to those identified within other interventions, to enable further synthesis.

Following the structure of the summary matrix, the evaluation team identified, discussed and summarised main findings for each intervention according to each of the four levels (and the corresponding focus points). These main findings were drawn from existing evaluation reports and corresponding data (see Table 2 above). Identified findings were then organised into a Summary Matrix, an example of which—for Poultry Health and Babban Gona—is included below (Table 3). The completed Summary Matrix is provided in Appendix 4.

Table 3: Summary Matrix Template Example

|                                                 |                                   | Poultry Health                                                                                                                                                                                                                                                                                                  | Babban Gona                                                                                                                                                                                                                                                                          |
|-------------------------------------------------|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Impact/beneficiaries                            | Scale (number of beneficiaries)   | No separate number reported; up to 19,000? (around 45% flocks owned by women)                                                                                                                                                                                                                                   | 18,000 BG members; number who increased income not known; intervention completed                                                                                                                                                                                                     |
|                                                 | Unintended/ Indirect consequences | Households in other than the targeted have experienced income increases                                                                                                                                                                                                                                         | Non-BG farmers close to BG farmers have experienced increased incomes and resilience (diversification) and WEE benefits                                                                                                                                                              |
|                                                 | WEE                               | More income for women, increased voice and agency                                                                                                                                                                                                                                                               | Some evidence of a greater say over income use                                                                                                                                                                                                                                       |
|                                                 | Resilience                        | Resilience evidenced by the ability of households that moved temporarily to pay ransoms and increased in the population that did not move; indicated by diversification of income sources, savings, more income                                                                                                 | Greater resilience indicated by higher incomes                                                                                                                                                                                                                                       |
|                                                 | Reinvestment                      | Reinvestment in poultry and other economic activities                                                                                                                                                                                                                                                           | No reinvestment (land planted with maize has decreased), no data on diversification                                                                                                                                                                                                  |
|                                                 | Increased income                  | Incomes from poultry increased (on average fivefold) and the likelihood of living below the poverty line decreased                                                                                                                                                                                              | Increased incomes from maize cultivation; no change in likelihood of poverty                                                                                                                                                                                                         |
| Core market/ Effectiveness                      | Unintended/ Indirect consequences | Increase in apparent commercialization of chicken breeding. Households not targeted have taken up vaccination.                                                                                                                                                                                                  | Copying of BG farming practices and use of inputs by non-BG farmers (also supported by EWRS findings) leading to higher productivity, more involvement of women, but also heavier workloads for women; more work opportunities for paid labour; poorest households unable to compete |
|                                                 | WEE                               | Women improved their knowledge, took up vaccination, but provision of services was often facilitated by men                                                                                                                                                                                                     | Some evidence of greater involvement of women in maize cultivation                                                                                                                                                                                                                   |
|                                                 | Productivity                      | Chicken mortality has decreased to nearly zero, productivity increased                                                                                                                                                                                                                                          | Doubled productivity; time savings                                                                                                                                                                                                                                                   |
|                                                 | Market access                     | With more and better quality chickens more are being sold on the market rather than from home, and at a time decided by the households                                                                                                                                                                          | Access to markets improved as BG brokers the sale of produce                                                                                                                                                                                                                         |
|                                                 | Quality outputs                   | The quality of chickens has improved due to better health                                                                                                                                                                                                                                                       | Improved maize quality                                                                                                                                                                                                                                                               |
|                                                 | Quality inputs/ services          | Households have accessed vaccines and, through the vaccinator, other medicines                                                                                                                                                                                                                                  | Improved use of hybrid seeds and quality agrochemicals                                                                                                                                                                                                                               |
|                                                 | Information to behaviour          | Information about Newcastle disease and vaccines has resulted in vaccination                                                                                                                                                                                                                                    | Access to information resulted in changes in farming practices                                                                                                                                                                                                                       |
| Support market/ Sustainability, systemic change | Unintended/ Indirect consequences | The intervention contributed to the establishment of the Community Animal Health Worker (CAHW) programme, which was not foreseen. Village Based Vaccinators (VBV) trained others and established local distribution networks.                                                                                   | Stronger demand for hybrid seeds and agrochemicals from non-BG farmers close to BG, higher prices for inputs                                                                                                                                                                         |
|                                                 | WEE                               | Women were not empowered in the supply chain, i.e. as VBVs. Initial plans to do so were unsuccessful. No particular measures to target women.                                                                                                                                                                   | WEE component using the maize business model for soya but no data. No particular measures to target women                                                                                                                                                                            |
|                                                 | Respond                           | The National Veterinary Research Institute is increasing production of vaccines.                                                                                                                                                                                                                                | None found                                                                                                                                                                                                                                                                           |
|                                                 | Expand                            | NewCo has taken up the model and is adapting it to its own requirements, adding new services and products; MADE Nigeria (project) is using an adapted version of the model; the national public-sector CAHW programme has been inspired by the business model and will provide similar and additional services. | No other market players have taken up the model                                                                                                                                                                                                                                      |
|                                                 | Adapt                             | ACI(Agric-Project Concept International) is investing in expanding use of the business model geographically, but with project support. It plans to do this independently.                                                                                                                                       | BG continues to expand geographically, 12 investors, including USAID, have contributed to the investment                                                                                                                                                                             |

|                                |                                                                            | Poultry Health                                                                                                                                                                                                                      | Babban Gona                                                                     |
|--------------------------------|----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
|                                | <b>Adopt</b>                                                               | ACI invested in pilots, demonstrated viability after changes, and adopted the vaccination business model. Vaccinators generating income                                                                                             | Business model not developed by the project but by BG. BG invested.             |
|                                | <b>Depth of partnership commitment</b>                                     | Willing but passive initial private sector partner (ACI), which did, however, invest in the model (30%). Vaccines make up just 1% of its profits. Eventually willing public-sector partner (National Veterinary Research Institute) | BG has invested, and the business model is its own.                             |
| <b>Intervention activities</b> | <b>Scoping studies (1)</b>                                                 | Yes                                                                                                                                                                                                                                 | Yes                                                                             |
|                                | <b>WEE (gender analysis) (1)</b>                                           | No                                                                                                                                                                                                                                  | No                                                                              |
|                                | <b>Business model development (1)</b>                                      | Yes                                                                                                                                                                                                                                 | The model is BG's                                                               |
|                                | <b>Private Sector partnership (1)</b>                                      | Yes                                                                                                                                                                                                                                 | Yes                                                                             |
|                                | <b>Public Sector Partnership (1)</b>                                       | Yes                                                                                                                                                                                                                                 | No                                                                              |
|                                | <b>Funding by PM (1)</b>                                                   | Yes                                                                                                                                                                                                                                 | Yes, ROPO bond investment loan, repaid                                          |
|                                | <b>Training (3)</b>                                                        | Yes                                                                                                                                                                                                                                 | No                                                                              |
|                                | <b>Policy and Advocacy (1)</b>                                             | Yes                                                                                                                                                                                                                                 | No                                                                              |
|                                | <b>Information campaigns (2)</b>                                           | Yes                                                                                                                                                                                                                                 | No                                                                              |
| <b>Relevance</b>               | <b>Scoping Study</b>                                                       |                                                                                                                                                                                                                                     | Approached by BG for funding for existing model                                 |
|                                | <b>Intervention guide</b>                                                  | IG developed                                                                                                                                                                                                                        | IG developed                                                                    |
|                                | <b>Barriers identified</b>                                                 | Supply: Quantity of vaccines, distribution. Demand: information re vaccines                                                                                                                                                         | Supply side: Access to inputs and GAP<br>Demand side: Access to markets         |
|                                | <b>Match with policies and priorities</b>                                  | Matched with state messages re NCD                                                                                                                                                                                                  | Matched with policies to promote local maize production                         |
|                                | <b>Adopt (Model was seen as appropriate by private sector implementer)</b> | Programme tried a WEE focussed model that had weaknesses                                                                                                                                                                            | Model was in existence                                                          |
|                                | <b>WEE</b>                                                                 | Was identified in the scoping study as a result of ownership figures. No specific strategy adopted to meet WEE needs.                                                                                                               | Maize cultivation is mostly in the hands of men;no strategy                     |
| <b>Efficiency</b>              | <b>Leveraging of partner finance</b>                                       | Yes, private sector partner invested own funds. Importantly VBVs also invested own funds                                                                                                                                            | Private sector partner invested                                                 |
|                                | <b>Leveraging of partner nonfin resources</b>                              | Leveraging existing distribution networks / agents. Making use of other networks (NGOs and fertiliser)                                                                                                                              | PM piggybacked on existing model. But model might be dependent on donor funding |
|                                | <b>Leveraging of pub sector resources</b>                                  | Piggyback on pub sector information campaigns?                                                                                                                                                                                      | Donor investment, 12 additional investors attracted                             |

### 3.4.2. Step 2: Synthesising Lessons Learned (Across All Interventions)

Informed by the main findings identified in Step 1, the evaluation team then began synthesising findings across the interventions. The aim of this synthesis was to identify similarities and distinctions between main findings, as well as possible explanations for these, according to which lessons learned could be developed and formulated.

The synthesis was structured around each of the four levels of the Summary Matrix (see Table 3), starting from the top with impact-beneficiaries. As just one example, “reinvestment” among beneficiary farmers was identified across six interventions: Poultry Health, Rice Parboiling, Electronic Warehousing, Crop Protection-Syngenta, Feed Finishing, and Crop Protection-CropLife. Motivated by this finding, the team then re-examined each of these interventions for any similarities or distinctions which might explain the successful reinvestment, paying particular attention to relevant assumptions or contextual conditions. For example, further analysis of reinvestment in these interventions revealed that households reinvesting part of their additional earnings in the same economic activity (expanding chicken flock size and land under cultivation, for instance) occurred in cases where the return of investments made had taken place relatively quickly—over one season, for instance (see Section 4 for a more detailed account of this finding).

By logical extension, the team then re-examined the two interventions, Babban Gona and Tillers, where no reinvestment appeared to have taken place, again placing particular attention to relevant assumptions or contextual conditions. Here the evaluation team found that the lack of reinvestment may be due to farmers being dependent on the sustained supply of inputs by Babban Gona; for Tillers, the increase in income was likely too small (largely due to cost savings on labour) for reinvestment to occur (see Section 4 for more detailed findings).

In several cases, the synthesis across the interventions demanded re-analysis of primary data. To illustrate, one central synthesis finding is that all interventions that increased incomes also led to higher productivity. Here re-analysis of qualitative data from the intervention evaluations indicated that beneficiaries as well as key informants attributed the rise in incomes in part to higher productivity, and that productivity improvement can be expected to result in income increases if market conditions are conducive (e.g. if demand is strong and prices do not fall). In this way, additional analysis provided more nuanced synthesis findings.

On the basis of synthesis across the interventions, lessons learned within each level of the TOC were formulated and summarised in a Lessons Learned Synthesis Template. The complete Lessons Learned Template is provided in the Appendix 4.

### 3.4.3. Step 3. Assessing the Strength of Evidence.

Finally, the third step of the synthesis involved an appraisal of the strength of evidence for each of the lessons learned. This assessment of the strength evidence for each lesson learned was made using the following categories:

1. **(Red) Inconclusive** – findings are potentially biased because there is little or no consistency across different interventions, types of data, and people’s perspectives. But these findings may be useful because they provide different perspectives about an issue. For example, this might include a point raised by a single individual that is not supported (or contested) by another source, and the evaluation team feel warrants mention.
  2. **(Amber) Partially conclusive** – findings are valid because there is a reasonable level of consistency across different interventions, types of data sources, and people’s perspectives.
- (Green) Conclusive** – findings are very valid because there is a high level of consistency across different interventions, types of data sources, and people’s perspectives.

The resultant strength of evidence ratings for each lesson learned are displayed in Section 6.

### 3.5. Methodological Limitations

There are several methodological limitations of the final evaluation that should be acknowledged. One limitation pertaining to the individual studies—qualitative as well as quantitative—is that they predominantly rely on the respondents' recall of past events, farming practices, and changes in economic conditions. While the informants were forthcoming during the survey and interviews, given the passing of time, their recall of past events was not always exact. Although the findings drawn from these interviews can be taken to represent the individual's views about the process, they must be interpreted within this context. To remedy this concern, the evaluation team used multiple data sources, allowing for data triangulation.

Another pertinent limitation—and one anticipated in the Inception Report—is that the lack of randomised control groups may limit the evaluation's internal validity, most importantly in relation to causal attribution and, specifically, not identifying non-programme factors that account for the observed outcomes. To remedy this shortcoming, the evaluation included a comparison group of non-beneficiary farmers in the surveys of the two primary markets, to support the validity of the assessment of the programme's contribution to the desired outcomes. Moreover, careful attention was given to the identification and consideration of salient factors and alternative explanations. The credibility of causal claims in the individual studies relies on the development of an empirically verified TOC (linking programme activities with outcomes), the triangulation of data sources and methods (qualitative and quantitative), as well as the systematic and transparent assessment of the most salient influencing factors and alternative explanations.

Whilst it is important to note the two methodological limitations of the primary studies outlined above, these are unlikely to have significant impact on the main conclusions and lessons learned emerging from this theory-based synthesis.

In relation to the final theory-based synthesis, it should be noted that the findings do not support statistical generalisation; that is, these findings cannot be aggregated or generalised to a broader set of populations or settings other than the ones covered in the existing evaluation reports and corresponding data. There are several reasons for this. For one, the data collection followed the programme implementation areas, which for practical reasons were not randomly selected by the programme. Within the select PM-k intervention areas, the programme participants were also not randomly selected for programme activities.

Accordingly, while the sampled areas and farmers are representative of the total population of PM-k beneficiaries, the findings of the present synthesis are not representative of the wider population and thus not statistically generalisable beyond the boundaries of the PM-k programme. However, the lessons learned (at least those categorised partially conclusive and conclusive) have been identified and consistently confirmed by findings across multiple interventions (and a broad range of data sources). As such, these lessons likely hold relevance and can potentially be transferred to other similar interventions, populations and settings.

Finally, it deserves mention that this synthesis of findings is based on a select subset of interventions that collectively comprise the PM-k programme. Accordingly, these findings do not reflect all the activities, products, and complete impact of the PM-k programme. Rather, the findings of the final evaluation reflect the main lessons emerging across what were agreed to be the most salient interventions of the PM-k programme, as defined by the market selection criteria presented in Section 3.<sup>23</sup>

Overall, the final theory-based synthesis is grounded in findings emerging from broad range interventions, data collection methods, and sources. Recognising the varying degrees of evidence for the identified lessons learned, the final synthesis also involves an appraisal of the strength of evidence for each of the lessons learned. The credibility of the findings is grounded on the quality of the individual

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<sup>23</sup>For a complete description of the market selection process and criteria, see the Selection of Secondary Markets Report, 2016, and Selection of Secondary Markets—Wave 2 Report, 2017

studies, the triangulation of data sources and methods (qualitative and quantitative), as well as the systematic and transparent analytical procedures of the final synthesis.

### **3.6. Ethical Considerations**

The interaction of the international and local teams with the beneficiary communities and respondents as well as in KIIs with programme partners was conducted in accordance with DFID Ethics Principles for Research and Evaluation. All of the participants consented to take part and were given the option to withdraw at any time.<sup>24</sup> No individual is named in the report and care has been taken to preserve anonymity to the fullest extent possible. All researchers who conducted primary research were trained to ensure consistent application of the evaluations' conflict and gender sensitive approach, integrity in the application of research methods and maintenance of ethical research standards. The evaluation endeavoured to ensure the inclusion of a broad range of informants, including males and females; youth and adults; those representing marginalised groups; a geographical spread of views; donors, implementers and beneficiaries.

### **3.7. Independence**

There are no significant dissenting views within the evaluation team. An “early look” draft version of this report was circulated to DFID on 8 June 2018, and a first draft of the Final Report is being circulated to DFID and the programme on 25 June 2018. The team is grateful for all detailed feedback provided by DFID and the programme and will note any dissenting views and take them fully into consideration in the final draft analysis, conclusions and recommendations. A comments log documenting all written feedback is included in the appendices of the completed Final Report (see Appendix 1).

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<sup>24</sup> DFID, Ethics Principles for Research and Evaluation, 2011

## 4. Main Findings and Analysis

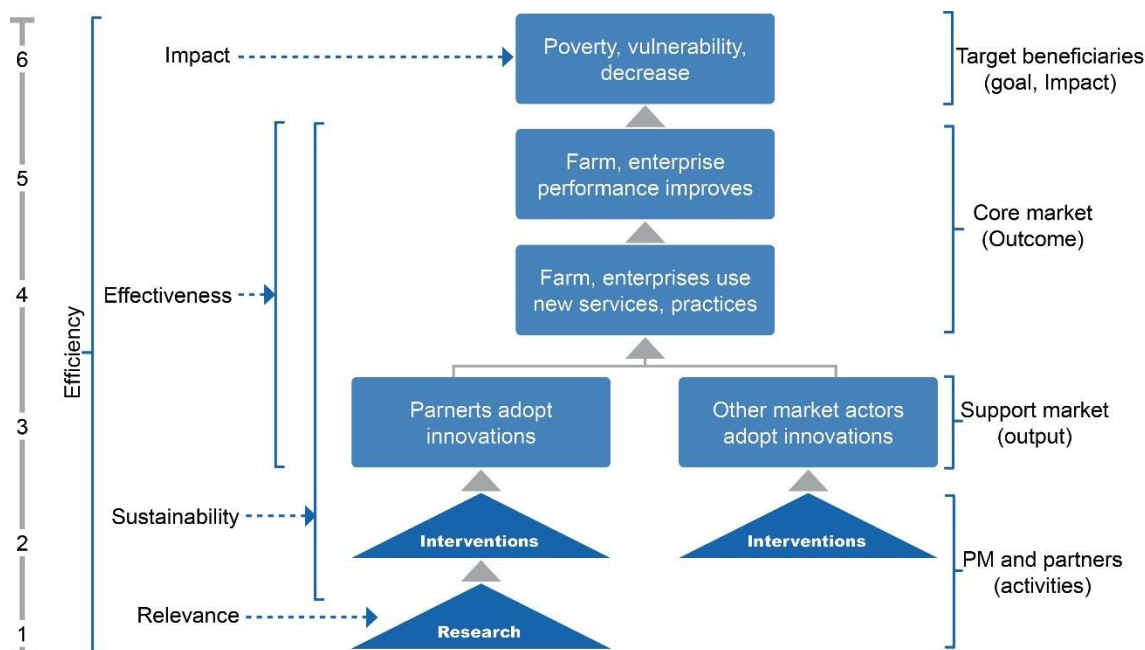
### 4.1 Analysis Approach

This section considers the programme's overall impacts and achievements against the DAC evaluation criteria of relevance, sustainability, effectiveness, impact and efficiency (Figure 3).

Propcom Mai-karfi's overall TOC provides a framework that enables the evaluation to establish causal linkages between programme interventions and impact, effectiveness and sustainability. It also provides, along with the DAC criteria, the structure of this section. The strength of evidence as described in the Methodology Section (Section 3) is provided for each sub-section.

The following figure summarises the programme's TOC in its most generic form, illustrating its relationship to the DAC criteria. The sustainability criterion has been broadened to reflect the nature of Propcom Mai-karfi as a M4P project, including an assessment of the extent to which the project has contributed to systemic and catalytic change. Systemic change in this context refers to change that is sustainable and large scale. Change that leads to further change not directly supported by the project can be considered catalytic. This is a typical example of how M4P projects achieve scale.

**Figure 3: Linking Propcom Mai-karfi's Theory of Change to the DAC Criteria**



The paragraphs below relate each of the components of the programme's Theory of Change to the four DAC criteria (relevance, sustainability, effectiveness, and impact):<sup>25</sup>

#### A. Relevance

- PM-k research identifies the underlying constraints on participation of the lack of benefits to the poor, and those that it can address. Such constraints usually lie in support markets (those that provide inputs and services and set regulations) (*an intervention activity*).
- This contributes to the design of interventions that introduce innovations (usually new business models) that are intended to address the identified constraints (PM-k partners) (*an intervention activity*). This contributes to:

<sup>25</sup> Efficiency is not an integral part of the Theory of Change but is a standalone component of the DAC criteria benefits and associated costs of the whole programme. It is reported separately in Section 4.5

## B. Sustainability and Systemic Change

- Implementation of interventions that introduce innovations with interested support market actors (PM-k partners, providers of inputs and services to target group farms and enterprises), facilitated by PM-k, usually first on a pilot basis (*an **intervention activity***). This contributes to:
- Actors in the support market systems adopting and sustaining innovations; first on a limited basis (PM-k's partners) and then on a larger scale (PM-k's partners expanding use, other market actors taking up the model), so that market systems provide more and better inputs or services, or set better rules, for large numbers of target group farms and enterprises, on a sustainable basis (*systemic change in the **support market***). This contributes to:

## C. Effectiveness

- Change in the core market system (target group farms and enterprises) as poor women and men use new/better services and inputs or are affected by better rules (*systemic change in the **core market***). This contributes to:
- Changes in behaviour in the core market that increase productivity, yield and sales (*systemic change in the **core market***). This contributes to:

## D. Impact

- Higher incomes for many in the target group, the intended beneficiaries<sup>26</sup>, contributing to reduced poverty and greater resilience.

Each level of the TOC has, or could have, elements which contribute to WEE. For instance, research could include gender analysis to identify constraints on market participation by women, or business models could incorporate measures to include women in markets specifically. Women could then benefit from better access to inputs and changes in gender roles in relation to buyers and input providers, their incomes could then increase, possibly contributing to WEE in the household and the community. Although the latter was not initially part of the project's TOC, the 2016 Gender Strategy did include this as a crucial aspect of poverty reduction<sup>27</sup>.

The above TOC (Figure 3) is the generic framework used for each individual project intervention, also called the results chain. The extent to which a TOC is realised depends on:

- Factors internal to the TOC: those related to the interventions (e.g. was the business model promoted by the project sound and sufficiently attractive to partners?); and logical assumptions (e.g. higher productivity leads to higher incomes);
- External factors: factors in the environment that affect the results of an intervention (e.g. the overall economic environment, drought). These are mostly but not always beyond a project's control.

The internal and external factors discussed above will now be considered where relevant within the intervention, testing logical assumptions when appropriate (e.g. consider whether higher productivity did in fact increase incomes).

When considering whether a change in the support market has become systemic, the “Adopt, Adapt, Expand and Respond” framework has been applied. This is used by most Market Systems Development (MSD) projects to plan for and assess systemic change, as set out in the Inception Report. This requires asking whether:

- Partners have invested in a new business model (such as Agric-Project Concept International (ACI) in Poultry Health), demonstrating viability and concrete plans to continue the model (the ‘adopt’ stage)

<sup>26</sup> We consider the intended beneficiaries to be women and men in the core market, not those who sell inputs and services, such as retailers and dealers

<sup>27</sup> Propcom Mai-karfi Gender and WEE Strategy, 2016.

- Partners continue the new model independently, invest in it, expand its use as normal business practice, and adapt it to their needs when necessary (the 'adapt' stage).
- Similar market players (e.g. veterinary service providers that are not partners) adopt the model or adaptations of it – the model is taken up at scale (the 'expand' stage).
- Market players that do not compete with the partners adjust their practices in response to the uptake of the new business model (e.g. increasing vaccine production) (the 'respond' stage).

These are not necessarily consecutive stages of systemic change. For example, market players could take up a new business model even if project partners have not yet continued it independently.

## 4.2 Analysis Against the DAC Criteria

The first DAC criteria examined is the relevance of PM-k's interventions as designed, with a focus on the constraints in the support and core market systems identified. Impact, effectiveness, and sustainability/systemic change will then be assessed, in this order. This retrospective view allows for identification of the programme's achievements followed by its chosen, implementation activities with the aim of identifying the causes of success, or the lack thereof. Finally, efficiency will be considered separately as it does not apply to a specific level in the TOC.

## 4.3. Relevance

M4P programmes identify constraints within market systems that limit the participation of, and therefore the potential benefits available to, poor individuals. They design interventions that introduce innovations to overcome these constraints in such a way that market players, whether they are public or private sector, are convinced of the economic benefit of continuing the innovation after programme support is completed. In this way the sustainability of the innovation, or its variations, is achieved.

### 4.3.1. Market Constraints

#### Strength of Evidence<sup>28</sup>

|  |                   |                                                                                                                                                        |
|--|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <b>Conclusive</b> | Findings are very valid because there is a high level of consistency across different interventions, types of data sources, and people's perspectives. |
|--|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|

In each of the nine interventions selected for evaluation, Propcom Mai-karfi conducted scoping studies to identify potential market barriers that contribute to the perpetuation of low incomes. In a number of cases these studies were strategy papers (e.g. Soap and Handwashing), which also identified potential steps that the programme might take to overcome its barriers. In each case, with the exception of Soap and Handwashing, low farm-level<sup>29</sup> productivity was identified as the main cause of low incomes, and the research pieces identified both barriers in the supply and demand side of the market for services and inputs (the support market) that could increase productivity. In Soap and Handwashing there appeared to be no barriers to the supply of soap to the market, and the demand restrictions were perceived rather than substantiated. In this latter case, it was thought that there was a lack of knowledge regarding the need for hand washing to curtail disease transmission.

For the remaining eight interventions, there were commonalities in some of the demand side barriers, i.e. barriers that limit farmers' demand for inputs and services that could increase their productivity. Access to information regarding the product or service or both was common to seven of the eight interventions. The exception to this was Tillers, where the product was too new to the marketplace to identify information access as a barrier. In the communities which participated in the tiller intervention, there was a level of knowledge of the need for soil preparation and there was knowledge of mechanised means to perform this function. Flowing from this lack of information, a lack of skills or an ability to apply this information was a common demand side constraint. Seven of the interventions (Poultry Health,

<sup>28</sup> See Section 3.4.3 for rationale

<sup>29</sup> For consistency we use the term farm level, but at times (e.g. Soap and handwashing or poultry health) this refers to household level.

Babban Gona, Rice Parboiling<sup>30</sup>, Feed Finishing and both Crop Protection interventions) identified this as a constraint and it emerged later in Electronic Warehousing. Soap and Handwashing did not identify it as a constraint and it was not relevant in Tillers. Knowledge of Good Agricultural Practice (GAP) was a commonly identified lack of information and skills. This is to be expected, given the agricultural focus of the programme.

Another common demand side barrier observed in five of the interventions was last mile distribution. In these cases, the input or service may be available in other, more densely populated areas, but unavailable in more rural, often poorer areas. Reasons for this may be a combination of factors including a lack of demand (often as a result of a lack of information) and a lack of commercially viable supply. In the Tillers and Rice Parboiling interventions the last mile distribution barrier was not relevant; Rice Parboiling focussed on overcoming barriers inherent to the existing marketplace while Tillers introduced a new product to the marketplace developing distribution networks incorporating the last mile. In Electronic Warehousing the issue of last mile distribution only emerged after refining the service, where distance was identified as both a barrier to offering the grain storage service and as a barrier to providing quality inputs, which was not part of the original intervention design.

Access to finance was noted as a market barrier in all of the interventions. In three interventions (Babban Gona, Rice Parboiling and Tillers) lack of access to finance at farm level was identified, and it emerged as a constraint in Electronic Warehousing as well. In Feed Finishing and Poultry Health, access to finance emerged as a constraint at the supplier level<sup>31</sup> where service providers were not able to access sufficient finance to engage in the intervention. Access to finance at the farmer level also appeared as a constraint in part of the Crop Protection interventions. In gathering qualitative data in the Crop Protection interventions, it emerged that farmers regarded the products from Syngenta as too expensive, opting instead to buy less effective but less expensive alternatives<sup>32</sup>.

Common supply side barriers included access to a sufficient quantity of inputs. This was initially common to four of the interventions (Poultry Health, Babban Gona, Rice Parboiling and Feed Finishing), with it later emerging as a constraint for the success of Electronic Warehousing as well. In both Crop Protection interventions as well as Soap and Handwashing, sufficient quantities of the product were available. In Tillers, as a new product introduced to the market, access to quantity was not relevant.

Access to quality products or inputs was initially identified as a market constraint, because lower quality products were readily available in three of the interventions (Babban Gona and both Crop Protection interventions). In Electronic Warehousing this also emerged as a market constraint. In Poultry Health, Tillers and Feed Finishing there was either only one supplier or no identified supplier of quality inputs, meaning that the programme's focus on overcoming this constraint was slightly different in these markets.

Other market constraints that emerged included counterfeit products (Crop Protection) and lack of storage facilities (Electronic Warehousing).

In addition to factors limiting productivity, access to markets was identified as a constraint to be addressed by three interventions; Babban Gona, Rice Parboiling and Electronic Warehousing. In Babban Gona the intervention foresaw that this contract farming enterprise would act as a broker between farmers and large buyers. In Rice Parboiling, linkages between buyers and producers were to be developed. In Electronic Warehousing, AFEX, the partner for the intervention, offers farmers the opportunity to sell on spot markets.

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<sup>30</sup> In the Rice intervention the skills component was not limited to Rice Parboiling, but had a wider permit, building life skills and businesses capacities amongst beneficiaries.

<sup>31</sup> This constraint was later overcome in Poultry Health.

<sup>32</sup> FGD, retailers of Syngenta CPPs, Kano State, April 2018

#### 4.3.2. Matching Priorities and Policies

##### Strength of Evidence

|  |                             |                                                                                                                                                         |
|--|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <b>Partially conclusive</b> | Findings are valid because there is a reasonable level of consistency across different interventions, types of data sources, and people's perspectives. |
|--|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|

To leverage support from the public sector for its interventions, an M4P programme should determine to what extent the identified market constraints and planned interventions to overcome these, match with policies and priorities within its context. In the case of Propcom Mai-karfi, six of the evaluated interventions matched with established policies and priorities. In the case of Poultry Health, the programme worked with state agencies to increase the reach of information regarding Newcastle Disease. The programme's Crop Protection and Babban Gona interventions corresponded with priorities to increase local maize production. The Electronic Warehousing private sector partner, AFEX, rented storage space from the Federal Ministry of Agriculture. The programme facilitated a relationship with civil service employed paravets as part of its Feed Finishing intervention. In Soap and Handwashing, where one might expect a linkage with public health agencies, no relationship was reported. There appeared to be no linkages with public sector policies and priorities in the Rice Parboiling and Tillers intervention, although in the latter, the state-run Nigeria Incentive-Based Risk Sharing system for Agricultural Lending (NISRAL) did act as guarantor for a percentage of the purchasers' loans.

#### 4.3.3. Targeting Women

##### Strength of Evidence

|  |                   |                                                                                                                                                        |
|--|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <b>Conclusive</b> | Findings are very valid because there is a high level of consistency across different interventions, types of data sources, and people's perspectives. |
|--|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|

As part of its programme outcomes Propcom Mai-karfi was tasked to reach at least 250,000 women. While all of the Intervention Guides disaggregated their targets by sex, only four of the nine evaluated interventions (Poultry Health, Tillers, Feed Finishing and Rice Parboiling) specifically identified women as beneficiaries and only two of these (Tillers and Rice Parboiling) identified specific strategies to identify and work with women, identifying constraints that were peculiar to women in these sectors. Both of these latter interventions were gender-specific interventions targeting women. The other interventions were gender blind in that they did not identify constraints that were particular to women and as a result, interventions designs did not incorporate activities to overcome these constraints.

In summary, of the evaluated interventions, eight of the nine (with soap and handwashing being the exception) identified both demand and supply side constraints within the market, where overcoming the obstacles could lead to benefits for poor farmers and households. For the most, part these same interventions also linked their market analysis with contextual policies and priorities, increasing the likelihood of the interventions gaining traction.

#### 4.4. Impact on Beneficiaries and Households (DAC Criterion: Impact)

##### Strength of Evidence

|  |                   |                                                                                                                                                        |
|--|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <b>Conclusive</b> | Findings are very valid because there is a high level of consistency across different interventions, types of data sources, and people's perspectives. |
|--|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|

This section considers the impact of the interventions on the target group (farmers) and their households. The reasons for impact (or its absence) lie in the core and the support markets, so will therefore be discussed in the subsequent two sections.

The TOC synthesis table<sup>33</sup> summarises the findings from each evaluated intervention against key indicators at each of the levels of the TOC. The TOC posits that project interventions will contribute to higher incomes, which will in turn contribute to other positive changes in the households (WEE and resilience). There may also be unforeseen or indirect consequences of the interventions, including some which may have been envisaged but not actively facilitated.

All the interventions on which data are available (7 out of 9) indicate that incomes have increased for interventions which targeted economic activity. Two interventions—Poultry Health and Babban Gona—were quantitatively evaluated. In the former intervention it was found that net incomes from chicken breeding in the households that vaccinated their poultry increased by a factor 2.7 on average. No change in the average income took place in a comparison group and it is therefore plausible that the higher incomes can at least in part be attributed to the intervention.<sup>34</sup> In the latter intervention—in support of a maize farming contract farming model—it was found that on average net incomes of Babban Gona farmers nearly doubled, but comparison farmers experienced a similar increase.<sup>35</sup> Qualitative information on other interventions, when collected, indicated a doubling of income or more. In Electronic Warehousing farmers reported buying motorbikes and other assets with their additional income, which indicates that the gains were significant. Where estimates on the size of the increases are not available (Rice Parboiling, Tillers) these may be smaller, as respondents were not able or willing to make additional asset purchases or investments. Data on the CropLife intervention are limited by the relative recentness of the intervention. In the Soap and Handwashing market the intervention was stopped shortly after a phase one roll out and there is insufficient data to determine the income impact of the intervention.

Households report using part of their additional earnings on expenses such as school fees, health care and clothing contributing to improved living standards. In most (6 out of 7) cases where income was found to have increased, households, women in particular, have reinvested part of their additional earnings in the same economic activity (expanding chickens flock sizes and land under cultivation for instance), so deepening their financial commitment to the activity. Households also invested in diversification of activities: income from rearing ruminants going to investment in more and different ruminants (cattle) as well as crop cultivation, or to investment in different sectors, e.g. retail and cement brick production<sup>36</sup>. A user of Syngenta Crop Protection Programmes (CPP) reported:

*You can see the wealth of village women when take a look at the animals in their backyards; most of us here have calves and goats, all of which is thanks to our increased income. Prior to the use of all the modern methods (use of CPP, GAP), all we could rear were chickens.*  
Woman, FGD, Gabassawa.<sup>37</sup>

<sup>33</sup> See Section 3, “Methodology” p. 9

<sup>34</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Mai-karfi Programme, Northern Nigeria Endline Evaluation Report – Poultry Health June 2018

<sup>35</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Mai-karfi Programme, Northern Nigeria Endline Evaluation Report – Babban Gona June 2018

<sup>36</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Maikarfi Programme, Northern Nigeria Interim Evaluation Report – Systemic Effects and Impact on Farmers and Households of the Crop Protection Products Intervention with Syngenta October 2017 p. 4; Independent Evaluation for Promoting Pro-Poor Opportunities in Commodities and Service Markets (Propcom) Maikarfi Programme, Northern Nigeria Interim Evaluation Report – Systemic Effects and Impact on Farmers and Households of the Feed Finishing Intervention October 2017 p. 15; Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Mai-karfi Programme, Northern Nigeria Interim Phase 2018 Evaluation Report – Poultry Vaccination Intervention April 2018 p. 16; Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (PrOpCom) Mai-karfi Programme, Northern Nigeria Interim Evaluation Report – Propcom Mai-karfi’s Effectiveness in Reaching Women and Women’s Economic Empowerment April 2018 p. 20

<sup>37</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Maikarfi Programme, Northern Nigeria Interim Evaluation Report – Systemic Effects and Impact on Farmers and Households of the Crop Protection Products Intervention with Syngenta October 2017 p. 17

In all of these cases, the return of investments made has taken place over one season. In the two cases where no reinvestment was found, Babban Gona and Tillers, this may be due to farmers being dependent on the supply of inputs by Babban Gona and, for Tillers, the income increase likely being small (largely due to cost savings on labour), and the need to repay loans taken out to purchase the tillers. As we will see in the next two sections, tillers were also used inconsistently due to breakdowns.

For the 7 interventions where income was found to have increased, especially when the investments in improving an economic activity could be recouped in a short period of time (e.g. one season), it can be assumed that this action has contributed to household resilience, including to shock and unexpected changes, as households now have more disposable income. More cash enhances a household's ability to cover health care emergencies for instance. Greater resilience has also been considered as a dimension of PM-k's impact, separate from income. Direct evidence of greater resilience resulting from the Poultry Health intervention was found. During the evaluation a number of households who were targeted by the Poultry Health intervention were forced from their homes and communities in response to a spate of bandit-related crime including kidnappings, rape and cattle rustling. The evaluation team analysed these households separately and took time to gather additional qualitative data from these households.<sup>38</sup> Villagers used their savings from poultry keeping and sold their flocks to pay ransoms for kidnapped family members. The displaced households reported that while they lost the bulk of their assets and financial resources during this time, on their return they almost immediately began keeping, vaccinating and selling chickens.

Though for other interventions there is not such direct evidence (no shocks having taken place), under the Poultry Health and Syngenta CPP interventions households indicated that they have saved more, which is likely to enhance their ability to deal with shocks. Diversification of income sources (evidenced in households targeted by the Poultry Health, Babban Gona, Feed Finishing, and Syngenta CPP interventions) is likely to reduce vulnerability to shocks (e.g. collapsing prices, no rains). Specifically, in relation to natural threats (possibly due to climate change), households used additional income to improve access to water and strengthen flood protection (CPP Syngenta)<sup>39</sup>. As two farmers reported:

*I was able to dig a well in my rice farm as a preventive measure to overcome any drought to be experienced in future, since rice plants depend much on water, and inadequacy of it will translate into low or even no yield.*

Man, farmer FGD, Gabassawa<sup>40</sup>

*I am optimistic that I can face any future challenge that may confront me, because I think that I have diversified enough to enable me to cope with life's shocks which you have mentioned...initially I was cultivating only 1 piece of land, and now I cultivate 3 pieces of land.*

Woman, farmer FGD, Kura<sup>41</sup>

Ways in which resilience is likely to have been strengthened that are unrelated to income increases are:

<sup>38</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Mai-karfi Programme, Northern Nigeria Endline Evaluation Report – Poultry Health June 2018

<sup>39</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Maikarfi Programme, Northern Nigeria Interim Evaluation Report – Systemic Effects and Impact on Farmers and Households of the Crop Protection Products Intervention with Syngenta October 2017, p. 17

<sup>40</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Maikarfi Programme, Northern Nigeria Interim Evaluation Report – Systemic Effects and Impact on Farmers and Households of the Crop Protection Products Intervention with Syngenta October 2017, p. 17

<sup>41</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Maikarfi Programme, Northern Nigeria Interim Evaluation Report – Systemic Effects and Impact on Farmers and Households of the Crop Protection Products Intervention with Syngenta October 2017

- Household noted that the use of feed supplements made them less dependent on feed foraged from a degrading natural environment (Feed Finishing);<sup>42</sup>
- Poultry keeping households were able to sell their chickens when needing cash rather than in expectation of chickens dying due to disease;<sup>43</sup>
- The Electronic Warehousing intervention allowed farmers to store their grain and provide them with the opportunity to sell their grain when they needed, rather than immediately after harvest.<sup>44</sup>

With regard to evaluating PM-k's impact on WEE, a cross cutting qualitative study of four interventions was conducted, one of which – Rice Parboiling – was women focussed.<sup>45</sup> In addition, one of the earlier qualitative evaluation studies focussed on a women specific intervention – tillers.<sup>46</sup> Most other evaluation studies covered WEE (excluding Electronic Warehousing and Babban Gona), though some only to a limited extent. Under all the interventions where income increased among farmers generally, the incomes of women engaged in the targeted economic activities increased too. Increased income went directly to women, and generally they also allocated its use.<sup>47</sup>

The number of women who benefitted compared to the number of men varied:

- In maize and rice cultivation women's involvement as owners of the economic activity is generally low, with between 2 to 10% owning or renting land they have cultivated.<sup>48</sup> The Babban Gona, CPP Syngenta, CropLife and Electronic Warehousing interventions could therefore affect incomes of a small number of women only (though for Electronic Warehousing this is 12% and therefore somewhat higher than could be expected). In both CPP interventions women reported using CPPs for commercial horticulture, but since this research was qualitative the scale at which this happened was not established.
- In animal husbandry (chickens and small ruminants) ownership among women is higher, with PM-k's own surveys reporting women owning 87% of the flocks and representation of women as owners in the evaluation's endline survey being 45%.<sup>49</sup> For small ruminant rearing it is estimated that in 40-60% of households, women are involved in this activity.<sup>50</sup> PM-k reports women make up 32% of those who increased their income.<sup>51</sup> The strong involvement of women in this market suggests this could have been more.

<sup>42</sup> Independent Evaluation for Promoting Pro-Poor Opportunities in Commodities and Service Markets (Propcom) Maikarfi Programme, Northern Nigeria Interim Evaluation Report – Systemic Effects and Impact on Farmers and Households of the Feed Finishing Intervention October 2017 p. 16, 20

<sup>43</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Mai-karfi Programme, Northern Nigeria Endline Evaluation Report – Poultry Health June 2018

<sup>44</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Maikarfi Programme, Northern Nigeria Interim Evaluation Report – Electronic Warehousing Receipt Intervention October 2017 p. 8

<sup>45</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (PrOpCom) Mai-karfi Programme, Northern Nigeria Interim Evaluation Report – Propcom Mai-karfi's Effectiveness in Reaching Women and Women's Economic Empowerment April 2018

<sup>46</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (PrOpCom) Mai-karfi Programme, Northern Nigeria Interim Phase 2016 Evaluation Report Section 3

<sup>47</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (PrOpCom) Mai-karfi Programme, Northern Nigeria Interim Evaluation Report – Propcom Mai-karfi's Effectiveness in Reaching Women and Women's Economic Empowerment April 2018, p. 1

<sup>48</sup> Independent Evaluation for Promoting Pro-Poor Opportunities in Commodities and Service Markets (Propcom) Maikarfi Programme, Northern Nigeria Interim Evaluation Report – Systemic Effects and Impact on Farmers and Households of the Feed Finishing Intervention October 2017 p. 10

<sup>49</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (PrOpCom) Mai-karfi Programme, Northern Nigeria Interim Evaluation Report – Propcom Mai-karfi's Effectiveness in Reaching Women and Women's Economic Empowerment April 2018p. 11; Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Mai-karfi Programme, Northern Nigeria Endline Evaluation Report – Poultry Health June 2018 p.35

<sup>50</sup> Independent Evaluation for Promoting Pro-Poor Opportunities in Commodities and Service Markets (Propcom) Maikarfi Programme, Northern Nigeria Interim Evaluation Report – Systemic Effects and Impact on Farmers and Households of the Feed Finishing Intervention October 2017, p. 1

<sup>51</sup> PM-k Annual Report 2017, page 50. (736 farmers out of 2,319)

- The Rice Parboiling intervention targeted women only and only women benefited from income increases, though in small numbers (680).<sup>52</sup>

In most evaluations, when looking beyond income increases it was found that women have increased their standing and influence over use of income in their households; they gained in financial independence and self-esteem; and increased their standing and influence in the community.<sup>53</sup>

*There is nothing like having your own money and you take care of yourselves and your children. Men sometimes also get tired of being asked for everything. So they respect the wife who has her own money. Other women too will respect you more if you are not the one borrowing from them.*<sup>54</sup>

*Our independence has earned us respect from our husbands to the extent that some are saying we have cast some magic spell on them. It is better to be able to help our husband rather than being a liability always.*

Woman, FGD, Sokoto<sup>55</sup>

In terms of the scale of direct impact on the target group, the Poultry Health, Babban Gona and Electronic Warehousing interventions have had the greatest effect, with the others' benefitting far fewer women and men.<sup>56</sup> The Poultry Health and Babban Gona interventions were also found to have benefited households that were not directly targeted with the same economic activities (i.e. in Local Government Areas (LGA) into which the services had not yet expanded). Feed Finishing increased incomes in related markets (e.g. animal transport, slaughter houses). This is further increasing the scale of impact, the causes of which will be discussed in the next section. Some of the poorest households, however, saw their incomes stagnate or even drop.<sup>57</sup>

So far it can be concluded that the interventions have contributed to PM-k's goal of increased incomes and that this contributed to resilience (via reinvestment and diversification, or directly) and, in most cases WEE at the household and community level.

#### 4.5. Changes in the Core Market (DAC Criterion: Effectiveness)

##### Strength of Evidence

|  |                   |                                                                                                                                                        |
|--|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <b>Conclusive</b> | Findings are very valid because there is a high level of consistency across different interventions, types of data sources, and people's perspectives. |
|--|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|

This section will consider the interventions' effectiveness in bringing change to the core market, i.e. the market in which the households' economic activities are conducted and in which their produce is sold. This will provide initial answers to the question as to "why incomes increased".

<sup>52</sup> PM-k Annual report 2017, page 54

<sup>53</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (PrOpCom) Mai-karfi Programme, Northern Nigeria Interim Evaluation Report – Propcom Mai-karfi's Effectiveness in Reaching Women and Women's Economic Empowerment April 2018, p. 14 to 17.

<sup>54</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (PrOpCom) Mai-karfi Programme, Northern Nigeria Interim Evaluation Report – Propcom Mai-karfi's Effectiveness in Reaching Women and Women's Economic Empowerment April 2018 p. 14

<sup>55</sup> Independent Evaluation for Promoting Pro-Poor Opportunities in Commodities and Service Markets (Propcom) Maikarfi Programme, Northern Nigeria Interim Evaluation Report – Systemic Effects and Impact on Farmers and Households of the Feed Finishing Intervention October 2017 p. 17

<sup>56</sup> See VFM appendix 14

<sup>57</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Mai-karfi Programme, Northern Nigeria Endline Evaluation Report – Babban Gona June 2018, non-Babban Gona farmers p. 17

The findings presented in the TOC synthesis table described in the Methodology Section<sup>58</sup> indicates that all seven interventions which established increased incomes also led to higher productivity. Members of Babban Gona, for whom there is quantitative information, appear to have doubled their productivity on average, though this cannot be concluded with full certainty because of some misreporting at the baseline. Comparison households did not increase productivity.<sup>59</sup> A household survey of those who practiced vaccination found that chicken mortality decreased to nearly zero among users, a change which did not take place in the comparison population.<sup>60</sup> Where qualitative evaluations were conducted, farmers reported their yields had increased by 50% to 200%, depending on the intervention.<sup>61</sup> A partial exception is tillers, as the tillers were not used consistently.

The quality of produce, including chickens, small ruminants and grains, also increased, though this was not reported for Tillers and the findings for the CropLife intervention are too recent to be conclusive<sup>62</sup> (e.g. maize grains were larger, had the right water content and were more nutritious, chickens and small ruminants were healthier and had more meat). Qualitative data from the intervention evaluations indicate that beneficiaries as well as key informants attributed the rise in incomes in part to higher productivity and better quality.<sup>63</sup> Such improvements can be expected to result in income increases if market conditions are conducive: if demand is strong and prices do not fall.

This was indeed the case, and it indicates a second important factor contributing to higher earnings: Government policies restricted import of nearly all the products produced by the targeted farmers and comparison farmers (including poultry and ruminants but excluding parboiled rice)<sup>64</sup>. This resulted in large buyers from the main cities establishing themselves in local markets, an increase in demand especially for high quality produce, and, crucially for the producers, higher prices, with informants reporting a doubling or tripling of prices for maize and rice.<sup>65</sup> In most of the markets covered by the

<sup>58</sup> See p. 17

<sup>59</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Mai-karfi Programme, Northern Nigeria Endline Evaluation Report – Babban Gona June 2018. p.33

<sup>60</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Mai-karfi Programme, Northern Nigeria Endline Evaluation Report – Poultry Health June 2018. p.25

<sup>61</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Maikarfi Programme, Northern Nigeria Interim Evaluation report – Systemic Effects and Impact on Farmers and Households of the Crop Protection Products Intervention with Syngenta October 2017, p. 4

<sup>62</sup>Independent Evaluation for Promoting Pro-Poor Opportunities in Commodities and Service Markets (Propcom) Maikarfi Programme, Northern Nigeria Interim Evaluation Report – Systemic Effects and Impact on Farmers and Households of the Feed Finishing Intervention October 2017 p. 14, 15; Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (PrOpCom) Mai-karfi Programme, Northern Nigeria Interim Phase 2016 Evaluation Report, p. 20; Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Maikarfi Programme, Northern Nigeria Interim Evaluation Report – Systemic Effects and Impact on Farmers and Households of the Crop Protection Products Intervention with Syngenta October 2017 p. 15; Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Mai-karfi Programme, Northern Nigeria Endline Evaluation Report – Poultry Health June 2018, p.30

<sup>63</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Maikarfi Programme, Northern Nigeria Interim Evaluation Report – Systemic Effects and Impact on Farmers and Households of the Crop Protection Products Intervention with Syngenta October 2017, p. 16; Independent Evaluation for Promoting Pro-Poor Opportunities in Commodities and Service Markets (Propcom) Maikarfi Programme, Northern Nigeria Interim Evaluation Report – Systemic Effects and Impact on Farmers and Households of the Feed Finishing Intervention October 2017 p. 15; Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Maikarfi Programme, Northern Nigeria Interim Evaluation Report – Electronic Warehousing Receipt Intervention October 2017 p. 15

<sup>64</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (PrOpCom) Mai-karfi Programme, Northern Nigeria Interim Phase 2016 Evaluation Report p. 20. See also <https://goo.gl/JnGyx9> and USDA Foreign Agricultural Service, "GAIN report Nigeria; grain and feed annual", April 2016.

<sup>65</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Maikarfi Programme, Northern Nigeria Interim Evaluation Report – Systemic Effects and Impact on Farmers and Households of the Crop Protection Products Intervention with Syngenta October 2017 p. 12; Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Mai-karfi Programme, Northern Nigeria Endline Evaluation Report – Babban Gona June 2018, non-Babban Gona farmers p. 14; Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Maikarfi Programme, Northern Nigeria Interim Evaluation Report – Electronic Warehousing Receipt Intervention October 2017 p. 8; Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service

interventions this can be considered to have been a main driver of change, being an incentive to expand cultivation or production, and improve quality. Some of the interventions, having set out to improve access to markets, may have amplified this effect. This includes Electronic Warehousing, where farmers can sell on spot markets through AFEX, though AFEX was able to deliver on this for only one season. Babban Gona functions as a broker between farmers and large buyers, and the prices it obtained for its members were 12% higher than those for comparison farmers. Against expectations, though, Babban Gona farmers reduced the area of land under maize cultivation rather than responding to strong demand. Farmers reported that Babban Gona was willing to support them on limited numbers of hectares only. This may have moderated the direct effect of higher demand in the local market. Under rice parboiling the intervention also improved access to markets, developing direct linkages between the groups of women producers, traders and improving women's negotiating positions, which also contributed to higher prices. Under the Poultry Health intervention producers have moved from selling from their home to selling more on the local market, which provides them with a larger and more diverse market of consumers.<sup>66</sup> While the poultry vaccination intervention did not aim at improving marketing channels, PM-k implements a complementary intervention that intends to link producers to large retailers through collectors, aggregators and processors.<sup>67</sup> This complementary intervention is at too early a stage to expect pervasive effects on the chicken market but could enhance the impact of the poultry vaccination intervention.

While higher market prices were largely due to an external factor, improvement of productivity (and quality) is part of PM-k's TOC. The findings presented in the TOC synthesis table<sup>68</sup> respond to the question "Why did productivity and quality improve." Farmers:

- Accessed and used services or agricultural inputs new to them (vaccinations, credit, tillers, feed supplements);
- Accessed and used higher quality inputs (hybrid seeds, effective CPPs, fertiliser); and/or
- Improved access to inputs (paddy rice, inputs for rice parboiling, fertiliser). This includes the Electronic Warehousing model where improved access to fertiliser is likely to have been the main cause of increased productivity.<sup>69</sup>

A second important factor is improved access to information and training, which was an aspect of all the evaluated interventions. This related to:

- Promotion of the new services (vaccination, tillers, CPP spraying services, storage);
- Training and information on GAP and better animal rearing practices.

The first was usually a partner or project activity under the intervention, to raise awareness and stimulate initial demand. Efforts to raise awareness of the disease that destroys a large proportion of farmer's chickens each year (Newcastle Disease (NCD)) are likely to have contributed to greater awareness of the disease and vaccination.<sup>70</sup> Nearly all households surveyed after the intervention (including in the comparison group) were aware of the disease, compared to two-thirds before the intervention.<sup>71</sup> However, other factors (such as the presence of a vaccinator in the local or a nearby community) are likely to have played a role. The Syngenta CPPs intervention used mass field events to promote the

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Markets (PrOpCom) Mai-karfi Programme, Northern Nigeria Interim Phase 2016 Evaluation Report, p. 32; <https://www.export.gov/article?id=Nigeria-Prohibited-and-Restricted-Imports>

<sup>66</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Mai-karfi Programme, Northern Nigeria Endline Evaluation Report – Poultry Health June 2018 p.29

<sup>67</sup> Propcom Maikarfi Annual report 2017 p. 47 - 49

<sup>68</sup> See p. 17

<sup>69</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Maikarfi Programme, Northern Nigeria Interim Evaluation Report – Electronic Warehousing Receipt Intervention October 2017, p. 8

<sup>70</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Mai-karfi Programme, Northern Nigeria Interim Phase 2018 Evaluation Report – Poultry Vaccination Intervention April 2018 p. 10

<sup>71</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Mai-karfi Programme, Northern Nigeria Endline Evaluation Report – Poultry Health June 2018, p.20

products, which PM-k reports reached tens of thousands of farmers.<sup>72</sup> As sales of the linked product were, in Syngenta's view, disappointing, their effectiveness is likely to have been low.<sup>73</sup>

Training and information on better practices were part of the business models PM-k's partners were expected to adopt. In other words, this was part of what the partners were meant to provide farmers with on a sustainable basis. Under all of the seven interventions evaluated where households increased incomes, respondents reported an increase in knowledge and/or skills related to their economic activity. In one intervention where no increase in income was established because the intervention was too recent (CropLife), knowledge of GAP also increased. In terms of the quantitative data collected, 100% of Babban Gona members felt that they had learned about how to improve maize cultivation in the last year, a 20-fold increase compared to baseline. For Babban Gona comparison households this was only 10%.<sup>74</sup> All intervention households covered by the Poultry Health surveys were aware of the NCD vaccine at endline, compared to nearly none at baseline and this remaining the same in the comparison population.<sup>75</sup>

In all seven interventions that increased incomes (as well as the CropLife intervention), better knowledge led to changes in the farmers' practices, such as uptake of vaccinations and feed supplements and use of GAP (e.g. relating to soil preparation, planting, use of agrochemicals). Practice of GAP increased in all of the interventions for which this was a component (Babban Gona, Syngenta CPP, Electronic Warehousing, CropLife). This improves the cost efficiency of the farmer, by guiding them to use the correct volume of inputs, reducing their costs and increasing the value of their yield. In the Babban Gona intervention knowledge and use of GAP increased for all practices promoted by Babban Gona, more than in the comparison population.<sup>76</sup> Under the Feed Finishing intervention knowledge and skills were obtained on good small ruminant rearing practices, which resulted in better practices (such as keeping animals tethered near the home and giving them sufficient clean water to drink). Ruminant breeders attributed higher productivity in part to these practices (in addition to use of feed supplements).<sup>77</sup> For the soap and hand washing intervention there is no clear record of an increase in washing hands, though there were indications that awareness of the need to wash hands was increased.<sup>78</sup> Comparison with the interventions that did result in behaviour changes indicates that they provided a continuous rather than a campaign-style dissemination of knowledge. In addition, the main rationale presented for hand washing (savings on medical and funeral bills and a decrease in absenteeism) may have been an insufficient and a too long-term incentive for behavioural change.<sup>79</sup>

In nearly all the other interventions (Poultry Health, Babban Gona, Rice Parboiling, Electronic Warehousing, Syngenta CPPs, Feed Finishing, CropLife CPPs) the producers' incentive that was being addressed was higher productivity (larger yields, no or lower chicken mortality and faster fattening of small ruminants) resulting in increased incomes (in Tillers the incentive was mainly a reduction in labour costs). The results of better inputs, GAP, feed and vaccinations were visible and demonstrable within a short period of time, on demonstration plots (Syngenta CPPs) or among users (all interventions). This is likely to have contributed to rapid behavioural change. Some of the limitations on success in terms of

<sup>72</sup> "Store in Shop: End of Intervention Report" Propcom Mai-karfi- Syngenta report, September 2016, p. 5.

<sup>73</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Maikarfi Programme, Northern Nigeria Interim Evaluation Report – Systemic Effects and Impact on Farmers and Households of the Crop Protection Products Intervention with Syngenta October 2017 p. 4

<sup>74</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Mai-karfi Programme, Northern Nigeria Endline Evaluation Report – Babban Gona June 2018, p.29

<sup>75</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Mai-karfi Programme, Northern Nigeria Endline Evaluation Report – Poultry Health June 2018, p.22

<sup>76</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Mai-karfi Programme, Northern Nigeria Endline Evaluation Report – Babban Gona June 2018

<sup>77</sup> Independent Evaluation for Promoting Pro-Poor Opportunities in Commodities and Service Markets (Propcom) Maikarfi Programme, Northern Nigeria Interim Evaluation Report – Systemic Effects and Impact on Farmers and Households of the Feed Finishing Intervention October 2017, p. 14

<sup>78</sup> (PrOpCom) Mai-karfi Programme, Northern Nigeria Interim Phase 2016 Evaluation Report p. 45

<sup>79</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (PrOpCom) Mai-karfi Programme, Northern Nigeria Interim Phase 2016 Evaluation Report 2016, p. 49

use of services and inputs and behavioural change were usually due to unforeseen constraints in or related to the support markets.

The changes in the core market have not only affected incomes but are also likely to have contributed to **the resilience of the economic activities** that were affected. Greater access to consumers, as in Poultry Health, increases breeders' selling options and therefore their adaptability to sudden change. More broadly, resilience can be expected to have been by strengthened by the apparent commercialisation of some of the economic activities, in particular chicken breeding, small ruminant rearing and crop cultivation (Syngenta CPPs). With higher productivity and quality, and strong market demand it was found that beneficiaries had become more likely to see their activity as a business and an investment opportunity.<sup>80</sup> This is also borne out by the findings on reinvestment.

*"I have always had one or two animals, but I do that when I get a gift or when I save. I don't do it for business. From last year, when I started using the advice from the paravets, I realise that I could make it my business. I invested more in the animals and also invested in their care, by buying the supplements and seeking paravets advice caring for them. Now they are doing well".*

Woman, case study, Kebbi.<sup>81</sup>

The endline Poultry Health survey found that the share of intervention households that sells chickens (rather than consuming them all) had increased by some 10%, and that "Roughly double the proportion of intervention households now sell their chickens at the market compared to comparison households". Intervention households planned to expand their flock sizes by 31 chickens compared to 12 at baseline and 6 in the comparison group. It attributed this to breeding chickens having become a safer investment and concluded these were indications of farmers perceiving it more like a business<sup>82</sup>.

Increased resilience of the economic activities is also indicated by improved knowledge and skills, which could enable farmers to respond better to sudden change; and by better linkages to input distribution channels, which provides farmers with more options to respond to sudden change. This depends of course on the sustainability of these channels.

The evaluations found some evidence of empowerment of women in the core market. Women have gained access to services, inputs and knowledge, though men continue to facilitate relations with providers and as a result a significant change in this respect is not able to be established. In Feed Finishing women were even more under-represented (at just 15.8%) among those who received training than among those who increased incomes (32% as reported by PM-k<sup>83</sup>). Poultry Health appears to have been more successful in this regard, with Village Based Vaccinators (VBV) reporting that 85% of their clients are women, though it is unclear to what extent this was facilitated by men. In spite of these findings, there are some signs of changing gender roles in the targeted economic activities, with:

<sup>80</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Mai-karfi Programme, Northern Nigeria Endline Evaluation Report – Poultry Health June 2018, p.25; Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Maikarfi Programme, Northern Nigeria Interim Evaluation Report – Systemic Effects and Impact on Farmers and Households of the Crop Protection Products Intervention with Syngenta October 2017 p. 16; Independent Evaluation for Promoting Pro-Poor Opportunities in Commodities and Service Markets (Propcom) Maikarfi Programme, Northern Nigeria Interim Evaluation Report – Systemic Effects and Impact on Farmers and Households of the Feed Finishing Intervention October 2017 p. 16

<sup>81</sup> Independent Evaluation for Promoting Pro-Poor Opportunities in Commodities and Service Markets (Propcom) Maikarfi Programme, Northern Nigeria Interim Evaluation Report – Systemic Effects and Impact on Farmers and Households of the Feed Finishing Intervention October 2017, p. 17

<sup>82</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Mai-karfi Programme, Northern Nigeria Endline Evaluation Report – Poultry Health June 2018, p.25

<sup>83</sup> Propcom Maikarfi Annual Report 2017, p. 50

- More women becoming engaged in cultivation of commercial crops that are traditionally a male domain (maize and rice farming, under the Babban Gona and Syngenta CPP interventions), and small ruminant rearing women buying cattle (also traditionally a male domain),<sup>84</sup>
- Women diversifying into other on and off farm economic activities and increasingly taking investment decisions themselves (Feed Finishing).<sup>85</sup>

It is difficult to assess to what extent these changes can be attributed to improved use of services, inputs and knowledge. However, some attribution is likely given that women reported to have a greater say in spending household income and control over increases in income that they generate. Broader shifts in social norms may be another factor, but this has not been possible to establish this.

Unlike these interventions, the rice parboiling intervention set out specifically to empower women in their economic activity. This has been successful, with the development, with project assistance, of direct linkages with traders and suppliers, and women's increased capacity to manage their business and negotiate prices. The outreach (PM-k reports 5,000 in women's groups) was not insignificant, but as discussed in the previous section the number that benefitted in terms of incomes was much lower (680).

A number of indirect or unintended effects of the interventions in the core market were found. The first is the copying of new practices by farmers not originally targeted, often as a result of farmers actively passing on their knowledge. Households not in areas covered by an ACI vaccinator have paid more for the vaccines in order to have a vaccinator come;<sup>86</sup> farmers living near Babban Gona members or Electronic Warehousing users have copied their GAP and use of inputs;<sup>87</sup> and farmers not originally reached by the Syngenta pilot have done the same.<sup>88</sup> Better ruminant rearing practices have been copied too, and more women and men, especially youth, are starting to rear animals for sale<sup>89</sup>. This creates more jobs in related activities, which accounts for income increases noted in the previous section. Copying accounts for the higher earnings and other benefits realised by farmers not originally targeted noted in the previous section as indirect impact. The other interventions are either too recent or, in the case of rice parboiling, would require a large investment to copy, especially in knowledge. Copying increases the scale of changes in both the core market and at the beneficiary level. Based on the nature of practices that were copied, it seems likely that it is facilitated by relatively low levels of required investment and the demonstrable and usually visible success of new farming practices. Many women and men have actively passed on their knowledge. The survey of farmers neighbouring Babban Gona farmers found that:

*"Farmers ... also reported a direct effect of Babban Gona farmers on new cultivation practices. Of the 42.2% who said they have learned new practices, 60.5% had learned them from Babban Gona farmers. Some FGD participants confirmed this, especially with regard to planting practices*

<sup>84</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Maikarfi Programme, Northern Nigeria Interim Evaluation Report – Systemic Effects and Impact on Farmers and Households of the Crop Protection Products Intervention with Syngenta October 2017 p. 18; Independent Evaluation for Promoting Pro-Poor Opportunities in Commodities and Service Markets (Propcom) Maikarfi Programme, Northern Nigeria Interim Evaluation Report – Systemic Effects and Impact on Farmers and Households of the Feed Finishing Intervention October 2017 p. 17; Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Mai-karfi Programme, Northern Nigeria Endline Evaluation Report – Babban Gona June 2018

<sup>85</sup> Independent Evaluation for Promoting Pro-Poor Opportunities in Commodities and Service Markets (Propcom) Maikarfi Programme, Northern Nigeria Interim Evaluation Report – Systemic Effects and Impact on Farmers and Households of the Feed Finishing Intervention October 2017, p. 17

<sup>86</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Mai-karfi Programme, Northern Nigeria Endline Evaluation Report – Poultry Health June 2018

<sup>87</sup> Male FGD respondents, Angwan-Magaji Gari, August 2017

<sup>88</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Maikarfi Programme, Northern Nigeria Interim Evaluation Report – Systemic Effects and Impact on Farmers and Households of the Crop Protection Products Intervention with Syngenta October 2017, p. 16

<sup>89</sup> Independent Evaluation for Promoting Pro-Poor Opportunities in Commodities and Service Markets (Propcom) Maikarfi Programme, Northern Nigeria Interim Evaluation Report – Systemic Effects and Impact on Farmers and Households of the Feed Finishing Intervention October 2017 p. 15

*but also for better use of inputs, seeds and post-harvest practices (better storage). ...Key informants and two of the women farmers confirmed the direct learning of non-Babban Gona farmers from Babban Gona farmers".<sup>90</sup>*

A beneficiary of the Feed Finishing intervention reported:

*I am willing to continue (to use the feed supplements) and to introduce more of my farmer friends to the feed supplement... I have the conviction that this new innovation is capable of eliminating the poverty that has bedevilled rural communities.*

Man, FGD, Sokoto.<sup>91</sup>

The second major indirect effect is the apparent commercialisation of some of the economic activities, already mentioned above. Specifically, this took place in chicken breeding, small ruminant rearing and crop cultivation (Syngenta CPPs and farmers influenced by Babban Gona). This is likely to have contributed not only to resilience, but directly to higher productivity and incomes as well. The increase in prices and market demand is likely to have been a major contributing factor.

The unintended effects on paid labour are strong as a result of the Babban Gona intervention, including among copying farmers, where more households are hiring workers. This is possibly because they can now afford this (among Babban Gona farmers) or because they have expanded production (their copying neighbours). The study of the latter found that:

According to key informants there was little use of paid farm labour before, and this has increased strongly, among Babban Gona as well as non-Babban Gona farmers; one respondent said;

*"A lot of people not working now work, and those who worked work more".*

Key informants reported this has resulted in rising labour costs, higher incomes, living standards and "empowerment" of the poorest.<sup>92</sup>

The Babban Gona endline survey found that the cost of labour used by intervention farmers had increased by roughly 20%, while it had decreased in the comparison group.<sup>93</sup>

Those households copying Babban Gona farmers that cannot afford paid labour noted increased workloads for women and children.<sup>94</sup> The Syngenta intervention decreased opportunities for male paid labour (in weeding) but increased them for women (in (post-) harvest activities).

The study of farmers neighbouring Babban Gona beneficiaries (which comprised a small survey, Focus Group Discussions and interviews) also established that the poorest households, women farmers in particular, cannot afford the improved inputs, of which prices have been rising, and therefore cannot compete with the higher quality produce the market demands<sup>95</sup>. They have not benefitted from changes in the market, which accounts for their stagnating or even lower incomes noted in the impact section.

<sup>90</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (PrOpCom) Mai-karfi Programme, Northern Nigeria Interim Phase 2016 Evaluation Report p. 21

<sup>91</sup> Independent Evaluation for Promoting Pro-Poor Opportunities in Commodities and Service Markets (Propcom) Maikarfi Programme, Northern Nigeria Interim Evaluation Report – Systemic Effects and Impact on Farmers and Households of the Feed Finishing Intervention October 2017 p. 18

<sup>92</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (PrOpCom) Mai-karfi Programme, Northern Nigeria Interim Phase 2016 Evaluation Report, p. 17

<sup>93</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Mai-karfi Programme, Northern Nigeria Endline Evaluation Report – Babban Gona June 2018, p.31

<sup>94</sup>Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (PrOpCom) Mai-karfi Programme, Northern Nigeria Interim Phase 2016 Evaluation Report, p. 22

<sup>95</sup>Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (PrOpCom) Mai-karfi Programme, Northern Nigeria Interim Phase 2016 Evaluation Report, p. 17

This Babban Gona study was the only study of unintended consequences, and it is possible that other interventions based on the same TOC have had similar results for the poorest, including the landless where demand for their labour fell. The study of the Feed Finishing intervention also found that the poorest households may not be able to afford the feed supplements.<sup>96</sup>

Overall it can be concluded that PM-k's interventions have achieved their objective of productivity and quality improvement, for male and female producers. This accounts for the higher incomes and the benefits that result from these reported in the previous section. The studies done by the programme, which is considered under relevance, therefore correctly identified the obstacles to low productivity as a cause of low incomes. The extent to which women and men not directly targeted by the interventions have copied new practices indicates that the changes in the core market have been catalytic. Women have generally continued to have had less direct access to services, inputs and knowledge than men. The landless and poorest households have often not benefitted from more inclusion in the market.

#### 4.6. The support Market and Interventions (DAC Criterion: Sustainability)

##### Strength of Evidence

|  |                   |                                                                                                                                                        |
|--|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <b>Conclusive</b> | Findings are very valid because there is a high level of consistency across different interventions, types of data sources, and people's perspectives. |
|--|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|

This section considers why access to services, inputs and knowledge increased, how PM-k brought this about, and whether the changes are systemic (sustainable and large in scale).

The findings presented in the TOC synthesis table<sup>97</sup> indicate that all of the private sector partners with whom the programme piloted a business model, invested in the pilot, demonstrating some level of commitment to testing the innovation. The collaboration with Babban Gona did not start as a pilot, since Babban Gona was a going concern, to which PM-k lent investment capital. In six evaluated interventions (Poultry Health, Babban Gona, Rice Parboiling, Electronic Warehousing Soap and Handwashing, CropLife) the business models proved sufficiently viable (in the case of Poultry Health and Electronic Warehousing after some changes) for partners to plan to continue their use. In three evaluated interventions (Syngenta CPPs, feed finishing, and tillers) this proved not to be the case.

The evaluation findings indicate that key factors contributing to this success are likely to have been:

- The studies on which PM-k based its interventions (considered in the relevance section) having correctly identified the causes of low productivity as constraints on provision of inputs, services and knowledge by the support market. This ensured that interventions to overcome these constraints were relevant to the target group and that they held the potential to unlock markets for providers of such inputs, services and knowledge;
- The business models were developed in consultation with or largely by partners and addressed the partners' profit motive. This improved the relevance, feasibility and commitment of the partners;
- Selection of appropriate partners, with adequate basic capacity and willingness to innovate, though often the project had little choice (e.g. in the case of ACI in Poultry Health and PZ Cussons (PZC) in the case of soap and handwashing) due to the small number of businesses willing to venture out into the thin North-Nigerian markets;
- Interventions supporting already planned investments (Babban Gona and Electronic Warehousing) or planned expansion of markets (e.g. PZC). PM-k was able to piggy-back on an existing initiative;

<sup>96</sup> Independent Evaluation for Promoting Pro-Poor Opportunities in Commodities and Service Markets (Propcom) Maikarfi Programme, Northern Nigeria Interim Evaluation Report – Systemic Effects and Impact on Farmers and Households of the Feed Finishing Intervention October 2017, p. 19

<sup>97</sup> See p. 17

- The pilots having been executed based on the business models as they were meant to function independently from the project (rather than with a role for the project partners could not sustain);
- Business models having been changed when the pilot indicated they were not viable, and PM-k flexibly addressing previously not identified constraints as they were encountered:
  - While Electronic Warehousing was primarily meant to provide farmers with a safe place to store grain, against which they would obtain a receipt that could be used as collateral for loans, this ran into regulatory obstacles. This was circumvented by AFEX partnering with a financial services provider. Farmers' priority need for more fertiliser was also addressed by including other companies in the business model;
  - In chicken health, the vaccination producer, the NVRI, was initially unable to keep up with demand. PM-k addressed this by supporting the NVRI to commission dormant equipment and is also supporting development of its distribution system. Initial objections of state and federal regulatory authorities to the development and training of VBV were also overcome;<sup>98</sup>
- Pilots not requiring an investment by the partner incommensurate with its resources or the expected returns, or PM-k making available investment capital on loan;
- PM-k not implementing pilots it fully funded but ensuring a contribution by the partner, to ensure commitment.
- The pilots proving effective in terms of increasing sales.

These findings are in line with global M4P experience and good practice. None of these factors were sufficient in themselves as the Syngenta case (below) demonstrates. Rather, each is likely to have been a necessary condition for success.

The most important external influencing factor was the increasingly strong market demand for the farmers' produce, contributing to greater incentives for them and project partners to innovate and take risks, and a stronger demand for inputs and services.

The reasons for Syngenta not adopting the business model it had largely developed itself are straightforward. Sales were disappointing in relation to the cost of the pilot, which included a cost-shared temporary "project team" and more staff hired when sales were not realised. Conflicting expectations (e.g. Syngenta expecting PM-k to mobilise farmers, and PM-k having, incongruously, a role in the business model) also played a role. Syngenta itself concluded farmers were too poor to buy its products, and while the products are widely recognised as the most effective, usage is in fact limited by the high price.<sup>99</sup> PM-k felt inadequate distribution channels were the cause of the lack of success. Syngenta does not sell on credit to dealers, and dealers do not sell on credit to retailers. Although, the need to pay in cash did indeed disrupt supply chains<sup>100</sup>.

In sum, the Syngenta/PM-k business model was inadequate, insufficient market research was done, and the pilot was badly executed and incurred unsustainably high costs. The model was discontinued. We found that Syngenta CPPs are still available on the market, but with reducing sales and other good quality CPPs of somewhat lower effectiveness expanding in the market.<sup>101</sup> Follow up research found that the possibility that the introduction of Syngenta, providing information and training to a large number

<sup>98</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Mai-karfi Programme, Northern Nigeria Interim Phase 2018 Evaluation Report – Poultry Vaccination Intervention April 2018, p. 6

<sup>99</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Mai-karfi Programme, Northern Nigeria Interim Evaluation Report – Systemic Effects and Impact on Farmers and Households of the Crop Protection Products Intervention with Syngenta October 2017, p. 15

<sup>100</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Mai-karfi Programme, Northern Nigeria Interim Evaluation Report – Systemic Effects and Impact on Farmers and Households of the Crop Protection Products Intervention with Syngenta October 2017 p. 11, 22

<sup>101</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Mai-karfi Programme, Northern Nigeria Interim Evaluation Report – Systemic Effects and Impact on Farmers and Households of the Crop Protection Products Intervention with Syngenta October 2017 p. 15

of farmers in particular, contributed to the development of the market for high quality CPPs could not be discounted. However, it should be seen in the context of a broader move towards better quality CPPs to which many other factors contributed. These include the influence of other programmes and public services to farmers, and effective CPPs having become widely available at costs farmers can afford. Supply is reliable, in part because dealers and retailers can buy on credit. Most of these factors are likely to have been more important than the Syngenta intervention because of their longer and more pervasive presence.

The main reason for the feed supplements producers not adopting the new business model was that it depended on paravets as distributors, retailers and as trainers of remotely located farmers. The incentives the paravets received in terms of a small mark-up were too small to motivate them (according to some informants in comparison to incentives offered by other programmes), and a one-time bonus PM-k financed for the first bags of feed sold was not sustainable. Only 10% of trained paravets actually trained farmers. Supply was undependable for the same reasons as Syngenta CPPs, i.e. the feed supplement producers not supplying on credit to dealers, and the dealers not providing credit to paravets. Here too, the business model was poorly thought through and the bonuses funded during the pilot exacerbated this situation. PM-k, dealers and feed producers blame the lack of entrepreneurship among the mostly public sector paravets, but this should not have come as a surprise. While the partners did demonstrate commitment to implement the pilot, this did not go as far as offering a better deal to paravets, which would have eaten into the partners' own profit margins. PM-k also found that sales of small ruminants had not increased due to Feed Finishing interventions in general (though our study found beneficiaries were selling more animals and they did not report problems in finding buyers) and decided to further examine constraints before possibly intervening in the market again.<sup>102</sup>

The tillers pilot put in place a system for women's cooperatives to buy tillers from the vendor on credit, with loans guaranteed by NISRAL of up to 80%. NISRAL was slow to commit itself which led to the delivery of the first batch of tillers missing the planning season. Repayment performance was poor, with the vendor having little capacity to handle loans and repayments, and PM-k was unable to interest a professional MFI to manage the credit. Women reported the tillers were too small, indicating insufficient background research. Tillers broke down and could not be repaired, explaining their limited use and impact noted earlier. The need for maintenance services had not been taken into account in the business model. An external influencing factor was the severe devaluation of the Naira in 2015-'16, which increased the price of the imported tillers. While the main partners, the tiller vendor Habgito and the SWFO Women Farmers' Groups umbrella organisation demonstrated commitment in the pilot phase, Habgito has no definite plans to continue and the intervention is on hold.

In none of these three cases have similar market players taken up the business models, probably because they were not successful. There has been no systemic change, and the sustainability and scale of change at the core market and beneficiary level is therefore in doubt. If farmers cannot access the inputs, higher productivity and incomes are unlikely to be maintained, and copying by more farmers is unlikely. Fortunately, in the case of CPPs farmers have an alternative in buying other effective CPPs, and they are doing so. This is not the case in the other two interventions.

In the other five market systems (the CropLife intervention is too recent to assess) PM-k's partners continued the business models with all but the rice parboiling groups expanding their use geographically. PZC (hand washing) has done so in the South, without project support and adapting the model. Since it has not been shown to contribute to PM-k's goal, the benefits of this success in terms of systemic change are not known. Babban Gona is expanding independently from the project (with support from other investors), and partners in other interventions do so with project support but report they are planning to continue expansion independently. Though it is impossible to consider the business models fully adapted as geographical expansion by the partners is mostly still dependent on project support, (fully adapted business models are continued and further expanded by the same partner independent

<sup>102</sup>Propcom Mai-karfi Annual Report 2017, p. 52

from project support) the achievements at the core market and beneficiary levels are likely to prove sustainable and increase in scale. The main causes of this success include:

- The scoping studies done by the project correctly identified constraints in the core and support markets, and therefore the likely demand for the services, inputs and knowledge that adoption of the business models would make available. This ensured that the interventions were relevant to farmers as well as partners.
- The business models proved to be viable beyond the pilot, generating a profit for most of the partners, though for Electronic Warehousing this still has to be realised and for ACI the profits are just 1% of their total, which could affect future commitment of this particular partner. Other private sector partners are replicating the model.
- Those involved in the business model other than the partners are generating an income as a result. VBVs earn from vaccinating chickens and, increasingly, other animal health related products and services. Babban Gona and Electronic Warehousing provide paid employment.
- In Poultry Health, Community Based Organisations (CBO) and other groups were used as an entry point especially for promotion, which proved an effective way of reaching more chicken farmers, women in particular.
- The partners are large concerns with the resources (or the ability to attract them) to expand.
- Additional support was provided by the project when this proved necessary, e.g. in Poultry Health capacity building at ACI, advocacy to have VBVs recognised by the Veterinary Council Nigeria and troubleshooting as when vaccines had to be imported.

In terms of more market players taking up the successful business models, this has happened only in the Poultry Health market, where one firm has adopted a revised version and the MADE Nigeria project is working with private sector partners in the South. The success of the business model has also contributed to the establishment of the National CAHW programme by the public sector, with some PM-k support. This is contributing to a high potential for scale.<sup>103</sup> In this instance, the realisation of scale will to some extent depend on the performance of the public-sector partner, which is likely to be less effective than private sector partners (due to the usual budget and capacity limitations). The key factors in this success, in addition to those mentioned above are:

- The business model can be adapted to provide other veterinary services;
- Vaccinations are being taken up almost universally when they become available and the market is large and provides scope for more market players;
- Market conditions remain conducive with strong demand for chickens.

The increase in production and distribution of vaccines by the National Veterinary Institute could be seen as a response to the success of the vaccination business model and the resulting increase in demand for vaccines. Poultry Health is therefore the intervention that had led to the greatest systemic change in the market system and is likely to lead to more. Saturation of the market for chickens could be the main threat in the medium term, and it is therefore appropriate that PM-k is implementing an intervention that aims at better market access through retailing chains.

While more women's groups have taken up the rice parboiling model, and the model is therefore expanding geographically, this has been fully supported by the project, without an increase in the investments made by the women's groups. Replication of the original intervention was the strategy for reaching scale. This has obvious limitations because of the cost, especially since the model requires significant investment in capacity building. While the Non-Governmental Organisation (NGO) with which PM-k has worked to implement the intervention could be seen as its scale agent (an institution or business that brings a model to scale), all its costs had to be covered by the project, which is, in the long run, not sustainable. Further replication has therefore stopped and gains in scale are unlikely. This could have been foreseen. Competition from private and public sector mills with improved technology

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<sup>103</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Mai-karfi Programme, Northern Nigeria Interim Phase 2018 Evaluation Report – Poultry Vaccination Intervention April 2018, p. 17 and passim

may affect sustainability of the women's groups.<sup>104</sup> Access to credit was improved but only 600 of the 5,000 women involved obtained loans due to low financial literacy, difficulties with the provision of services from the MFI and women considering service charges as interest on their loans (against Muslim norms).<sup>105</sup> These factors put the continued provision of financial services in doubt, which may also affect sustainability.

The lack of other market players taking up the business models of Babban Gona, Electronic Warehousing, and soap for hand washing may include:

- The high entry level in terms of required investment in the case of Babban Gona and Electronic Warehousing, and insufficient knowledge among large scale investors of these undertakings.
- Electronic Warehousing still has to demonstrate profitability.
- Promoting soap on the basis of scent and size rather than health or cost-savings benefits serves other companies well in this market.

It is also noted that PM-k's Intervention Guides made available to us do not include activities to bring market system change to scale by drawing in other market players. Rather the focus is on support to existing partners to bring change to scale.

With regard to measures to strengthen women's empowerment through change in the support market, two of the interventions (Tillers and Rice Parboiling) were built on business models that targeted women specifically. Both have resulted in only limited or no systemic change and as a result limited scale in the core market and in terms of impact. Linkages to CBOs were useful in reaching the (limited) scale that was realised. None of the business models under the other interventions included elements specifically meant to reach and include women, and a gender analysis to identify constraints on women was conducted only for the tillers and rice parboiling interventions. This is not to say the project did not make efforts to include women, e.g. by asking lead farmers to invite women to demonstrations and visiting households to motivate women to go to them, through linkages to women's groups or CBOs or by providing extra bonuses to paravets to sell feed supplements to women. These were ad hoc measures which, as stated in the previous section, did not lead to reaching women to the extent that could be expected based on their participation in the market. The only exception may be Poultry Health, where VBV's stated that 85% of their clients are women, though survey findings indicate that only 42% of those who took the decision to vaccinate were women (similar to the percentage that owns the flocks).<sup>106</sup> In a less ad hoc manner, PM-k tried unsuccessfully to include women as VBV's, and trained a small number of female paravets (8% of the total). The effect of the latter effort has been limited. VBV's reported they promote their services through women's groups, but they had not been instructed to do so and it was not part of the business model.<sup>107</sup>

Gender norms, which assign care roles to women, and limit the income earning opportunities open to women, women's mobility, and interaction with markets and with men other than family members, are the key constraining external factors to WEE.<sup>108</sup> In terms of the interventions, the business models did not provide a business rationale for and an approach to target women specifically as buyers of services

<sup>104</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (PrOpCom) Mai-karfi Programme, Northern Nigeria Interim Evaluation Report – Propcom Mai-karfi's Effectiveness in Reaching Women and Women's Economic Empowerment April 2018 p. 12

<sup>105</sup> Propcom Maikarfi Annual Report 2017 p. 54

<sup>106</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (PrOpCom) Mai-karfi Programme, Northern Nigeria Interim Evaluation Report – Propcom Mai-karfi's Effectiveness in Reaching Women and Women's Economic Empowerment April 2018, p. 11; Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Mai-karfi Programme, Northern Nigeria Endline Evaluation Report – Poultry Health June 2018, p.23

<sup>107</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (PrOpCom) Mai-karfi Programme, Northern Nigeria Interim Evaluation Report – Propcom Mai-karfi's Effectiveness in Reaching Women and Women's Economic Empowerment April 2018, p. 19

<sup>108</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (PrOpCom) Mai-karfi Programme, Northern Nigeria Interim Evaluation Report – Propcom Mai-karfi's Effectiveness in Reaching Women and Women's Economic Empowerment April 2018 p. 19

and inputs, and partners saw no reason to do so, even in markets where women make up a large share of their potential market (poultry, small ruminants). As one of the feed supplement producer respondents<sup>109</sup> stated:

*“The company in his view has little or no interest in the demographic indices, especially sex of who patronises the product, rather sales figure. As such it will be difficult for the company to give reaching women a more close focus”. (Key Informant Interview)*

This is also likely to be due to gender norms, perceived gender roles in particular, with the male owners and managers of companies incorrectly assuming women do not take buying decisions. Not addressing these assumptions and not developing systemic measures to include women specifically in markets, can be considered a missed opportunity.

The unintended or indirect effects of the interventions at this level are varied. The most noteworthy is VBVs training more VBVs themselves and setting up local distribution networks.<sup>110</sup> This is a further indication of scale being reached, in response to growing demand from poultry breeders. The adaptation of the Electronic Warehousing business model to include more services than storage was also not foreseen and was essential to achieving viability and Electronic Warehousing continuing geographical expansion. The CropLife Spray Service Providers are displacing existing sprayers of lower quality CPPs. Training these individuals and absorbing them in CropLife’s network was recommended as a way forward.<sup>111</sup>

In conclusion, the project succeeded at facilitating some level of systemic change through six of the nine interventions, with Poultry Health, Babban Gona and Electronic Warehousing being the most successful in this respect, apart from soap and hand washing of which the benefits are not known. These three also have the largest scale of impact on the beneficiaries and other farmers. The Poultry Health intervention has resulted in the highest level of systemic change and has been catalytic in terms of drawing in other market players, including in the public sector.

Given likely sustainability of the changes in the support market resulting from the Poultry Health, Babban Gona and Electronic Warehousing interventions, scale in the core market and of impact on beneficiaries can be expected to increase further.

The changes in the market systems (or the interventions themselves where such changes were absent or minimal) had effects on the empowerment of women, by default rather than design. Apart from rice parboiling and tillers none of the business models included specific measures to include more women, even in markets in which women have a strong presence. The gender-blind interventions have benefitted more women than the two that set out to do so.

#### 4.7. Efficiency

##### Strength of Evidence

|  |                             |                                                                                                                                                         |
|--|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <b>Partially conclusive</b> | Findings are valid because there is a reasonable level of consistency across different interventions, types of data sources, and people’s perspectives. |
|--|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|

<sup>109</sup> Independent Evaluation for Promoting Pro-Poor Opportunities in Commodities and Service Markets (Propcom) Maikarfi Programme, Northern Nigeria Interim Evaluation Report – Systemic Effects and Impact on Farmers and Households of the Feed Finishing Intervention October 2017

<sup>110</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Mai-karfi Programme, Northern Nigeria Interim Phase 2018 Evaluation Report – Poultry Vaccination Intervention April 2018 p. 17

<sup>111</sup> Ikechukwu Ejekwumadu and Millicent Lefe, Croplife SSPs Impact Assessment Report 2017, February 2018, page 8

A number of factors—both internal to the programme and in the external environment—affect programme efficiency. While a Value for Money<sup>112</sup> assessment often forms the bulk of an efficiency component of the evaluation, the values arrived at must be interpreted within the context of both the internal and the external environment.

#### *4.7.1. The Legacy Factor*

Propcom Mai-karfi built on a foundation of a previous programme Promoting Pro-Poor Opportunities through Commodity and Service Markets Mai-karfi Programme (Propcom) from which it transitioned relatively seamlessly on 2012/3. This allowed the programme to effectively build on the successes of the previous iteration, expending little effort and resources on establishing foundational relationships. This efficiency can be seen in the programme's cost effectiveness numbers and reach related to both its agricultural inputs and its agricultural mechanisation markets.

While the mandate and operations of the two programmes shifted relatively smoothly, there were a number of personnel changes in the implementation team relatively early in the process. This is in part due to the contract change of implementing agent, but some respondents have mentioned the movement of the Team Leader as a result of early methodological differences between himself and DFID.<sup>113</sup> The same reason has been referenced regarding the loss of the programme's technical partner, The Springfield Centre.

#### *4.7.2. Internal Environmental Factors*

The internal environment of the programme creates an atmosphere in which programme strategy is designed and decision making implemented. Disruption within this environment can severely impact the efficiency of programme implementation.

The programme was initially housed within the same house / office complex that had been used by its preceding programme. In its last 18 months of operation the programme moved to an office building that housed other programmes implemented by Palladium. In each case there was adequate office space for individuals to work and meet, although in the former location this was spread over three floors, which might have adversely affected team communication in a minor fashion. The programme had sufficient IT and communications equipment including copiers, phones and data projectors.

In terms of its staff organogram the programme has four levels of staff; a team leader, senior managers, manager and implementation managers. As at the end of 2017 the programme had 36 positions throughout these levels, all of them filled. While there has been some turnover in the lower positions, the senior management positions have remained relatively stable since shortly after inception. The same cannot be said for the team leader position. Here, the contracting agency, Palladium, appointed six individuals seven times to fill this position, with one individual filling the position twice. The centrality of this role cannot be underestimated, and the programme implementation could have suffered more than it did, if it had not been for a robust and steady senior management team.

No interviewed staff members mentioned any difficulties with accessing sufficient resources to allow them to perform adequately, and none reported any difficulties regarding the internal decision-making process.

The programme reported regularly on its ongoing capacity building of staff which included security and Hostile Environment Awareness Training (HEAT) as well as on improving the methodological understanding of the M4P model.

From an evaluation perspective the Propcom Mai-karfi's internal monitoring system was exemplary from a technical viewpoint and the communication from the PM-k monitoring and results management (MRM)

<sup>112</sup> A Value for Money analysis is included as Appendix 14

<sup>113</sup> KII, Senior Programme Staff, 6 February 2018, Abuja.

and team to the evaluation team was good. The MRM team did at times experience difficulty in carrying out adequate, timely impact studies of their interventions. Accurate, timely data regarding interventions' impacts should have fed into decision making regarding the project, or at the very least, supported the decisions that were made. At times MRM reports and other reports generated by the programme were slow in being made public, often due to internal constraints and quality control capacity.

#### *4.7.3. External Environment Factors*

Propcom Mai-karfi faced a number of challenges in its implementation, many of which were foreseen in the business case and included working in fluid, conflict affected states. While the security situation in Abuja remained stable with few, if any, adverse events during the course of the programme, the situation in the field was very different.

Insecurity affected the implementation of the programme to some extent, with interventions in certain states being paused or implementation being impaired as a result of security concerns, and the programme reported on this regularly.<sup>114</sup> While the programme implemented prescribed security measures, by its nature, the fluid situation in the implementation environment impacted on outreach and efficiencies. Some interventions had to be curtailed due to the security situation, others were paused in the hope that a decline in security in a particular setting was temporary and that the intervention would be reinitiated when the situation stabilised. All of these “stop-go” situation impacted on the roll out of the affected interventions, impacting on the programme's efficiencies, outreach and ultimately on its impact.

#### *4.7.4. Efficiency of Specific Markets*

Drawing from the VfM analysis presented in the appendices, two markets dominated the programmes portfolio in cost efficiency; agricultural inputs and agricultural mechanisation. Both of these are legacy programmes from the first iteration of Propcom. Agricultural inputs reached farmers at an average cost of £10.51 with an average increase in income of £26.14 with a cost benefit ratio of 1: 2.5. Agricultural mechanisation reached farmers at an average cost of £15.44 with an average increase in income of £64.58 with a cost benefit ratio of 1:4.18. Both of these markets displayed cost benefit ratio far better than the business case estimate of 1:1.9. The programme benefitted from the investments made by its predecessor and the increases in scale and sustainability that can be expected from older interventions in an M4P programme.

Using the unleveraged programme value of £22.9 million, the programme reported benefitting 655,633 individuals at an average cost of £34.93 with an average income increase of £41.55 and a cost benefit ratio below that estimated in the business case (1:1.19). The cost trend of reaching farmers has increased over the six years of programme operation, reflecting the high cost of doing business in the country, the declining security situation and the increase in local inflation.

These figures are based on the programme attributing impact 100% to itself, which is not plausible. On the other hand, they do not take into account indirect impact, such as higher incomes due to farmers copying the practices of those directly targeted by interventions, or market players similar to the partners for interventions taking up the promoted innovations. The evaluations indicate this may be extensive (see Sections 4.6 and 4.7.). In addition, no period of benefit beyond the programme end is claimed.

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<sup>114</sup> See for example: Propcom Mai-karfi, Quarterly Progress Reports, June and September 2013 and March 2016.

## 5. Answering the Evaluation Questions

This section maps the evaluation analysis set out in Section 4 against the original Evaluation Questions and provides an indication of the strength of evidence supporting the conclusions to these questions (with reference to the ratings presented in Section 3.3.1.).

### 5.1. The Evaluation Questions Groupings

In the original TOR (Anne 2), DFID posed a number of Evaluation Questions (EQs) (see Table 4 below) to guide the evaluation. As set out in Section 2, these questions were subsequently revised in the Inception Report (see Appendix 3 for more details).<sup>115</sup>

**Table 4: Original Evaluation Questions**

| Original Evaluation Questions |                                                                                                                                                                                                            |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EQ 1                          | How effective was the programme as a whole in delivering the promised outcomes and impacts?                                                                                                                |
| EQ 2                          | Were the outcomes and impacts delivered relevant to beneficiaries needs?                                                                                                                                   |
| EQ 3                          | How effective was the programme in meeting its results promised for women and girls, who were only 7% of beneficiaries in Propcom 1?                                                                       |
| EQ 4                          | How effective was the programme in decreasing vulnerability to shocks, trends and seasonality of poor women and men engaged in selected rural markets?                                                     |
| EQ 5                          | How did the interventions interact with other factors in the local and regional economy?                                                                                                                   |
| EQ 6                          | Were the interventions really catalytic, did this lead to systemic change resulting in better access to services and inputs?                                                                               |
| EQ 7                          | To what extent did the programme's interventions stimulate the continuation in the market of existing players and the entry of other players into the market in a long term, positive and sustainable way? |
| EQ 8                          | How effective were individual interventions in delivering the intended outcomes? If some interventions were more successful than others, why? Were these the right combination of interventions?           |
| EQ 9                          | How effective is the market system analysis approach in delivering more relevant interventions that improve incomes and reduce poverty?                                                                    |
| EQ 10                         | What is the effect of insecurity on the programme's interventions?                                                                                                                                         |

While the previous section attempts to respond to each of the evaluation questions using the framework of the Theory of Change, this section groups the evaluation questions into six clusters based on thematic similarities (see Table 5 below).<sup>116</sup> The discussion of each cluster is informed by both quantitative data from Propcom Mai-karfi and independently collected evaluation data, some of which is presented in Section 4. The strength of the evidence for the conclusions reached for each cluster is provided at beginning of each discussion. Before providing evidence to address each cluster of answers, each individual EQ of the cluster is addressed separately.

<sup>115</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (PrOpCom) Mai-karfi Programme, Northern Nigeria Interim Phase 2016 Evaluation Report November 2016 p 89.

<sup>116</sup>One EQ has been omitted from these clusters. The VFM question "Did the programme's portfolio composition offer good value for money?" is dealt with in Sub-Section 4.5.4 and in the VFM Appendix (Appendix 15)

**Table 5: Evaluation Questions Clusters**

| Evaluation Question Clusters |                                                                                                                                                                                                                  |                                                         |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| Cluster                      | Evaluation Question                                                                                                                                                                                              | Theme                                                   |
| Cluster 1                    | EQ 1: How effective was the programme as a whole in delivering the promised outcomes and impacts?                                                                                                                | The appropriateness of M4P as a development methodology |
|                              | EQ8: How effective were individual interventions in delivering the intended outcomes? If some interventions were more successful than others, why? Were these the right combination of interventions?            |                                                         |
|                              | EQ9: How effective is the market system analysis approach in delivering more relevant interventions that improve incomes and reduce poverty?                                                                     |                                                         |
| Cluster 2                    | EQ 2: Were the outcomes and impacts delivered relevant to beneficiaries needs?                                                                                                                                   | The appropriateness of the programme interventions      |
|                              | EQ 5: How did the interventions interact with other factors in the local and regional economy?                                                                                                                   |                                                         |
| Cluster 3                    | EQ 3: How effective was the programme in meeting its results promised for women and girls, who were only 7% of beneficiaries in PropCom 1?                                                                       | Women's Economic Empowerment                            |
| Cluster 4                    | EQ 4: How effective was the programme in decreasing vulnerability to shocks, trends and seasonality of poor women and men engaged in selected rural markets?                                                     | Building resilience                                     |
|                              | EQ 11: What is the effect of climatic and food shocks on the programme's interventions?                                                                                                                          |                                                         |
|                              | EQ 12: How did the programme's portfolio composition mitigate exposure to risk?                                                                                                                                  |                                                         |
| Cluster 5                    | EQ 6: Were the interventions really catalytic, did this lead to systemic change resulting in better access to services and inputs?                                                                               | Facilitating market change                              |
|                              | EQ 7: To what extent did the programme's interventions stimulate the continuation in the market of existing players and the entry of other players into the market in a long term, positive and sustainable way? |                                                         |
| Cluster 6                    | EQ 10: What is the effect of insecurity on the programme's interventions?                                                                                                                                        | Operating in fragile environments                       |

## 5.2. Cluster 1: The Appropriateness of M4P as a Development Methodology

- EQ 1: How effective was the programme as a whole in delivering the promised outcomes and impacts?
- EQ8: How effective were individual interventions in delivering the intended outcomes? If some interventions were more successful than others, why? Were these the right combination of interventions?
- EQ9: How effective is the market system analysis approach in delivering more relevant interventions that improve incomes and reduce poverty?

### Strength of Evidence<sup>28</sup>

|  |                   |                                                                                                                                                        |
|--|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <b>Conclusive</b> | Findings are very valid because there is a high level of consistency across different interventions, types of data sources, and people's perspectives. |
|--|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|

| Evaluation Question                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>EQ 1: How effective was the programme as a whole in delivering the promised outcomes and impacts?</b></p> <p>The programme impact aimed to improve the incomes of 500,000 poor people in Northern Nigeria. In seven of the nine evaluated interventions, incomes were shown to increase. In all of these seven interventions increased incomes also led to higher productivity.</p> <p>The increased provision of services across many of the interventions, from agricultural inputs, to vaccination services, demonstrate an increase in the functioning of rural market systems, with private sector partners committing their own funds to increase their reach and scope in a number of the interventions.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <p><b>EQ8: How effective were individual interventions in delivering the intended outcomes? If some interventions were more successful than others, why? Were these the right combination of interventions?</b></p> <p>The programme focused largely on agricultural interventions, with two legacy interventions being carried over from the first phase, Propcom 1. These two legacy interventions (agricultural inputs and agricultural mechanisation) were responsible for over 80% of the programme's beneficiary reach and most successful at raising income of their beneficiaries, (possibly demonstrating the longer term "hockey stick effect" of M4P interventions. These most successful interventions correctly identified roles for both public and private sector players.</p> <p>The programme worked with a number of different interventions within the same market sector which allow the programme to build on lessons learned from parallel interventions and link individual interventions by giving them additional value and leverage. It is likely that individual, standalone interventions, would have had benefited but, lacking the additionality, this benefit might have been less prominent</p> |
| <p><b>EQ9: How effective is the market system analysis approach in delivering more relevant interventions that improve incomes and reduce poverty?</b></p> <p>Within the parameters of this evaluation, it is not possible to say whether the market development approach is more effective or more efficient than other development approaches. However, as it can be seen by the extensive reach of the Agricultural Inputs and Agricultural Mechanisation markets, scaling beneficiary reach increases over time. The evaluation team has confidence in the findings that a market development approach is an appropriate development strategy to pursue in northern Nigeria as long as it applies appropriately along with conducive, external influencing factors.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

Propcom Mai-karfi was designed to enhance poor farmers and small-scale rural entrepreneurs' performance in the markets in which the programme intervenes. This achievement in turn was expected to contribute to "Sustained increases in the incomes of poor women and men engaged in selected rural markets in northern Nigeria".<sup>117</sup>

<sup>117</sup> Propcom Mai-karfi Logframe. <https://goo.gl/oaegm3>

The programme reports that 665,000<sup>118</sup> people in northern Nigeria benefitted from the programme, overachieving its set target. However, the programme failed at achieving its sub-target of 250,000 women by reaching only 144,000 women. This particular shortcoming is addressed in the Cluster 3 discussion below. In terms of income increase, as explained in section 4, higher productivity, resulting from better access to inputs, services and knowledge contribute to an increase in income. Nearly all of the interventions applied a similar Theory of Change, with similar results.

Of the evaluated interventions, eight of the nine (with Soap and Handwashing being the exception) focused on facilitating developments in the agricultural sector. This is unsurprising given the relatively rural and underdeveloped state of the northern Nigerian economy and the heavy dependence of this region on agriculture.<sup>119</sup> Interventions in two of the markets (Agricultural Inputs (59%) and Agricultural Mechanisation (24%)) were responsible for over 80% of the programme's beneficiary reach<sup>120</sup> (see Table 6). Components of both of these markets (Fertiliser and Seed in Agricultural Inputs and Tractors in Agricultural Mechanisation) are legacy markets from the first iteration of the Propcom programme. Poultry had the next most extensive reach with 8.8% (58,000) of beneficiary reach. None of the other markets achieved more than 8% of the total programme beneficiary reach.

Similarly, the same two markets (Agricultural Inputs and Agricultural Mechanisation) were the most successful at raising income of their beneficiaries, (See Table 7). They both account for 37% of the total reported increase in income. Babban Gona is the third highest contributor to income increase (13% of the overall income increase), whereas poultry, only accounts for 2.3% of the value (despite being the third largest market in terms of beneficiary reach). This finding is in keeping with the quantitative evaluation findings in Poultry Health where households recorded relatively small increases in incomes from poultry. This observation regarding the potential for transformative income increase was made by the evaluation team even at baseline.<sup>121</sup>

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<sup>118</sup> All programme figures are taken from the programme dashboard provided to the evaluators. Email from programme Results Director 15 May 2018. The evaluation was never tasked with verifying programme reported numbers. The programme differentiates between the individuals reached (the programme estimates over a million were reached) and those who it estimates benefited from the interventions. The beneficiary numbers are reported here.

<sup>119</sup> Propcom Mai-Karfi : A rural market development programme for northern Nigeria, November 2012.

<sup>120</sup> The programme distinguishes between "Access Outreach" where it counts all individuals that might have been reached in terms of the intervention and "Benefit Outreach" where it counts all individuals who might have benefitted from the intervention. This report considers only the latter figure, in accordance with the logframe targets.

<sup>121</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (PrOpCom) Mai-karfi Programme, Northern Nigeria, Baseline Report - Quantitative Poultry Health Market Survey, December 2015. p21.

**Table 6: Programme Outreach by Market**

| Market                     | Benefit Outreach (Overall) |               |
|----------------------------|----------------------------|---------------|
| Agricultural Inputs        | 389,430                    | 58.5%         |
| Agricultural Mechanisation | 156,920                    | 23.6%         |
| Poultry Health             | 58,355                     | 8.8%          |
| Grain Storage              | 23,969                     | 3.6%          |
| Women Economic Empowerment | 11,621                     | 1.7%          |
| Babban Gona                | 8,138                      | 1.2%          |
| Soybean                    | 6,830                      | 1.0%          |
| Livestock                  | 6,269                      | 0.9%          |
| Agricultural Cooperatives  | 2,381                      | 0.4%          |
| Shea                       | 1,541                      | 0.2%          |
| Soap and Handwashing       | 178                        | 0.0%          |
| <b>Total</b>               | <b>665,632</b>             | <b>100.0%</b> |

**Table 7: Increase of Income per Market**

| Market                     | Benefit Outreach (Overall) |               |
|----------------------------|----------------------------|---------------|
| Agricultural Inputs        | 10,180,651                 | 37.4%         |
| Agricultural Mechanisation | 10,133,716                 | 37.2%         |
| Poultry Health             | 3,560,702                  | 13.1%         |
| Grain Storage              | 1,485,091                  | 5.5%          |
| Women Economic Empowerment | 614,818                    | 2.3%          |
| Babban Gona                | 613,566                    | 2.3%          |
| Soybean                    | 268,335                    | 1.0%          |
| Livestock                  | 220,386                    | 0.8%          |
| Agricultural Cooperatives  | 125,986                    | 0.5%          |
| Shea                       | 39,458                     | 0.1%          |
| Soap and Handwashing       | 1,187                      | 0.0%          |
| <b>Total</b>               | <b>27,243,896</b>          | <b>100.0%</b> |

Propcom Mai-karfi used a market system approach to analyse the markets in which it intervened. In eight of the evaluated interventions, the programme worked with private sectors partners (and in four cases supplemented this working with public sector partners).<sup>122</sup> The exception to this was Rice Parboiling, where although the programme worked with both a civil society organisation and a microfinance provider, their relationships did not appear to be structured in a sustainable manner, meaning that the partners' role would likely evaporate soon after the closure of the programme.<sup>123</sup> In six of the nine evaluated interventions, partners and other private sector companies who have since been crowded in (companies not directly involved in the intervention replicating, or refining and replicating the business model), are likely to continue with the intervention in some way, continuing to benefit the targeted women and men. More detail on the effectiveness and sustainability of market system approach can be found in Sub-Sections 4.5. and 4.6. of the Theory of Change section.

Within the parameters of this evaluation, it is not possible to say whether the market development approach is more effective or more efficient than other development approaches. Where a M4P approach attempts to measure sustainability, scale and beneficiary reach of the programme, compared to more direct forms of assistance, this can only be demonstrated in the longer term, as can be seen by

<sup>122</sup> See Relevance Section (4.1) for more detail

<sup>123</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (PrOpCom) Mai-karfi Programme, Northern Nigeria Interim Evaluation Report – Propcom Mai-karfi's Effectiveness in Reaching Women and Women's Economic Empowerment April 2018

the extensive reach of the Agricultural Inputs and Agricultural Mechanisation markets.<sup>124</sup> As indicated in the previous section, at present, only the Poultry Health intervention has achieved all three, where, Babban Gona and Electronic Warehousing are showing good potential to do so in the short term and CropLife in the medium term. These findings give confidence to the evaluation team that a market development approach is an appropriate development strategy to pursue in northern Nigeria as long as it applied appropriately along with conducive, external influencing factors. As previously observed, interventions might also fail to achieve the objective of lasting change in market systems in spite of the target group benefitting from the intervention. For instance, in the Feed Finishing intervention (Section 3.5) women and men changed their small ruminant rearing practices, including use of feed supplements, and increased their incomes as a result, but no systemic change took place. Therefore, in this case, there will be no further increase in the number of beneficiaries and sustainability is doubtful given the probable lack of continued supply of food supplements.

Sub-Section 4.3. and 4.4. of the Theory of Change explores the questions relating to outcomes and beneficiary impact in more detail.

### 5.3. Cluster 2: The Appropriateness of the Programme Intervention

- EQ 2: Were the outcomes and impacts delivered relevant to beneficiaries needs?
- EQ5: How did the interventions interact with other factors in the local and regional economy?

#### Strength of Evidence

|  |                   |                                                                                                                                                        |
|--|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <b>Conclusive</b> | Findings are very valid because there is a high level of consistency across different interventions, types of data sources, and people's perspectives. |
|--|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|

| <b>Evaluation Question</b>                                                                                                                                                                                                                                                                                                                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>EQ 2: Were the outcomes and impacts delivered relevant to beneficiaries needs?</b>                                                                                                                                                                                                                                                                           |
| In eight of the evaluated interventions, the programme identified demand side constraints whereas in six of the evaluated interventions, the programme also identified supply side constraints. If those constraints are properly solved, this would allow private and public sector partners to provide products and services to address beneficiaries' needs. |
| <b>EQ5: How did the interventions interact with other factors in the local and regional economy?</b>                                                                                                                                                                                                                                                            |
| In six of the evaluated interventions the programme matched its interventions with established public sector policies and priorities. The ongoing relationship the programme has developed and maintained with the public sector has allowed for a number of initiatives launched by the programme to move into mainstream public sector activities.            |

Meeting beneficiaries' needs in a sustainable manner on a large scale is the *raison d'être* of any M4P programme. As part of its methodology, an M4P programme identifies market constraints that might prevent beneficiaries' access to products and services. It then facilitates relationships with partners in the market to address these constraints, and by default, meets beneficiaries' needs. The relevance and sustainability sections of the previous sub-sections (4.3. and 4.6.) speak to this process in more detail.

As part of its initial steps in identifying constraints, Propcom Mai-karfi conducted market assessments in each of the market systems in which it was interested. Together with selected partners it then facilitated interventions that would address these constraints in a sustainable manner. In eight of the evaluated interventions, the programme identified demand side constraints which it sought to overcome. In six of the evaluated interventions, the programme also identified supply side constraints which it sought to overcome.

<sup>124</sup> See Section 4.5.4 (Efficiency)

Part of the process of identifying constraints and potential stakeholders is identifying how the proposed intervention strategy matches or links with other players in the regional economy. In six of the evaluated interventions the programme matched its interventions with established policies and priorities. Examples of this are; Poultry Health worked with state agencies promoting awareness of the disease, and the CPP and Babban Gona interventions promoted and facilitated processes to increase maize production, in keeping with local state (and federal) priorities.

The ongoing work of the programme's partners speaks to the strengths of the interventions in developing backwards and forwards linkages throughout the market systems. This is particularly prevalent in the Poultry Health intervention, where the programme initiative has resulted in both copying (non-intervention populations taking up the service) and crowding in (companies not directly involved in the intervention replicating or refining and replicating the business model).<sup>125</sup> The programme's initiative of local chicken processing has also emerged from this initiative and public sector players are building on the concept of VBVs to develop a more comprehensive CAHW concept.<sup>126</sup> The interventions in the agricultural inputs market and their related services have also seen some linkages between the interventions, as reported above. Of note, in evaluating the Electronic Warehousing intervention, a respondent unprompted referred to learning Good Agricultural Practice regarding fertiliser from (i.e. copying) a neighbour who was a Babban Gona farmer.<sup>127</sup>

Of the evaluated interventions, eight of the nine (with Soap and Handwashing being the exception) sought to meet beneficiaries' needs by identifying market constraints, either on the demand or supply side or both. In each of these eight evaluated interventions, beneficiaries report either increased access to inputs or services or increased income as a result of this increased access, reinforcing the fact that the designed interventions overcoming market constraints were relevant not only to the market players but also to the beneficiaries.

Sub-Section 4.3 of the Theory of Change explores the questions relating to relevance of the interventions in more detail.

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<sup>125</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Mai-karfi Programme, Northern Nigeria. Interim Phase 2018 Evaluation Report – Poultry Vaccination Intervention, May 2018.

<sup>126</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Mai-karfi Programme, Northern Nigeria. Interim Phase 2018 Evaluation Report – Poultry Vaccination Intervention, May 2018.

<sup>127</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Mai-karfi Programme, Northern Nigeria Interim Evaluation Report – Electronic Warehousing Receipt Intervention. October 2017.

#### 5.4. Cluster 3: Women's Economic Empowerment

- EQ3: How effective was the programme in meeting its results promised for women and girls, who were only 7% of beneficiaries in Propcom 1?

##### Strength of Evidence

|  |                             |                                                                                                                                                         |
|--|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <b>Partially conclusive</b> | Findings are valid because there is a reasonable level of consistency across different interventions, types of data sources, and people's perspectives. |
|--|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|

##### Evaluation Question

##### **EQ3: How effective was the programme in meeting its results promised for women and girls who were only 7% of beneficiaries in Propcom 1?**

The programme significantly increased its reach to women and girls from its historical predecessor, with women and girls constituting 22% of the overall programme reach.

On the other hand, the programme fell short of its logframe target of reaching 250,000 women. The programme only managed to achieve 58% of this target. However, it is worth noting that there appears to be no rational explanation in the business case for the significant increase in this target, possibly failing to take into account economic role of women in northern Nigeria.

The original Propcom Mai-karfi programme had a target of ensuring that at least 7% of its beneficiaries were women. The current Propcom Mai-karfi has a logframe target of ensuring that 50% of its beneficiaries were women. There appears to be no logical explanation for the huge increase in this target, and there is no indication of any rationale in the business case, with the same source acknowledging that women tend to be economically isolated from mainstream markets and often trade through petty trading networks and that the majority are financially excluded.<sup>128</sup> This notwithstanding, the Business Case states that the programme will target markets in which women are already engaged, as it was argued that “experience suggests that working in markets where women are not already engaged will reap reduced and slower impact”<sup>129</sup>

As part of the evaluation a programme-wide Women's Economic Empowerment study was undertaken, selecting four specific interventions to ascertain the effectiveness of the programme in reaching women. This study is attached as Appendix 12.e.

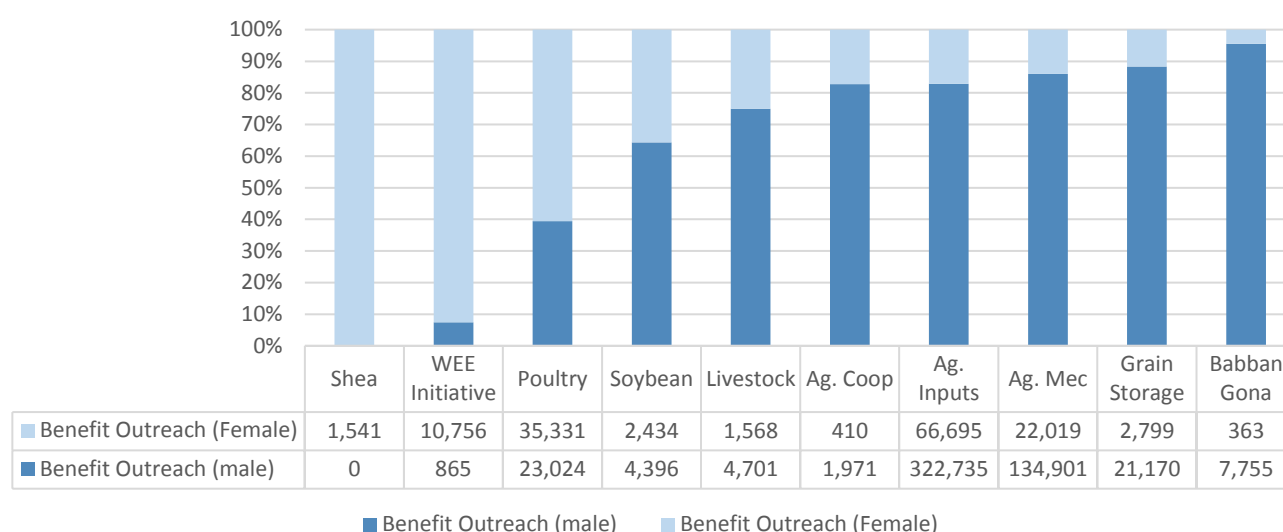
Of all the programme markets, two markets (Agricultural Inputs and Agricultural Mechanisation) proved to be the most effective in reaching women in terms of numbers (See Figure 4) and income (Table 6). This is to be expected from the two legacy markets, given the already substantial foundation on which the interventions could build. It is not clear in the Agricultural Inputs market, the extent to which the interventions targeted crops that are traditionally grown by men and those grown by women, and whether separate strategies were followed for these specific crops. The need for separate strategies was reinforced in the WEE evaluation study where women felt that they might have been more receptive to the GAP and application message by employing alternative outreach strategies.<sup>130</sup>

Two of the evaluated interventions specifically targeted women (Rice Parboiling and Tillers) and identified specific strategies to empower women by identifying constraints that were peculiar to women in these sectors. Two others (Poultry Health and Feed Finishing) specifically identified women as beneficiaries but did not explicitly identify appropriate strategies to engage with these women. The other evaluated interventions were gender blind in that they did not identify women specific constraints and did not, as a result plan or include activities to overcome these constraints.

<sup>128</sup> Propcom Mai-Karfi : A rural market development programme for northern Nigeria, November 2012. p9.

<sup>129</sup> Propcom Mai-Karfi : A rural market development programme for northern Nigeria, November 2012. p17.

<sup>130</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (PrOpCom) Mai-karfi Programme, Northern Nigeria Interim Evaluation Report – Propcom Mai-karfi's Effectiveness in Reaching Women and Women's Economic Empowerment, April 2018. P13.

**Figure 4: Gender Outreach of Evaluated Intervention (%)**

As previously mentioned, the programme estimates that it benefitted 144,000 women<sup>131</sup> or 58% of its set target. In keeping with the overall outreach, the Agricultural Inputs market reached the largest percentage of women achieving 46% of the total women beneficiaries. The Poultry Health market reached the next greatest percentage of women with 24.5% and of this 19.5% were reached through poultry vaccination, with the remaining percentage reached through chicken processing. (See Table 8).

In terms of reported increase in women's incomes, Agricultural Inputs was again the market responsible for the largest value (40%) and agricultural mechanisation with 28%. Poultry vaccinations, which reached the second largest group of women beneficiaries was only responsible for 4.6% of the total value of income increase (See Table 9). There could be several reasons for this including the fact that women are often caretakers of household poultry and so will be counted as beneficiaries in terms of reach, but might not act as the beneficiary of increased income from the intervention.<sup>132</sup> However, it is more likely that although poultry acts as a significant market for reaching large number of women, and though in relative terms the effectiveness was strong (net incomes increased by a factor 2.7) it is not the most efficient means of increasing women's incomes since the base is small.<sup>133</sup>

It is worth noting that the later intervention of local chicken processing, which also targeted women, reached only 5% of the women beneficiaries but was responsible for 2.2% of the value of increased women incomes (See Table 9). Given the likelihood that the latter would be unsustainable without the former, if the two interventions are combined, they are responsible for a quarter of the women reached, and rank as the intervention responsible for the greatest increase in women's increased income behind the legacy interventions of tractors and fertiliser.

In terms of its implementation, the programme commissioned the development of a gender strategy to assist it in reaching women, about midway through implementation. The aim of this strategy was to assist the programme in more accurately identifying and addressing women specific market constraints, in keeping with the M4P methodology, but also to promote the development of interventions that increased women's access to economic assets and resources and improved their voice and control over

<sup>131</sup> Estimates are that the programme reached 212 000 women.

<sup>132</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (PrOpCom) Mai-karfi Programme, Northern Nigeria, Baseline Report - Quantitative Poultry Health Market Survey, December 2015

<sup>133</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Mai-karfi Programme, Northern Nigeria, Endline Evaluation Report – Poultry Health, June 2018, page 3. In this intervention, the programme reported even less of an average income increase of just £7.63 per women and an average overall income increase of just £9.51.

these assets while improving their agency within the market systems. As a result, the programme subsequently implemented both gender blind and women specific interventions simultaneously.

**Table 8: Programme Outreach by Market (Women)**

| Market                     | Benefit Outreach (Overall) |               |
|----------------------------|----------------------------|---------------|
| Agricultural Inputs        | 66,695                     | 46.3%         |
| Poultry Health             | 35,331                     | 24.5%         |
| Agricultural Mechanisation | 22,019                     | 15.3%         |
| Women Economic Empowerment | 10,756                     | 7.5%          |
| Grain Storage              | 2,799                      | 1.9%          |
| Soybean                    | 2,434                      | 1.7%          |
| Livestock                  | 1,568                      | 1.1%          |
| Shea                       | 1,541                      | 1.1%          |
| Agricultural Cooperatives  | 410                        | 0.3%          |
| Babban Gona                | 383                        | 0.3%          |
| Environmental Initiatives  |                            | 0.0%          |
| <b>Total</b>               | <b>143,936</b>             | <b>100.0%</b> |

**Table 9: Increase in Income by Market (Women)**

| Market                        | Benefit Outreach (Overall) |               |
|-------------------------------|----------------------------|---------------|
| Tractor Financing             | 1,300,021                  | 29.0%         |
| Fertiliser North East         | 1,067,414                  | 23.8%         |
| Fertiliser Distributer (2016) | 801,167                    | 17.9%         |
| Babban Gona                   | 315,074                    | 7.0%          |
| Poultry Scale up              | 213,930                    | 4.8%          |
| Electronic Warehousing        | 166,646                    | 3.7%          |
| Feed Finishing                | 126,818                    | 2.8%          |
| Notore DEEP (2012)            | 123,714                    | 2.8%          |
| Rice Parboiling               | 118,838                    | 2.7%          |
| Local Chicken Processing      | 104,032                    | 2.3%          |
| VSO Soybean                   | 76,533                     | 1.7%          |
| Notore SVP (2014)             | 62,234                     | 1.4%          |
| <b>Total</b>                  | <b>4,476,421</b>           | <b>100.0%</b> |

It is not clear from the evaluation results, which of these strategies was most effective in reaching women. Benefitting and empowering women in the areas of the market system, other than as end users, consumers or beneficiaries, has proved difficult. Part of the reason for this, is that it is often unclear from programme documentation, whether the interventions sought to overcome WEE constraints as opposed to the market system constraints, or whether these were one in the same thing. While the market constraints in Rice Parboiling are directly linked to WEE, given the dominance of women in the market, in the other markets systems this linkage is less obvious.

In all the interventions, where women have owned an asset, they have been in control of the income derived from that asset. In the gender-blind interventions assessed in this study, women report a direct link between their increased income and an increased voice, standing and agency both within their households and within their communities. It can also be stated however that interventions aimed uniquely at women, for example Rice Parboiling have been successful, but generally require more programme resources than gender-blind interventions.

#### 5.5. Cluster 4: Building Resilience

- EQ4: How effective was the programme in decreasing vulnerability to shocks, trends and seasonality of poor women and men engaged in selected rural markets?
- EQ11: What is the effect of climatic and food shocks on the programmes interventions?

- EQ12: How did the programme's portfolio composition mitigate exposure to risk?

**Strength of Evidence**

|  |                   |                                                                                                                                                        |
|--|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <b>Conclusive</b> | Findings are very valid because there is a high level of consistency across different interventions, types of data sources, and people's perspectives. |
|--|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|

**Evaluation Question****EQ4: How effective was the programme in decreasing vulnerability to shocks, trends and seasonality of poor women and men engaged in selected rural markets?**

The programme increased incomes of beneficiaries by almost £41 per capita. Men's per capita incomes increased by approximately £43 compared to women's average per capita increase of £32.6.

Increased incomes were reported in seven of the evaluated interventions and it is likely that this contributes towards the increased resilience of households, with respondents reportedly increasing their investment in the activity that has earned them more money, diversifying their income streams, and investing in their children's education. All of these activities speak to a household spreading its risk and therefore increasing its resilience. Increased knowledge and skills also contributed to the households' resilience.

**EQ11: What is the effect of climatic and food shocks on the programmes' interventions?**

The programme did not actively mitigate its risk of exposure to climate and weather shocks as part of its overall portfolio but it would have been unrealistic to expect otherwise. Individual interventions however spoke specifically to climate and weather shocks experienced by households, for example some agricultural interventions spoke to the more efficient use of water and agrochemicals as well as the use of manure as a much.

Two communities forming part of the evaluation reported unanticipated shocks as a result of bandit related crime including kidnappings, rape and cattle rustling. The evaluation found that the interventions likely contributed to these households' resilience, cooking them to deal more effectively with food shocks.

**EQ12: How did the programme's portfolio composition mitigate exposure to risk?**

The programmes' interventions were spread across a wide geographic area, mitigating against the risk associated with instability and insurgency that is commonplace in northern Nigeria. The programme's liaison and interaction with both political leadership as well as public sector bodies, assisted in this regard. Further, the programme was responsive to the political economic reality of the provinces in which was working, and responded appropriately, where necessary. In some cases, this might have entailed prematurely closing an initiative in a particular area and refocusing resources in another location.

As part of its brief, Propcom Mai-karfi contributed to "Sustained increases in the incomes of poor women and men engaged in selected rural markets in northern Nigeria",<sup>134</sup> increasing beneficiaries' resilience and ability to recover from both negative seasonal trends and unforeseen shocks. Overall the programme increased incomes of beneficiaries by over £27 million or a per capita increase of almost £41. Men's per capita incomes increased by approximately £43 compared to women's average per capita increase of £32.6.

Of the evaluated interventions, three, (Poultry Health, Babban Gona, and Electronic Warehousing) have contributed directly to increased household resilience. In the case of Poultry Health, the vaccination intervention was directly aimed at combatting a seasonal scourge of poultry deaths during harmattan. In the case of Babban Gona the intervention created a link between the farmers and international buyers of maize who were prepared to pay higher than local prices, as long as quality criteria were met. And in

<sup>134</sup> Propcom Mai-karfi Logframe. <https://goo.gl/oaegm3>

the case of Electronic Warehousing the participating farmers had an opportunity to store and sell their maize 1) beyond the farmgate to a wider marketplace with a greater number of buyers and 2) outside of the harvest season where harvest linked gluts drive prices down. In these three instances;

- Vaccinating households report that they have lost nearly no chickens since implementing the practice, in comparison to on average 11 chickens before the intervention, and that their incomes from poultry have increased by 170%.<sup>135</sup>
- Babban Gona farmers report that their efficiencies have increased and that their average net incomes doubled, although the same held true for the farmers in the comparison group.<sup>136</sup>
- Farmers participating in the Electronic Warehousing scheme reported earning more from their harvest and earning more per sold bag of grain.<sup>137</sup>

In both the markets where we gathered quantitative data, (Poultry Health and Babban Gona) households reported that their incomes increased and the endline evaluation studies ascertain confidence in the contribution of the programme intervention to the increase incomes.<sup>138</sup>

Increased incomes were reported in seven of the evaluated interventions (in addition increased savings were reported in Poultry Health and Syngenta Crop Protection) and it is likely that this contributes towards the increased resilience of households. This increase is reinforced in a number of ways; respondents report increasing their investment in the activity that has earned them more money (poultry or maize farming), of diversifying their income streams by either planting other crops or by investing in another business, and of investing in their children's education. All of these activities speak to a household spreading its risk and therefore increasing its resilience. An increase in knowledge or skills (or both) will also contribute to a household's increase in resilience, and this was a component of seven of the evaluated interventions.

In collecting endline data for the Poultry Health endline, two of the intervention communities reported unanticipated shocks as a result of bandit related crime including kidnappings, rape and cattle rustling. In a separate analysis<sup>139</sup> the evaluation found that on their return, almost all of them immediately began keeping, vaccinating and selling chickens, indicating the central contribution of this asset to a household's resilience.

There is a strong programme presence in a number of interventions throughout the Agricultural Inputs market system; from the facilitation of the provision of seeds, to fertiliser and Crop Protection products. Outside of the agricultural inputs but associated within the wider agricultural market system, the programme worked in the areas of agricultural cooperatives and grain storage for example. This went some way to allow the programme to build on lessons learned from parallel interventions and to link individual interventions by giving them additional value and leverage. It is likely that individual, standalone interventions, would have had benefit but, lacking the additionality, this benefit might have been less prominent. Similarly, the benefits of poultry vaccination<sup>140</sup> provided some input and opportunity for the programme to embark on an intervention focussing on local chicken processing.

<sup>135</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Mai-karfi Programme, Northern Nigeria, Endline Evaluation Report – Poultry Health, June 2018 and Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (PrOpCom) Mai-karfi Programme, Northern Nigeria, Baseline Report - Quantitative Poultry Health Market Survey, December 2015.

<sup>136</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Mai-karfi Programme, Northern Nigeria Endline Evaluation Report – Babban Gona

<sup>137</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Mai-karfi Programme, Northern Nigeria Interim Evaluation Report – Electronic Warehousing Receipt Intervention. October 2017.

<sup>138</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Mai-karfi Programme, Northern Nigeria, Endline Evaluation Report – Poultry Health, June 2018 and Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (PrOpCom) Mai-karfi Programme, Northern Nigeria Baseline Report – Babban Gona Baseline Survey March 2016

<sup>139</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Mai-karfi Programme, Northern Nigeria, Endline Evaluation Report – Poultry Health, June 2018

<sup>140</sup> The endline evaluation report on poultry vaccination (Upper Quartile, PO6311 Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Mai-karfi Programme, Northern

Given the reliance of the northern Nigerian economy on agriculture, the programme focussed on this sector in the design and implementation of its interventions. As a result of this focus, the programme did not actively mitigate its risk of exposure to climate and weather shocks, but it would have been unrealistic to expect the programme to do otherwise.

Within the individual interventions however, there were notable factors which mitigated the risk of farmers to climate and weather shocks. The interventions that focussed on GAP or on animal husbandry transferred skills that aid the farmer in more efficient use of water and agro-chemicals. In addition, Babban Gona farmers are encouraged to make use of manure as a mulch and fertiliser. Feed finishing beneficiaries corralled their livestock more closely and as a result would have reduced adverse livestock impact on the immediate environment.

Sections 4.6 and 4.7 of the Theory of Change Chapter explore the questions relating to resilience in more detail.

### 5.6. Cluster 5: Facilitating Market Change

- EQ6: Were the interventions really catalytic, did this lead to systemic change resulting in better access to services and inputs? (Impact and sustainability in the DAC criteria)
- EQ7: To what extent did the programme's interventions stimulate the continuation in the market of existing players and the entry of other players into the market in a long term, positive and sustainable way? (Sustainability in the DAC criteria)

#### Strength of Evidence

|  |                   |                                                                                                                                                        |
|--|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <b>Conclusive</b> | Findings are very valid because there is a high level of consistency across different interventions, types of data sources, and people's perspectives. |
|--|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|

| <b>Evaluation Question</b>                                                                                                                                                                                                                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>EQ6: Were the interventions really catalytic did this lead to systemic change resulting in better access to services and inputs? (Impact and sustainability in the DAC criteria)</b>                                                                    |
| The two legacy markets of the programme, agricultural mechanisation and agricultural inputs, point to a significant increase in scale of market interventions, given sufficient time.                                                                      |
| Three of the evaluated interventions, in addition to these legacy markets show positive indicators towards catalytic change.                                                                                                                               |
| <b>EQ7: To what extent did the programme's interventions stimulate the continuation in the market of existing players and the entry of other players into the market in a long term positive and sustainable way? (Sustainability in the DAC criteria)</b> |
| The programme sought to involve private sector and public sector partners in each of the interventions. In each case it sought to leverage these partners' interests in the sector rather than replace them with programme-led initiatives.                |

Under M4P approach, scale is usually achieved through catalytic change, e.g. additional changes that were not predicted by the intervention but were induced by it.

Three of the evaluated interventions have shown positive indications towards catalytic change.

Nigeria, Endline Evaluation Report – Poultry Health, June 2018) accounts that many households within the intervention group and now perceiving their chickens as a viable commercial asset, rather than a household asset and are investing in their chickens and selling them in the market. The chicken processing intervention was a natural extension of this outcome.

- As mentioned in the Cluster 2, the business model piloted under the Poultry Health Intervention<sup>141</sup> has resulted in both copying (non-intervention populations taking up the service) and crowding in (companies not directly involved in the intervention replicating or refining and replicating the business model) by a number of private sector partners refining and adopting the model, another donor programme refining the model for their purposes, and a public sector player using the model (with the assistance of the programme) as a foundation of a larger outreach model. Vaccinators are setting up their own local distribution systems, resulting in greater outreach. At the economic activity level, women and men in areas not targeted by the intervention make efforts to obtain vaccination services despite their distance from the original targeted areas.
- Farmers who are not direct AFEX clients are copying the GAP. This is also true for farmers living near Babban Gona members. Both Babban Gona and AFEX markets are expanding so which will likely lead to additional indirect benefits to farmers.
- In the Electronic Warehousing intervention, the private sector partner is using the success of the programme supported intervention to support regulatory changes that are required for the warehousing initiative to reach its full potential.<sup>142</sup>

Sub-Sections 4.6. and 4.7. of the Theory of Change explore the questions relating to the catalytic effect of the programme activities in more detail.

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<sup>141</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (Propcom) Mai-karfi Programme, Northern Nigeria. Interim Phase 2018 Evaluation Report – Poultry Vaccination Intervention, May 2018.

<sup>142</sup> Interview with AFEX staff, Abuja, 8 February 2018.

## 5.7. Cluster 6: Operating in Fragile Environments

- EQ10: What is the effect of insecurity on the programme's interventions?

### Strength of Evidence

|  |                             |                                                                                                                                                         |
|--|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <b>Partially conclusive</b> | Findings are valid because there is a reasonable level of consistency across different interventions, types of data sources, and people's perspectives. |
|--|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|

### Evaluation Question

#### EQ10: What is the effect of insecurity on the programme's interventions?

Adverse socio-economic activity and political instability in the locations in which the programme was operational impacted on the programme's effectiveness, scale and reach. Due to this instability certain interventions were paused or closed.

However, the programme was designed as being market led, and as a result flexibility and responding to changing market circumstances were built into the design. Consequently, although some costs associated with these closed interventions might have been irrecoverable, the programme was able to redeploy resources to other, more stable areas. It is worth noting that as an M4P initiative, the programme was dependent on public and private sector partners risk appetite which could be adversely affected by levels of insecurity.

Insecurity in northern Nigeria has been a challenge to the implementation of the programme. The deteriorating security situation in the country was noted as an implementation risk in the Business Case<sup>143</sup> but was also identified as a core rationale for the programme.

Insecurity did affect programme implementation, with interventions in certain states being paused or implementation being impaired as a result of security concerns. In some cases, programme partners found it difficult to travel to conflict areas, impacting on the intervention implementation, and affecting their profitability, scale and sustainability. The programme has reported on these issues regularly.<sup>144</sup> While the programme implemented prescribed security measures, the fluid security situation in the operating environment necessarily had an impact on outreach and efficiencies.

These impacts were not limited to programme staff and their day-to-day activities. By its very nature an M4P programme is reliant on its partners to implement interventions, both in pilot and roll out. As such, the deteriorating situation also impacted on programme partners. In the early stages of the programme, it is reported that a partner "clearly assessed the threat [to be] much higher than we did. He told us he would not go there [Borno]".<sup>145</sup> Attitudes such as this obviously impact on any intervention's efficiencies and attempts to reach scale, increasing the cost per head of outreach.

However, as has been seen in the poultry health intervention, the programme's activities with its commercial partners also provide opportunities and tools for populations affected by the insecurity to begin to rebuild their lives. One of the studies (of farmers influenced by Babban Gona) indicated the security situation had *improved*, which had resulted in "Buyers com(ing) from as far as Niger, Chad, and Cameroon"<sup>146</sup>. There are also references throughout the studies of large buyers of agricultural produce establishing themselves in local markets as a result of import restrictions, and demand therefore being stronger, indicating that the impact of insecurity on market conditions may have been relatively limited. If conditions do not worsen and the Government's policy remains in place, the sustainability prospects are therefore positive.

<sup>143</sup> Propcom Mai-Karfi : A rural market development programme for northern Nigeria, November 2012. p5.

<sup>144</sup> See for example : Propcom Mai-karfi, Quarterly Progress Reports, June and September 2013 and March 2016.

<sup>145</sup> Propcom Mai-karfi, Progress Report, June 2012 – July 2013.

<sup>146</sup> Independent Evaluation for Promoting Pro-poor Opportunities in Commodities and Service Markets (PrOpCom) Mai-karfi Programme, Northern Nigeria Interim Phase 2016 Evaluation Report, p. 19

## 6. Lessons Learned, Recommendations and Conclusions

This section states the lessons and corresponding recommendations that can be drawn from observing the process followed to increase incomes and build resilience. The lessons are grouped into five themes. Associated recommendations are based on the lessons provided in each theme; Beneficiary investment and resultant impact, Interventions targeting women, Acknowledging the external environment, Trading on partners' strengths and Designing M4P interventions.

PM-k interventions contributed to the programme goal of increased incomes. This in turn contributed to increased household resilience, through both reinvestment and diversification. Knowledge and skills transfer reinforced an increase in resilience of the households' economic activities. While women have benefitted from the interventions in which they participated, the evaluation reiterates the observation from the business case that women tend to be more isolated from the economy and as a result have less direct access to services, inputs and knowledge than men. The programme made little progress in increasing women's direct access and involving women more directly in the economy. While this was an objective of the programme's WEE strategy (See Appendix 12.e.), it is one that falls outside the direct mandate of the programme and will require considerable time and resources. The landless and poorest households have often not benefitted from more inclusion in the market.

In designing interventions that were relevant not only to market constraints but also to beneficiaries' needs, PM-k has achieved its objective of increasing productivity and quality improvement, for men and women, seen through their increased incomes. Some of these interventions have led to catalytic change as illustrated through copying of behaviour. Qualitative evidence from at least three interventions indicates that beneficiaries have often been regarded as a source of information and "good practice" as a result of their participation in the intervention, with community members seeking their advice.

**Table 10: Lessons Learned and Recommendations on Beneficiary Investment and Resultant Impact**

| Theme: Beneficiary Investment and Resultant Impact |                                                                                                                                                                                                                                                                                                                                                                                                            | Audience                 |
|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| Lessons Learned                                    |                                                                                                                                                                                                                                                                                                                                                                                                            |                          |
| Lesson 1                                           | When households recoup (or increase) their initial investment in a new product or service over a relatively short period of time, they are likely to reinvest in either the same economic activity or diversify their economic activities. A reinvestment in the same activity is likely to contribute towards increased demand for the product or service, contributing towards sustainability and scale. | M4P programmes           |
| Lesson 2                                           | If initial investment in new good or service are recouped (or increased) over a relatively short period of time, it is likely that this will contribute to an increase in disposable income within the household. This increase in disposable income is likely to increase resilience.                                                                                                                     | M4P programmes           |
| Lesson 3                                           | When beneficiaries display a fast ROI there is an increased likelihood of copying. When there is a low barrier to entry there is an increased likelihood of copying.                                                                                                                                                                                                                                       | M4P programmes           |
| Lesson 4                                           | Some interventions might directly contribute to resilience through information and skills transfer, which may not be reflected in the intervention design.                                                                                                                                                                                                                                                 | M4P programmes           |
| Lesson 5                                           | Reports from women indicate that they are more likely to invest a return on their investment in family members and the community; in education, health care, clothes and social obligations, in addition to a reinvestment in their economic activity and/or diversification.                                                                                                                              | M4P programmes<br>Donors |

| Recommendations  |                                                                                                                                                         |                                     |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| Recommendation 1 | Programmes should take the period for ROI into account when designing their interventions and prepare for an increase in scale relative to this period. | M4P programmes                      |
| Recommendation 2 | Programmes may want to consider trying to measure or assess interventions' contribution to increased resilience other than income increases.            | M4P programmes<br>Propcom Mai-karfi |
| Recommendation 3 | Women may prove to be a more effective route to contribute to a programme's wider social impact beyond increased incomes.                               | Donors                              |

Propcom Mai-karfi empowered women largely by default rather than design, missing an opportunity for involving greater numbers and economically empowering more women. Apart from rice parboiling and tillers none of the evaluated interventions included specific measures to include more women, even in markets in which women have a strong presence, in contrast to the business case. Programme partners were not convinced of a business rationale for targeting women possibly because of overriding cultural norms regarding gender roles, limiting their vision.

**Table 11: Lessons Learned and Recommendations for Interventions Targeting Women**

| Theme: Interventions Targeting Women |                                                                                                                                                                                                                                                                                                                  | Audience                 |
|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| Lessons Learned                      |                                                                                                                                                                                                                                                                                                                  |                          |
| Lesson 6                             | The interventions that exclusively targeted women achieved a smaller scale of impact than those that included them as part of the broader target group in the market.                                                                                                                                            | M4P programmes<br>Donors |
| Lesson 7                             | The interventions that targeted women exclusively were more costly in terms of reach and less efficient in terms of generating both individual ROI and programme benefit.                                                                                                                                        | M4P programmes<br>Donors |
| Lesson 8                             | The increased cost of women specific interventions impacted on the probable sustainability and scale of the interventions, affecting partner participation.                                                                                                                                                      | M4P programmes           |
| Lesson 9                             | Interventions, even if they are gender blind, in markets with a high representation of women are more likely to reach and benefit many women than those that target women exclusively.                                                                                                                           | M4P programmes           |
| Lesson 10                            | A M4P programme by its nature benefits individuals who can afford to acquire additional goods and services to improve their incomes. While this contributes to reducing poverty in these households the methodology is less successful at reducing poverty amongst the poorest of the poor, who are often women. | Donors                   |
| Recommendations                      |                                                                                                                                                                                                                                                                                                                  |                          |
| Recommendation 4                     | When designing interventions targeting women, programmes should take into account the increased investment needed to specifically reach women, often as a result of overcoming social and cultural barriers.                                                                                                     | M4P programmes           |
| Recommendation 5                     | When designing interventions targeting women, programmes should communicate with their partners the likely lengthier time and higher initial costs that these interventions may take to reach scale and sustainability.                                                                                          | M4P programmes           |
| Recommendation 6                     | Programmes should recognise the social and cultural barriers that partners themselves may need to overcome in recognising the drive to economically empower women. Their lack of awareness                                                                                                                       | M4P Programmes           |

|  |                                                                                                                                                                                                                                                         |        |
|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
|  | of women as active members of the economy, may inadvertently hinder an intervention's reach, profitability, sustainability and scale. These internal barriers might impact a programme's attempts to reach more women through mainstream interventions. | Donors |
|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|

M4P programmes operate within economic environments over which they have no control and very limited influence. In some cases this environment can negatively impact the outreach, scale and sustainability of a programme, but in other cases the same environment might inadvertently contrite to the programme's targets. Nigerian restrictions on a number of agricultural imports might have positively affected Propcom Mai-karfi's scale and sustainability in a number of interventions; including those affecting maize and chickens.

Very few market constraints are as a result of a simple oversight or missing market component. In many cases there are numerous factors affecting the lack of market activity. As a result it is often unlikely that a single programme partner can overcome these constraints. In at least two of the Propcom Mar-karfi interventions, (Poultry Health and EWRS), a number of partners played specific and defined roles in designing a successful business model.

**Table 12: Lessons and Recommendations on Acknowledging the External Environment**

| Theme: Acknowledging the External Environment |                                                                                                                                                                                                                                                          | Audience                            |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| <b>Lessons Learned</b>                        |                                                                                                                                                                                                                                                          |                                     |
| Lesson 11                                     | While increased productivity leads to greater efficiencies, external conditions such as growing demand are beyond the control of the programme but have great impact on the success of interventions and sustainability and scale of their achievements. | M4P programmes                      |
| <b>Recommendations</b>                        |                                                                                                                                                                                                                                                          |                                     |
| Recommendation 8                              | To the extent possible, external conditions should be taken into consideration in selecting potential intervention markets. For an M4P programme this may mean changing focus on markets that benefit from a more favourable external environment.       | M4P programmes<br>Propcom Mai-karfi |

Several programme interventions contributed to systemic change in the core and support markets. Business models have demonstrated viability and are being continued independently or with reduced support and in geographically expanded areas. The Poultry Health intervention has resulted in the highest level of systemic change and has been catalytic in terms of drawing in other market players, including in the public sector.

Key reasons for this success include good business models that address partners' incentives and adapting them when pilots indicate this is needed. Generally, successful pilots do not include elements that cannot be maintained without project support and do include partners who play the lead role. The rice parboiling, the Feed Finishing and the Syngenta CPP pilot interventions involved unsustainable components which could have been foreseen. In Poultry Health the programme demonstrated that an initially passive partner could come on board with more intensive support and following positive effects on sales. Conducive market conditions (strong demand for chickens, maize and other grains) played an important role in driving change in the support and core market systems.

**Table 13: Lessons and Recommendations on Designing M4P Interventions**

| Theme: Designing M4P interventions |                                                                                                                                                                                                                                                                                                                                        | Audience                                      |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| <b>Lessons Learned</b>             |                                                                                                                                                                                                                                                                                                                                        |                                               |
| Lesson 14                          | Especially in rural areas CBOs and faith based organisations can facilitate access to potential beneficiaries, especially to women, increasing outreach and therefore the potential for scale.                                                                                                                                         | M4P programmes<br>Propcom Mai-karfi           |
| Lesson 15                          | Pilots that include unsustainable elements (e.g. project-funded staff and bonuses) are likely to fail. Scaling up and sustainability, especially without crowding in, requires internal partner resources that need to be mobilised independently of the programme.                                                                    | M4P programmes<br>Propcom Mai-karfi           |
| Lesson 16                          | Companies requiring dealers and retailers to pay in cash limits distribution of their products and constrains the possibility and likelihood of scaling up. This is particularly true in environments where access to finance is curtailed.                                                                                            | M4P programmes<br>Propcom Mai-karfi<br>Donors |
| Lesson 17                          | Two of the three most successful interventions are based on business models largely developed by the partners, with the partner in the lead and PM's support consisting mainly of investment capital loans and limited technical assistance.                                                                                           | M4P programmes                                |
| Lesson 18                          | Two of the programme's most successful interventions in terms of reach and efficiency were legacy interventions, indicating that M4P programmes take time to achieve scale.                                                                                                                                                            | Donors                                        |
| <b>Recommendations</b>             |                                                                                                                                                                                                                                                                                                                                        |                                               |
| Recommendation 10                  | Pilot interventions should be designed with expansion and scale up in mind. Unsustainable elements that will not feature in an expanded model, should not form part of a pilot design.                                                                                                                                                 | M4P programmes<br>Propcom Mai-karfi           |
| Recommendation 11                  | In targeting potential partners a programme should, to the extent possible, take the partner's own internal constraints (cash flow, expansion capacity, etc.) into account. Clear communication between parties at the outset regarding requirements and capacity may help avoid surprises.                                            | M4P programmes<br>Propcom Mai-karfi           |
| Recommendation 12                  | Programmes should positively consider interventions where there is scope for both public and private sector partners and where both sets of players can commit to their roles, supporting the role of their interventions partner(s). Similarly, the programme should play to its own strengths as a catalytic funder and facilitator. | M4P Programmes                                |
| 3Recommendation 13                 | Programmes should consider the benefit of accessing non-traditional M4P organisations and networks to access potential beneficiaries.                                                                                                                                                                                                  | M4P programmes                                |
| Recommendation 14                  | M4P programmes should be regarded by all stakeholders (from donors, to programmes, to partners) as long term programmes, which might only achieve scale over a number of years.                                                                                                                                                        | Donors                                        |

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