

ANNUAL REPORT – YEAR THREE

Market Development (MADE) for Northern Ghana Programme



SUBMITTED TO
DFID Ghana

SUBMITTED BY
Nathan Associates London Ltd
www.nathanlondon.co.uk

(Under DAI Wealth Creation Framework)



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Table of Contents

Introduction	1
Section 1. Overall Programme Achievements	3
1.1 Impact and Outcome Levels	5
1.2 Output Level.....	6
Section 2. Progress Towards Systemic Change	11
2.1 Onions and Vegetables.....	11
2.2 Rice	13
2.3 Groundnuts	16
2.4 Crossmarket Interventions	17
2.5 Market Interventions Lessons Learned.....	19
Section 3. Cross Cutting Areas.....	21
3.1 Gender	21
3.2 Knowledge Management and Communications	22
3.3 Business Growth Accelerator (BGA).....	23
Section 4. Programme Systems and Procedures.....	24
4.1 Monitoring and Results Measurement Systems	24
4.2 Value For Money (VfM).....	25
4.3 Programme Management	25
Annex 1: List of Informal rules and Norms.....	27
Annex 2: Updated Risk Matrix	28
AnneX 3: VfM Indicators	31

Introduction

This Annual Report considers MADE's achievements during the third year of implementation against logframe. It also details more specifically the progress and changes in approach to each of the core and supporting markets over the past year as well as the adjustments and lessons learned with regards to the configuration of the team and systems and procedures adopted to properly implement, realise, and measure the goals set out for year 4.

The report is set out as follows:

- Section 1 presents the overall programme achievements from year 3 against the logframe;
- Section 2 details the progress towards systemic change broken down by each core market and cross cutting market;
- Section 3 reflects on the how the work in cross cutting areas of gender, communications, and knowledge management has been further integrated into the MADE programme; and
- Section 4 outlines changes to MADE's operational systems and procedures including Monitoring and Results Measurement (MRM) systems, Value for Money (VfM), and overall programme management and team structure. This section also outlines activities undertaken during the year to verify changes being observed, including beneficiary feedback

The overall context supporting the intervention as outlined in the original programme business case has not changed significantly, although poverty in the three northern regions has decreased marginally. Overall, the three northern regions remain the poorest in Ghana, with more than 2/3rds of the population living on less than \$2 a day, and agriculture yields still amongst the lowest in the world.

Nationally, Ghana's growth is slowing, with signs that the economy is increasingly vulnerable, as prices of its main commodities (cocoa, oil and gold) remain volatile. For Northern Ghana and from a MADE implementation perspective, the core problem remains the challenge of operating in "thin markets" with the following defining characteristics:

- i. *Limited interaction between market actors*: Limited interaction between actors is partially as a result of the geographic spread between market players and the fact that they are poorly connected due to limited transport and communication infrastructure.
- ii. *Lack of information*: Players within the market are not aware of demands, availability of resources, information on product and service requirements, standards and specifications of products, processes and services that the various actors need to act upon.
- iii. *Limited line of sight*: Partially as a result of the lack of information market players are often unaware of opportunities.
- iv. *High expenses to access market*. It is often cheaper to import certain goods into Ghana than to produce in Ghana at scale. The high cost of doing business also relates to the geographical dispersion of the market, and problems with infrastructure.
- v. *Dearth of support services*. There is very limited support service provision and infrastructure to assist new market entrants to survive. Services that do exist are often of poor quality, expensive to access and provide limited access.
- vi. *Small scale*: Many potential market players produce at a scale that is not viable. There is, also, limited cooperation between these types of players to increase their scale of production to make their produce or output more attractive to the market.
- vii. *Regional/local governance and agricultural policy*: Government policy and procurement has an impact on thin markets e.g., impact of procuring maize and soya by the government. Government policy might inadvertently potentially displace existing providers of goods and services increasing the length of time that markets remain thin. The case of the new government's Planting for Food and Jobs (PFJ) is an example. There is a high likelihood of the PFJ contributing to distortions in some of MADE's focus markets.
- viii. *Cultural view of what constitutes a market*: Individual's personal perceptions affect their ability to actively contribute to the market. Even when presented with an opportunity some

individuals will fail to take advantage. An ongoing and widespread pattern of this behaviour often results in negative views of the potential market.

On the plus side, there is potential to leverage learning from MADE to improve agricultural productivity and diversify sources of economic growth for Ghana more broadly. At the outset of Year 3, MADE had already developed budding partnerships across its four market sectors (rice, groundnuts, onions, and other vegetables) with agribusinesses that currently act as agricultural produce aggregators (or have the potential to do so) and small businesses that deal in agricultural inputs in local communities. The programme to date has leveraged its relationships with these partners to improve smallholder farmers (SHFs) access to and use of improved inputs and services including extension service, improved seeds, tractor and other land preparation services, etc. The increased access and use of the inputs has enabled the SHFs to experience yield increases at the end of the cropping season.

Within this context, MADE developed three strategic objectives for Year 3:

- i. **Yield and Productivity** gains by deepening and broadening exchanges initiated during years 1&2 between smallholder farmers and rural entrepreneurs especially at the output level, i.e., improved access to inputs and services.
- ii. The deepening of **Behaviour Change** interventions aimed at increasing and locking in investment at the level of individual market players. The behaviour changes are intermediate outcomes that contribute to and ensure sustainability of the programme's outcomes beyond the lifespan of the programme.
- iii. The **Crossmarket** (formerly "catalytic") interventions aimed at fostering market wide changes which, when combined with the changes at the individual market player level, will help trigger lasting transformative and systemic changes.

By the end of Year 3, MADE has facilitated 48 market actors to change their business practices and seen uptake by over 37,000 smallholder farmers and small scale entrepreneurs (17,000 of which are women) to use new or improved inputs designed to improve their productivity and profitability. This has been further reinforced by the achievement of support output level targets such as MADE's ability to facilitate the development of 17 new or improved services and products to date being provided to smallholder farmers and small scale entrepreneurs.

These improvements are being reflected in the achievements at the outcome level, as farmers have had another season to apply the new and improved inputs to their own fields. Over 32,000 (14,000 of which are women) farmers to date have reported increases in yields.

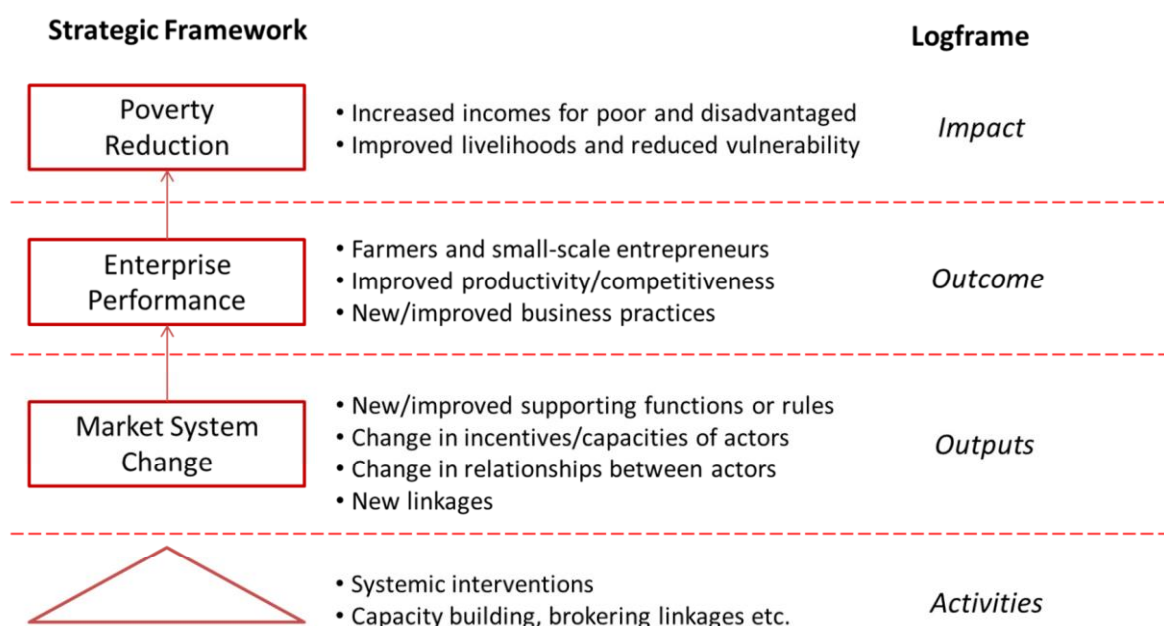
Following these encouraging results, MADE looks to consolidate, bundle, and scale-up its interventions in its final year of implementation. This is outlined in the Year 4 Business Plan.

Section 1. OVERALL PROGRAMME ACHIEVEMENTS

This section reports on achievements against the programme logframe for Year 3 (April 2016 - March 2017).

The logframe follows the strategic framework (see Figure 1) common to all market systems and sets out the logic that underpins MADE's work across the CORE set of exchanges between providers and consumers of goods and services, that help shape the market outcomes, and the SUPPORT functions that help the market develop and grow.

Figure 1. Market Systems Framework



MADE works by engaging with partners to design and implement interventions that address market weaknesses and constraints hindering the development and pro-poor growth in northern Ghana. The interventions are targeted at bringing about systemic change to achieve the desired impact of poverty reduction, applying the logic that simply making available inputs is not the solution. This transformational approach in tackling the problems of the region is in response to the weak performance of many development interventions in northern Ghana over the last few decades which have brought about short-term gains, but have failed to stimulate sustainable change.

The aim of **MADE** is to deliver the objective of better functioning markets that will enable smallholder producers and small-scale rural enterprises to register a self-sustaining increase in incomes during the life of the programme and to continue to benefit from and further grow those exchanges once the programme is completed, without the need for further financial assistance.

MADE teams work with private enterprise partners to develop appropriate business models and build sustainable linkages between SHFs and suppliers of goods, services and technology (**Activity-Level – Core Functions**) and with a broad range of market actors (including not-for-profit organisations) to undertake action research and disseminate and apply knowledge and improve market information systems (**Activity-Level – Support Functions**) to shape the way that the rural agricultural markets work for the poor. **MADE** also works to shape market outcomes and govern participation and behaviour in the markets by seeking to consolidate rules of engagement between MADE partners and SHFs (**Activity-Level – Market Rules**).

Working within the market systems framework, which requires identification of the different functions in the market, such as rules, information and inputs and the range of players involved,

private and public, formal and informal, which are needed to improve market performance, **MADE** acts as a facilitator or a catalyst of change.

The emphasis of **MADE**'s work is the development of replicable and sustainable scale at key points in the market chain to tackle the "thin" and undistinguished nature of the current market structure. As market actors directly facilitated by **MADE** change their business practices and deliver pro-poor innovations (**output-level**) this in turn, leads to Improvements in incomes and agricultural yields of poor farmers and small-scale rural entrepreneurs in northern Ghana through systemic change in target markets (**outcome-level**). As farmers and small-scale entrepreneurs access and benefit from the goods and services so their enterprises grow and become more competitive (e.g. through improved productivity and the adoption of value-added activities). This results in economic growth and increased incomes accruing to poor farmers and entrepreneurs in the Northern Savannah economic zone and contributes to lifting them out of poverty (**impact-level**).

During Year 3, **Yield and Productivity** interventions focused on: Supporting rice and groundnut aggregators to manage and mainstream the use of demonstrations to showcase good agricultural practices (GAPs) to smallholder farmers and supporting input dealers to increase demand for, sales to and use of improved seeds and other inputs by smallholder farmers especially in onions and other vegetables.

The successes of these yield and productivity interventions, largely drove the output achievements seen in the Year 3 logframe below. This is a result of an additional season where smallholder farmers were able to witness the increased yields on demonstrations and model farms now applying the practices and improved inputs on their own farms in Year 3.

During Year 3, **Behaviour Change** interventions focused on Promoting and supporting the adoption of the smallholder farmer based produce aggregation (PA) model, and the Promoting and supporting the adoption of the smallholder farmer based ultra-premium brand (UPB) model. These PA model is distinguishable in each core market due to the different levels of their development from the outset of the programme. The rice market was recognised as the most advanced, which has received significant donor support over the years and is one in which systems of production are relatively well organised. On the other hand, in the case of onion and other vegetables awareness and access to improved seed and knowledge on good agricultural practices (GAP) amongst farmers was limited prior to **MADE**'s intervention.

The PA model for rice and groundnuts is more developed as **MADE** works with already established agribusiness which aggregate produce. However, further elements of aggregation to add value beyond consolidation were show-cased to partners, and this has led to positive results. More than 30% of partners have already adopted at least one element of PA.

The PA model for onion and other vegetables differed as aggregation has not historically existed in these markets compared to rice and groundnuts due to limited supply. By working with upstream actors to address these constraints to aggregation, progress has been made in terms of the development of an out-growers scheme management model.

The UPB model in particular targeted the rice sector, and aimed at increasing pricing and margins for participating rice smallholder farmers and other upstream supply chain actors including aggregators and TOSC processors and buyers. However, there was limited momentum after the UPB model development due to constraints still faced by processors such as [REDACTED].

During Year 3, **Cross market interventions** aimed partly at analysing the necessary conditions for supporting markets to and the requirements for developing the capacity and facilitating the activities of players in the core market functions. Following validation workshops with stakeholders, irrigation and mechanisation were the business models determined to have the most expressions of interest and practical to pilot. As well, the Business Growth Accelerator (BGA) has proved to have success at providing a mentored facilitation service for aggregators and input dealers to define the support they needed and to properly signpost business development services to them.

Table 1: Programme Response to recommendations from Year 2's Annual Review

Annual Review Recommendation	MADE Response
MADE to increase field activities with existing partners to address progress against the Outcome Indicators	MADE has increased the use of sub-facilitators who extend the reach of the internal core market development team, short-term consultants and the time of the cross-cutting team, thus releasing and allowing the core market development team to focus and spend more time on field activities and/or with partners. In addition, partners have been supported with management tools, e.g., how to use work plans, to allow them to more effectively monitor, supervise and control the use of resources they provide to smallholder farmers, thus, contributing more effectively to progress against the outcome indicators.
MADE and DFID should consider whether the number of staff is sufficient, and MADE staff are spending enough time in the field with partners or helping with developing ideas to support scale up.	Provision has been made in the Year 4 Business Plan for the recruitment of a 5th Market Development Specialist. In addition, how the core market development team spends its time has been rationalised, to ensure that the team spends more time in the field, not only to monitor partners' performance but also to observe their operations at first hand to facilitate the development of ideas and learning to support scaling up in Year 4.
Develop a product aggregation strategy for vegetables that can help support the uptake of GAP by vegetable producers, as well as improve market linkages.	No specific action has been taken on the development of a product aggregation strategy for vegetables. MADE does not promote a single model for aggregation in vegetable. The focus of the programme to date in this market has been on improving the productivity of growers to get volumes to a level where offtake and aggregation are viable and the farmers are attractive partners to aggregators. MADE is open to stakeholders' ideas as to how they can deliver their business model and assesses these ideas in terms of feasibility, potential replicability, and inclusion, including benefits to poor men and women.
The logframe and theory of change should be revised, and review the suitability of the impact indicator	The logframe has been revised (see logframe update below). The impact indicator, however, was not changed. The impact level is designed to capture long term wide spread change which the programme contributes to and does not necessarily need to be attributed to. As an agricultural market development programme, a monetary-based poverty metric that uses consumption per capita fits with DFID Ghana's objective of reducing poverty in the North which is also regularly monitored through surveys conducted by USAID's Feed the Future programme. In addition, with only a year remaining of the programme, DFID considers it not appropriate to make changes at the impact level this late into implementation.

1.1 IMPACT AND OUTCOME LEVELS

Preliminary assessments (based on partner reports) and projections of achievements against log frame targets of outcome level indicators are provided in **Table 2** below.

The expectation that the number of farmers and market chain entrepreneurs experiencing higher sales would exceed those achieving greater yields did not take into account the wider impact of the programme on farmers not directly profiting from MADE. Unlike indicator 2 that numerates achievements from all SHF beneficiaries, Indicator 1 achievements only take into account farmers and entrepreneurs directly partnering the programme.

Farmers copying practices from MADE supported partners has been assessed as high as 20%. If these were included in the indicator 1 scores, the actual number of farmers experiencing increased sales would be around 32,760. This is still below the target of 46,582, however, because no sales increases were recorded in Year 1 of the programme.

Yield gain targets (indicator 2) have been exceeded as have gender achievements across both indicators, even taking into account the adjustment from 15% to 25%. The story behind the

achievements (which reflects MADE's emphasis on making gender a business imperative and not necessarily a social obligation) is set out in an upcoming case study.

Table 2: MADE Impact and Outcome Indicators

Statements	MADE Measurement	Progress (Y2 and Y3 only)	Validation, Justification, Evidence
Impact Level Statement Economic growth and poverty reduction in the Northern Savannah Ecological Zone	Impact Indicator 1: Average daily consumption expenditure per capita in the Northern Savannah Ecological Zone) Northern Region, Upper West and Upper West regions plus northern Brong Ahafo and Volta regions	<ul style="list-style-type: none"> Not to be measured until 2017/2018 (Target [REDACTED] Baseline: [REDACTED] in 2012) 	Source of information for assessment: USAID Feed the Future Indicators for Northern Ghana
Outcome Level Statement Improve incomes and agricultural yields of poor farmers and small-scale rural entrepreneurs in northern Ghana through systemic change in target markets	Outcome Indicator 1: Income/sales change - Number of poor farmers and small-scale entrepreneurs who, respectively, experience higher sales and higher turnover as a result of new or improved models introduced through facilitation by MADE (women in brackets) (cumulative)	<ul style="list-style-type: none"> Target for 2016/2017: 46,582 (6,987) Achieved: 27,300 (12,831) 	Annual survey for Rice established that 54.5 % (57.8% men; 48.8% women) SHFs experienced increased sales. Groundnuts recorded the lowest proportion of SHFs who experienced increased sales: 39.6% (35.6% men; 41.5% women). However for Onion and other vegetables evidence suggest increased number of SHFs sell their produce. The annual survey for Onion and other vegetables suggest higher bundles were sold by SHFs which validates the partner reported number
	Outcome Indicator 2: Productivity - Number of poor farmers who experience higher yield as a result of new or improved models introduced through facilitation by MADE (women in brackets) (cumulative)	<ul style="list-style-type: none"> Target (cumulative) for 2016/2017: 23,500 (3,525) Achieved: 32,014 (14,726) 	An overall 66% of SHFs experienced increase in yield. Preliminary findings from rice annual survey indicate 63.4% (65.5% men; 59.9 women) of SHFs reached (11,764) experienced yield increase while the Onion 53.6% (2,500), vegetable 93% (and groundnuts survey 52.6%).
	Outcome Indicator 3: Business practice/systemic change – Number of instances of systemic change (see MADE's definition of systemic change) (cumulative)	<ul style="list-style-type: none"> Target for 2016/17: 5 Achieved: 13 	Some of the verified services offered by partners include: Recruitment of sales representatives and agronomists, establishment of supply relationship with agro-input dealer businesses, managed demo/model farms and adaptation trails, training of sales and technical officers, out grower model, embedded services, private extension

1.2 OUTPUT LEVEL

MADE's output level results provide evidence of progress towards lasting systemic change in the programme's target market sectors. Outputs are measured at three levels, capturing changes in the core and supporting market actors as well as in rules and regulations governing the operation of the market.

	entrepreneurs supported by MADE (DFID) to cope with the effects of climate change (women in brackets). (cumulative)			Action needed to verify the no.of SHFs adopting and using climate resilient practices i.e. early maturing varieties; organic manure, bonding, crop rotation will be completed in July.
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RECOMMENDATIONS

- Output 1.1: Recommend a slight amendment to the wording and definition: Market actors means agribusinesses including produce aggregators, seed companies, input dealers, processors, etc. This includes attracting in new investment/new businesses and establishing business relationships with end-buyers and suppliers.
- Output 1.2: Recommend a slight amendment to the wording and definition: Inputs include: seeds, fertiliser, chemicals, mechanised services, storage, and training on GAP and changes in business models/practices and the entry of new agribusinesses in MADE's target market systems
- Output 1.3: Recommend a slight amendment to the definition: This indicator seeks to quantify the extent to which the adoption of improved seed varieties, and/or the application of GAP, and/or access to support services such as irrigation shields MADE beneficiaries from the effects of variations in climatic patterns.

1.2.2 SUPPORTING OUTPUT LEVEL

Supporting Output Level Statement - "Supporting functions to effective markets strengthened"

Perhaps, the most significant result from Output 2 is the percentage (70%) of "non-MADE partner" surveyed market actors who report positive perceptions of the models promoted by the programme. This is a good indication of crowding in by other private sector agribusinesses extending the reach and benefits of the programme to more poor farmers and rural small-scale entrepreneurs.

Table 4: Output Achievements against Logframe – Support

		2016/17 Target	2016/17 Progress (Y1-Y3)	Validation, Justification, Evidence
Output 2 - Support	Output Indicator 2.1 - Number of producers accessing financial and business services, research information and cooperative networks through MADE support. (women in brackets) (cumulative)	11,750 (1762)	19,506 (8,973)	Preliminary survey results indicate an average of 40% SHFs from across markets accessed financial services. Rice: 38% Groundnut: 29%, Onion: 47% Other Vegetables: 34%. The validated proportion are significantly consistent with partner estimation which was largely based on no. of SHFs accessing credit services from aggregators, input dealers etc
	Output Indicator 2.2 - Number of new or improved services introduced and provided to SHFs and SSEs	16	17	The Data Quality Assurance (DQA) assessment sampled 6 input dealers and 6 aggregators across 4 markets. All Input Dealers (100%) acknowledged providing demand generation models and sales outreach. Other models adopted included integration of managed demos, initiation of private

				extension, produce aggregation, embedded services and GAP
	Output Indicator 2.3 - Percentage of surveyed market actors (who do not receive facilitation through MADE) who report positive perceptions of relevant business models supported by MADE (cumulative)	50%	Above 70%	M&E Team involved in tools development for survey. Feedback and input provided to the external consultant The M&E team to finalize the Qualitative assessment report shortly

RECOMMENDATIONS

- Output 2.1: Recommend a slight amendment to the wording and definition: Supporting market products, services and networks are defined as: financial and business services, irrigation services, research and other information and cooperative networks (formal and informal)
- Output 2.2: Recommend a slight amendment to the wording and definition: This indicator assesses the number of new products and services that are being offered to SHFs and SSEs benefitting from MADE facilitation. These could include financial and business services, extension, research information, irrigation services, agricultural inputs (e.g., seeds, fertilizer), storage services, among others.
- Output 2.3: Recommend a slight amendment to the definition: This indicator seeks to identify instances of "Expand" from the AAER Matrix, i.e., when non-facilitated market actors see the benefit of introduced innovations and start adopting them. It also seeks to serve as an indication of the additionality of innovations, measured from the appetite shown by partners that are not targeted directly.

1.2.3 RULES OUTPUT LEVEL

Rules Output Level Statement - "More effective rules and practices of market system in selected sectors"

There is a relationship between MADE's refocus on informal rules and norms and the high level of satisfaction experienced by surveyed market actors. Improving the understanding of product and environmental safety with regard to agro-chemicals; the development of grades and standards for groundnuts (including issues of aflatoxin management) and improving market actor relationships (e.g., moving from transactional to long-term relationships with the introduction and promotion of out-grower and produce aggregation models) contribute significantly to increasing transparency and trust which underpin the high satisfaction levels. The 12 informal rules and norms promoted by the programme and adopted by partners, service providers and smallholder farmers are in **Annex 1**

Table 5: Output Achievements against Logframe – Rules

		2016/17 Target	2016/17 Progress (Y1-Y3)	Validation, Justification, Evidence
Output 3 - Rules	Output Indicator 3.1 - Number of regulatory changes and policy reforms brought about as a result of the programme (cumulative)	12	12	Interactions with partners, field observations, smallholder farmer surveys, etc. (see Annex 1 for full list of informal rules and norms)

	Output Indicator 3.2 - Level of satisfaction of surveyed market actors with key aspects* of commercial relationships facilitated by MADE (cumulative)	Medium	High	M&E Team involved in tools development for survey. Feedback and input provided to the external consultant. The M&E team to finalize the Qualitative assessment report shortly. Rapid Assessment and DQA correspond with the findings
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RECOMMENDATIONS

- Output 3.1 Recommend a slight amendment to the wording and definition: This indicator tracks changes in the "rules of the game" sphere, key for an M4P initiative to succeed. MADE is focused on working with agribusiness and producer market actors and is thus aiming at informal rules rather than regulation and government policy. These are defined as changes in practice related to contract formalisation and enforcement, grading, and community and stakeholder engagements, inter alia. These informal changes are reflected in the way the markets work and the way that business is undertaken, the use of new business relationship or transaction documents, e.g., MoUs and/or the adoption of new standards, norms and other informal rules, e.g., product grading.
- Output 3.2: The indicator should be maintained in the logframe.

Section 2. PROGRESS TOWARDS SYSTEMIC CHANGE

This section reports on progress in changing the market systems in MADE's core market sectors. For each market sector, a brief overview is provided of intervention-level signs of change observed during the year. These changes are then assessed and measured against the *systemic change framework* to illustrate the extent to which changes stimulated by MADE have taken root in the market and can be considered systemic (i.e. when changes in roles or the pro-poor product, service, or business model innovations are owned and upheld by market players independent of project support).

The change process envisioned by the systemic change framework is illustrated in the Figure 1.

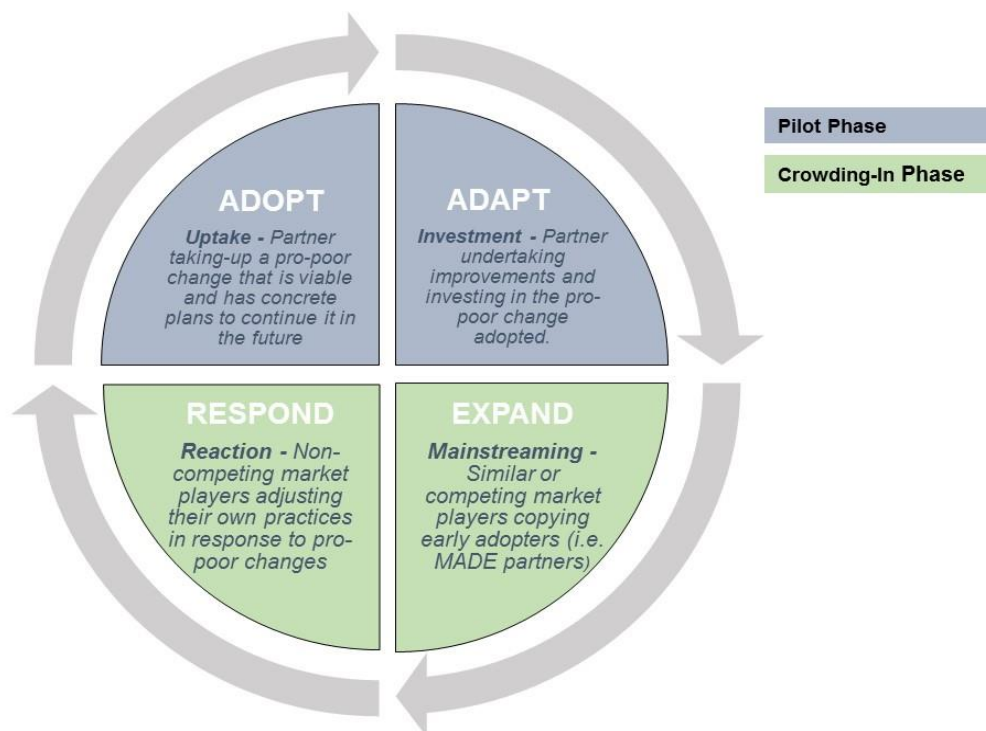


Figure 1: Pathway to Systemic Change

2.1 ONIONS AND VEGETABLES¹

In Year 3 MADE concentrated on activities that:

- i. Supports Agro-Input Dealers to Increase Demand and Sales of Improved Seeds and Other Inputs;
- ii. Linking northern producers to high value southern retail markets;
- iii. Improving access to finance through Warehouse receipt scheme (specifically for onions)

Agro-Input Dealer Support

The "Agro-Input Dealer Led" (ADL) model emphasizes on demand generation² and sales outreach strategies³ which are promoted for adoption/adaptation by agro-input dealer businesses to improve

¹ The approach and partners have been largely the same in the onion and other vegetable market sectors this year. Therefore for the purposes of this section the onions and other vegetables are reported as one market sector

² Demand generation strategies, e.g., development and distribution of leaflets/brochures, recruitment and deployment of technical sales people, use of radio and other electronic media, establishment of model farms, etc.

³ Sales outreach strategy (i.e. stockist unit, sales agent or itinerant sales) appropriate for each business.

and make their services attractive and accessible to SHFs. This follows the successes during the first two years of the programme where MADE promoted the “Thin Market Entry Development” (TMED)⁴ model that involved international seed companies, [REDACTED], to develop new markets for their products (largely preferred by the output markets) in Northern Savanna Ecological Zone (NSEZ).

MADE entered into partnership with a total of 19 agro-input dealer partners (using the ADL model) to support them in increasing demand and sales of improved seeds and other inputs. Some of the key strategies, e.g., product technical leaflets and brochures and model farms were aimed at addressing SHFs knowledge gaps while others, such as bulk breaking and itinerant sales, focused on their purchasing power. The promotion of itinerant sales and last mile community input kiosks and outlets also helped to address the challenges associated with distance and infrastructural deficiencies. MADE brokered relationships with major seed companies and larger input distributors and wholesalers, to address their cash flow and credit limitations. These brokered relationships also helped to improve commercial orientation and transactional practices and the lack of trust that was characteristic of the previous system. Most of the partners have given strong indications of their commitment to mainstream some of their preferred demand creation and sales outreach strategies into their businesses models

Year 3 highlights resulting from the demand generation and sales outreach strategies:

- 10 agro-input dealer partners signed on and started piloting media products (e.g. technical leaflets/flyers, brochures, radio ads) as a demand generation strategy
- MADE’s support included containing the reimbursable expenses of technical sales/field officers’ capacity building; running cost of field officers; part payment of inputs cost of select model farms
- All 19 agro-input partners experienced an average of 25% increase in sales of improved vegetables seed varieties over the last year. This has also led to between 20% - 25% increase in sale of assorted improved agro-inputs (e.g., plant nutrition and protection products)
- 3 agro-inputs companies/distributors⁵ have advanced their operations into NSEZ as result of the growth in market demand for improved inputs, including onion and vegetables seed varieties. Some have also responded with specific products (e.g. plant protection) to address emerging field level challenges on vegetables and onions cultivation.

Linking northern producers to high value southern retail markets

The idea of conducting a feasibility analysis of an appropriate north-south B2B model to adequately link northern producers to high valued southern retail markets still holds, efforts shifted towards internally developing an out-grower scheme model for the purpose of generating the level of production required to produce right quantities of fresh vegetables attractive for commercial engagement with high valued southern retail markets. The out-grower scheme model serves as an instrument that will enhance the adoption of improved seed and other agro-inputs by more SHFs to sufficiently and appropriately serve the output markets. Building on this, the approach going forward (scaling-up) will be to broaden the scope of the programme’s engagement with businesses (e.g. aggregators, input dealers, etc.) who are willing and capable of investing in or developing partnerships with the out-grower scheme operators.

Improving access to finance through Warehouse receipt scheme

On the warehouse receipt scheme, MADE has been working with [REDACTED] (who is building warehouse capacity), to test the effectiveness of storing onions. [REDACTED] has expressed interest to rent out warehouse space to other growers. (see Section 2.4.5 for more detail)

⁴ The TMED model has been able to create and increase SHFs awareness of improved seed varieties, generate some appetite for improved seed varieties, make some improved seed varieties available, though not in good commercial quantities

⁵ [REDACTED]

Table 6: Summary of Systemic Change in Onion and Other Vegetables Markets

Adopt	Adapt
<ul style="list-style-type: none"> 16 input dealers investing at varied levels on select demand generation and sales outreach strategies to increase clientele base and sales of the products and services Agro-input dealers stocking and selling to SHF seed companies catalogues, and disease and pest guide brochures Seed supplier [REDACTED] investing resources (Supply of sample seed varieties, technical expertise, training of field coordinators and sales officers) in support of demand generation activities of their distribution networks under the ADL model [REDACTED] introduced incentives (e.g. discount sales, pricing differentiation for category of agro-input dealers i.e. retailers, resellers and wholesalers) in the seed supply to encourage and attract more agro-input dealers to invest in their businesses 	<ul style="list-style-type: none"> Independent of MADE support, [REDACTED] established a retail outlet in Walewale, recruited full-time sales officer and agronomist for NSEZ Agro-input dealers are establishing supply relationship with other seed distributors aside those facilitated by MADE to appropriately stock products that addresses SHFs farm enterprise needs
Expand	Respond
<ul style="list-style-type: none"> 2 SCALE project (IFDC funded) which have onion as one of its markets, replicating the “Agro-input dealer led Model” in Volta region – working to create demand and sales outreach to more SHFs Other input dealers in the NSEZ begun stocking and selling improved onion and assorted vegetables seed varieties following information on the demand for improved varieties by smallholder farmers (SHFs) Other seed companies [REDACTED] have begun engaging with and stocking agro-input dealer businesses in NSEZ with vegetables seed varieties 	<ul style="list-style-type: none"> No evidence of change yet

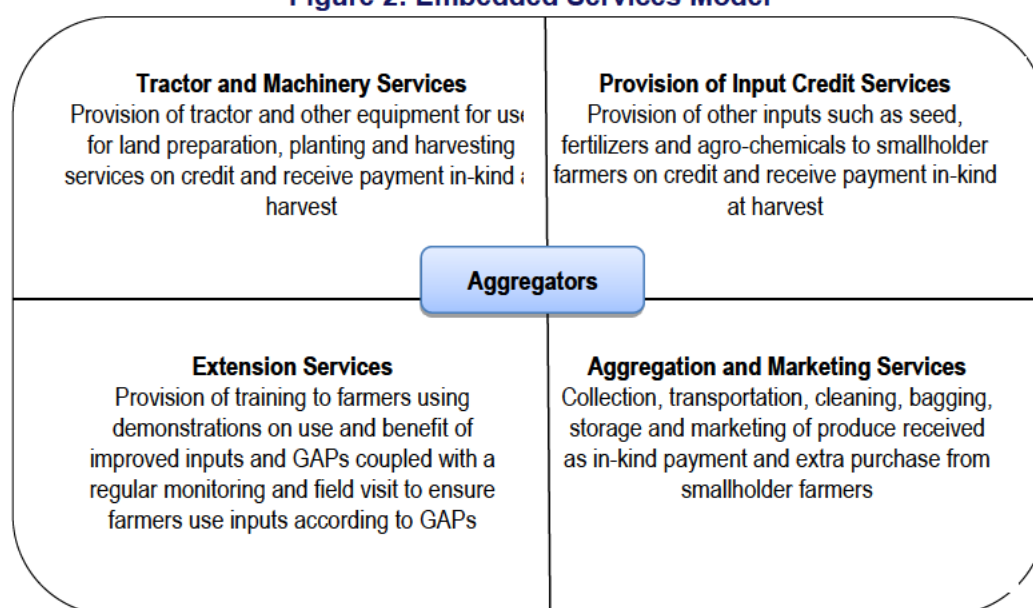
2.2 RICE

The activities in the rice market sector during the third year have been focused primarily on the following strategies:

- i. Supporting Aggregators to Manage and Mainstream Demonstration;
- ii. Promoting and supporting the adoption of the smallholder farmer based ultra-premium brand (UPB) model;
- iii. Promoting and supporting the adoption of smallholder farmer based produce aggregation (PA) model (adding value to product – beyond consolidation)

Supporting Aggregators to Manage and Mainstream Demonstration

During the year under review, MADE partnered with 17 agribusinesses. focused primarily on managed demonstrations and the provision of embedded services including extension services delivery by these businesses. (See Figure 2).

Figure 2: Embedded Services Model

MADE co-invested with partners to establish and professionally manage field demonstrations to transfer knowledge on good agricultural practices to farmers. Part of MADE's support has included the provision of a service provider or sub-facilitator to work alongside the aggregator in the planning, management and execution of all of the activities involved in the field demonstrations and supervision of the extension services provision. The partners were also encouraged to make more investment in the provision of input credits in the form of improved certified seed, fertilizers, agrochemicals and harvesting services to more farmers.

The purpose of this has been to deepen the appreciation and the behaviour change of the agribusinesses on good demonstration/extension delivery practices. It is, also, to enable them to mainstream the management of demonstrations as a management tool transfer knowledge to and build good relationship with the smallholder farmers. Most of the existing aggregators have incorporated these services into their business which led to significant investment in the activities during the period, including the following:

- About 100 Agricultural Extension Agents (AEAs) were trained on professional management of demonstrations. These AEAs supported the partner aggregators to set up and manage their demonstrations and train farmers to adopt GAPs and provided extension services to the smallholder farmers.
- More than 1,203 field days were organised to demonstrate GAPs for smallholder farmers to adopt new technologies for increase yields.
- There is significant increase in the number of farmers who adopted and applied the GAP practices demonstrated on their own fields as show in Box 1.

Box 1: Summary of GAPs adopted by the SHFs

GAPs adopted by the SHFs	Number of Farmers	Percentage of Target (%)
Use of improved certified seeds	11,248	65
Use of recommended planting methods	12,623	73
Timely and proper weed control	14,004	81
Use of fertilizers	11,257	65
Proper and timely harvesting of rice	13,569	78
Good water management/bond construction	7,128	41

Promoting and supporting the adoption of the smallholder farmer based ultra-premium brand (UPB) model;

An opportunity for introducing an ultra-premium rice brand (UPB) targeting the UK market was pursued through development of a practical and detailed business plan for the rice brand with recommendations on next steps and cost sharing models. Three key parties (██████ – milling, ██████ – aggregation and ██████ – a UK based brand development firm) expressed commitment in moving the process forward. The development of the business plan for the ultra-premium rice brand model was concluded with highlights commercial opportunity to launch the first Ghanaian jasmine rice brand into the UK market as a pilot with a view to scaling up into other markets such as the US and South Africa. The next steps to operationalize it would involve securing the investment of a mill to develop and launch the brand. The final result will generate added value worth ██████ to be shared between processors, aggregators and farmers generating additional margins of approximately ██████ farmer per year.

In addition, MADE continued to seek opportunities and address downstream constraints including improved post-harvest handling, packaging, processing, trade and marketing of rice. During the year MADE continued to facilitate relationship brokered between ██████ and all of our partner aggregators to allow them continue to supply quality paddy to ██████.

Promoting and supporting the adoption of smallholder farmer based produce aggregation (PA) model (adding value to product – beyond consolidation)

More than 30% of partners have already adopted at least one element of PA and three partners in rice have expressed interest in adaptation of the PA model to their businesses for adoption of more elements.

Table 7 Summary of Systemic Change in Rice Market

Adopt	Adapt
<ul style="list-style-type: none"> 13 partner aggregators have invested in piloting good demonstration management approach. An average of about 70% of the costs of setting up and managing the demonstrations was covered by partner aggregator. All the partners invested in provision of embedded services in the form of input credit and new/improved extension delivery service to smallholder farmers. 	<ul style="list-style-type: none"> One partner has varied the extension delivery approach by recruiting and training full-time field staff to pilot private extension delivery model.
Expand	Respond
<ul style="list-style-type: none"> No evidence of change yet 	<ul style="list-style-type: none"> No evidence of change yet

2.3 GROUNDNUTS

The activities in the groundnut market sector during the third year have been focused primarily on the following strategies:

- i. Supporting Aggregators to Manage and Mainstream Demonstration;
- ii. Promoting and Supporting the Adoption of Aflatoxin Control Protocols
- iii. Promoting and Supporting the Adoption of SHF- based Produce Aggregation (PA) model (adding value to product – beyond consolidation)

Supporting Aggregators to Manage and Mainstream Demonstration;

MADE signed MOUs with a total of 13 groundnut partners and supported them to adopt good procurement procedures to select and engage a total of 9 subfacilitators (SFs) and 58 AEAs to support them to mainstreaming and implement good management of demonstrations. MADE's partnership with these businesses focused mainly on demonstrating to them the value of incorporating extension delivery into the package of services they deliver to farmers to improve yields above what is achievable with only mechanisation services. Some farm level changes have been observed, these include the following:

- 15613 smallholder farmers attended field days and were trained on good agricultural practices required to maximise yields from groundnut cultivation.
- Of these 8022 SHF adopted at least one GAP – row planting, early/timely weeding and good harvesting practices especially the use of aflatoxin control practices.)

Farmers applied the line planting on the fields after attending the planting field day in our demonstration farm.

"It's easier planting groundnuts in rows and it's even easier when it gets to this stage of weeding as you can see now. And my field is looking more beautiful than the previous years' cultivation thanks to the good seed you encouraged us to buy because almost every seed planted has germinated I am therefore optimistic of a better yield this year". It was widely noticed that many farmers planted their groundnuts in rows with most of them heeding the advice of PARD to cultivate the low oil varieties"

– [REDACTED] (busily weeding her own groundnut farm she planted on rows this year after attending the planting field day and observing the practice)

Promoting and Supporting the Adoption of SHF- based Produce Aggregation (PA) Model

More farmers expressed interest in growing groundnuts using the new GAPs, and partners such as [REDACTED] and [REDACTED] have been receiving increased requests from SHF to register them as groundnut out growers.

The number of direct partners adopting models & changing practices increased from 3 in 2015 to over 6 in 2016. The models adopted included integration of demos in their business strategies, use of private extension, good/improved demo management and aspects of produce aggregation. [REDACTED] participated in the PA workshop and agreed to integrate PA into their businesses, and have submitted expressions of interest.

- Both partners and sub facilitators have understood and appreciated the technical assistance procurement process, and have decided to adopt it subsequently. For example, [REDACTED] developed a TOR, assessed proposals from resource persons, and signed contracts with a technical assistance provider to supervise its produce aggregation activities.
- [REDACTED] adopted demos by co-investing in co-financing the MADE supported demos. Each co-financed about 60% of the cost of the demos they established in 2016.
- [REDACTED] adopted groundnut out grower and embedded services models and thereby increased the range and volume of services such as

mechanisation service, seed and fertiliser supply, and increased produce aggregation) delivered to SHF out growers.

Promoting and Supporting the Adoption of Aflatoxin Control Protocols

Overall, MADE's aflatoxin interventions have triggered an increased awareness and has encouraged a number of businesses such as ██████████ to adopt aflatoxin control even though they had not participated directly in the aflatoxin programme;

██████████, has decided to establish a medium scale processing facility as a result of the mentoring and the coaching received on aflatoxin control facilitated by MADE through Integrated Commodities Company (ICC). ██████████ is seeking further technical assistance from MADE to establish the facility. ICC has also provided assistance in MADE's provision of technical backstopping to aggregators and small scale farmers to address the GAP and post-harvest management. Through this, MADE will continue with interventions to develop aflatoxin free smallholder farmer based groundnut supply chain with local and international top-of-the-supply-chain buyers and processors.

Table 8: Summary of Systemic Change in Groundnut Market

Adopt	Adapt
<ul style="list-style-type: none"> ██████████ was encouraged by MADE to adopt groundnut outgrowing for the first time as a result of MADE facilitation which increased his understanding of the groundnut market opportunities and using his rice and soybean outgrowing experience. 6 existing partners have mainstreamed demos in their outgrower operations, and have co-financed about 60% of the cost of all demos they implemented in 2016. ██████████ has decided to establish a medium processing facility to enable it process aflatoxin free groundnuts for ██████████ buyers, because it realised that the manual sorting will deliver the right volumes to enter the international market. 	<ul style="list-style-type: none"> ██████████ has adapted the PA model by integrating ██████████ as part of his emerging network of smaller aggregators being developed; ██████████ has an understanding to aggregate produce for ██████████ from his outgrower network. ██████████ has developed a strategy to educate the farmers in the Tolon and Kumbungu Communities on the importance of groundnut cultivation in order to whip up interest in the cultivation of the crop especially among the mail farmers else the crop risk being extinct in the next decade
Expand	Respond
<ul style="list-style-type: none"> No evidence of change yet 	<ul style="list-style-type: none"> No evidence of change yet

2.4 CROSSMARKET INTERVENTIONS

In Year 3, MADE finalised market systems assessments of a variety of supporting functions relevant to the core markets. Based on these assessments, the next step was to choose which interventions to pursue an actionable model to be piloted with partners.

2.4.1 AGRI-LEASING

Progress has focused primarily on the financial models and engagement with both agri-leasing suppliers and financial sector institutions during the Year to explore their initial buy-in to the concept of an agri-leasing fund and the commercial terms on which this would operate. A draft business plan was developed using a number of scenarios on repayment from aggregators / suppliers of equipment which were discussed with a number of financial institutions and agri-leasing companies. Progress toward agreeing Memorandum of Understandings with various stakeholders are outlined below:

- ██████████: The bank is furthest along in terms of agreeing a potential MOU but would require training in both sales and credit risk techniques to provide these services which would

- be a new offering for the bank. Their participation in the fund would be dependent on their ability to obtain Technical Assistance from the MADE programme
- ██████████: A change in senior management has slowed progress toward signing of a MOU, however, they remain interested in working with the fund. They would also require a technical assistance package for them to commercially deliver agri-leasing services to the North of Ghana.
 - ██████████: have fully committed their support to making the Fund concept a success and are willing to sign a MOU. ██████████ is willing to provide the necessary after-sales support (service and spare parts) and establish a satellite base with permanent trained after-sales staff, in Tamale.
 - ██████████: Initial discussions have been undertaken with ██████████ for the potential mechanisation fund to kick start the sector.

An initial pilot activity is being developed for a one year period to demonstrate the viability and potential uptake of mechanisation services that could be scaled up should the approach be successful and if the MADE programme is extended by DFID. In addition to these activities, to obtain baseline data that would feed into the refinement of the pilot activities to be launched (dependent of DFID approval) in Year 4 or an extension is through the tractor movement that has been brokered. This will include the number of tractors involved, the number of SHFs who benefited from the service, the acreage prepared broken down by regions, etc. and is broken down in more detail in the Year 4 Business Plan.

2.4.2 IRRIGATION/CLIMATE SMART AGRICULTURE

MADE completed a market systems analysis and identified actionable models for adoption for conservation agriculture, flood recession agriculture and small scale private irrigation. These findings were presented to partners, researchers, SADA, and other developmental agencies in a stakeholder workshop.

This analysis was used to engage prospective sub-facilitators to practically pilot the proposed models. ██████████ submitted a full proposal to pilot at least two Farm Business Advisor (FBA) business models in 2017 while working with existing MADE stakeholders to identify and test new methods to improve existing business relationships and private sector-led extension models to increase the supply of irrigation across northern Ghana. FBAs are independent contractors—often smallholder farmers themselves—who are expected to support their own network of client farmers with access to inputs, irrigation technologies, technical advice, and output markets. They have also presented an approach to enhance the aggregator model to deliver irrigation services into a bundle of other services (e.g., seed and other input credit, extension, produce offtake, etc.) as well as test a social enterprise model which they are in the process of developing into a commercially sustainable initiative to include irrigation facilities.

Primarily the iDE approach will focus developing interventions based on Human Centred Design (HCD) Assessments, to deliver more holistic offerings, that are expected to entail a combination of product(s), service(s), marketing, financing, and distribution to meet the needs of irrigation services of vegetable farmers. A sequenced implementation plan has been developed along with a phased budget which would design, initially pilot and subsequently roll out the successful business models. Depending on DFID approval, this will be an increased focus for MADE in Year 4.

2.4.3 SEED MULTIPLICATION SYSTEMS

All leading investors (and where applicable key shareholders) in rice and groundnuts in Africa have been identified through an investor search survey. These have been ranked against the key requirements of the Monitor/Deloitte investment profile for seed multiplication and will be targeted by MADE with appropriate investment promotion campaign in Year 4.

2.4.4 SEED DISTRIBUTION SYSTEMS

A detailed market system analysis (MSA) of the vegetables seeds market in Ghana has been completed and the results will be discussed with stakeholders and used as a foundation to promote further investment by seed and agro-inputs companies in Northern Ghana. The MSA confirmed

the vegetable seed market dynamics, and will be applied to MADE's current and future partners in Year 4.

2.4.5 ACCESS TO FINANCE

MADE produced an actionable study on the feasibility of developing a warehouse receipts system (WRS) (including financial products) for onion producers in Northern Ghana. Broad engagement with *onions and groundnuts* market stakeholders to share findings and gauge investment interest and possible roll out options was in the outcome of a workshop involving key stakeholders.

However, findings showed that for SHF the focus has been the need to secure credit from aggregators or input dealers (whether for tractor services, seed or chemical inputs) and as these enterprises grow, so their own finance needs become a constraint. MADE has switched its focus to facilitating embedded finance for partner enterprises with the input manufacturers (e.g. mechanisation through agri-leasing). Additionally, partners face constraints in terms of lack of investment finance. MADE has responded by directing partners to the BGA which is expected to work to improve access to investment finance by signposting the partners to the appropriate service provider (BSPs). The BSPs work with and support the partners to, among other things, identify the appropriate sources of finance and prepare necessary documentation and other requirement to be able to raise the finance. However, progress is challenging because of the inadequate availability of good quality service providers. BGA is thus supporting to raise the partners' business planning skills directly, as a stop gap measure. In Year 4 MADE will consider refocusing BGA's efforts also on coaching business service providers (BSPs). See BGA Section below

2.4.6 AGRO-CHEMICAL DISTRIBUTION SYSTEMS

MADE engaged with major agro-chemical suppliers (██████████) to improve the logistics of supply. In particular, with 'just in time' systems used to minimise working capital needs while products are held at ports of entry. Preliminary work on this was initiated in Year 3, however there was limited traction so this intervention was discontinued.

2.4.7 THIRD PARTY LOGISTICS SERVICES

Preliminary assessment led to the conclusion that the volumes of fresh produce to make this a viable two-way (i.e., with fresh produce to and from the south) undertaking were simply too low. This further led to the conclusion that right sizing the cold vans with MADE's could end up being a costly enterprise beyond MADE's mandate and perhaps resources despite the identified ██████████ opportunity focusing on the haulage component of the cold chain by ██████████.

2.4.8 SUPPLY CHAIN DEVELOPMENT

Currently MADE facilitates supply-chain linkages with selected partners (██████████) and offers technical assistance where there are opportunities to promote increased B2B transactions between northern origin suppliers & southern based buyers and processors. However, work on this initiative has been slow largely because it was dependent on completion of other assignments and interventions, e.g., vegetable supply chain intervention and 3rd party logistics.

2.5 MARKET INTERVENTIONS LESSONS LEARNED

Progress to-date offers evidence that, underpinned by the right incentives and initiatives, programme facilitation can catalyse and bring about significant behavioural change across the market - the route to systemic change.

Yield and Productivity: Key to success achieved so far has been targeting the right small-scale agribusinesses (through careful selection) as programme partners to test and mainstream business models, e.g., smallholder farmer (SHF) out-grower scheme cost recovery model, and to help the selected partners grow their businesses. Co-investing prudently with the private sector

firms as partners can reduce risk aversion and promote innovation through improvisation. Scaling-up the models that have been shown to be successful over the three years of MADE, offers the greatest opportunity for bringing about systemic change. For instance, rice and groundnut partner agribusinesses adopted piloted models to deliver inputs and services⁶ to SHFs often on credit, (i.e. making the inputs and services available to SHFs at the beginning of the season and recovering the cost in kind at the end of the season). Learning to-date has shown that these models require more intense support and monitoring of farmer activity and performance; as well as brokerage and facilitation of bulk procurement to reduce costs and improve access to inputs and output markets. The introduction of SHF passbooks to allow greater control of market actor engagements is a high priority for Year 4 of the programme.

Behaviour change. Initiatives have shown there is growing differentiation and economy of scale opportunities at input supply and produce aggregator levels in Northern Ghana markets which provide scope for targeted interventions to address supply-side constraints and quality demand issues. In Year 3 the development of aggregation and out grower scheme management models for onions and vegetables, drew heavily on lessons learned from the more evolved aggregation models piloted by rice and groundnut producers in year 2. As the programme moves forward and expands its number of partners so these models will be enhanced with the promotion of inputs and service integration/bundling.

Cross market. Initiatives using different programme delivery models and instruments (e.g., BGA and B2B mentorship) especially in untested fields (as is the case with BDS and financial innovation in Northern Ghana) to cross-fertilise ideas and outcomes and to leverage more learning is effective and delivers good value. For instance, the BGA was expected to become part of a separate market for MADE alongside its existing focus crop markets. The BGA's core service is a mentored facilitation service aimed at helping small agribusinesses to define the type of support and finance they need and then link them to the necessary providers. However, alongside the BGA, MADE also piloted a more focused mentoring intervention. There are early indications that this approach (i.e., B2B mentoring) has delivered a more effective and better value to one partner compared to what it has so far obtained from BGA. In addition, further market analysis and practical business plan development has defined on-farm capital investments required for irrigation and mechanisation models to be piloted for the upcoming year

These lessons from Year 3, continue to confirm the private sector can be incentivised to lead the transformation of Northern Ghana agriculture. MADE's Year 4 Business Plan documents how the programme will respond to these lessons moving forward.

⁶ The inputs and services range from tractor ploughing services, extension and dissemination of good crop agronomic practices, improved rice and vegetable seeds, fertilisers and other agro-chemicals and support for group formation and other forms of farmer clustering.

Section 3. CROSS CUTTING AREAS

3.1 GENDER

Action research to pilot a training of trainers with aggregators' extension agents and community based field officers

Progress of the Gender TOT concept is shown below:

Progress area	Description
Female targeted extension initiative	MADE is supporting partners to provide targeted gender sensitive training on productivity enhancement to groups of SHFs, comprising mostly women. A shortlist of 6 rice and groundnut aggregators who agreed to partner MADE to pilot the Gender TOT concepts, together with 24 Field extension officers (4 from each aggregator) were trained in Good Agronomic Practices, financial management and recordkeeping, and quality management, all topics with gender mainstreamed. The trainers have begun rolling out the farmer level training running from March through to June 2017, and expected to reach about 2,400 (60% women and 40% men) farmers.
Evaluation of the Gender TOT	A survey is ongoing to assess the baseline situation of the female and male farmers as well as the participating partner aggregators before roll out of the Gender TOT at the farmer level. The baseline and subsequent endline will enable a credible assessment of the training, on productivity and incomes changes at both farmer and aggregator levels after the 2017 season. This is expected to be completed by end of Year 4.

Gender M&E plan to ensure MADE is tracking gender outputs

MADE developed a Gender M&E framework and guidelines for a gender-screening tool for market interventions. This, together with the continuous gender review of data collection instruments and reports, has yielded improved gender disaggregated data and analysis in all MADE surveys and partner reports. Where applicable MADE has also included gender targets in ToRs of consultants engaged on the programme. The M&E and gender teams are therefore able to track and measure gender outcomes in all of MADE interventions.

BGA's Women Business Learning Group (BLG) contributes to gender targets

The Gender Specialist collaborated with BGA to get 5 women processors in rice, groundnut, and vegetables and 1 vegetable trader sign onto the BGA business coaching and mentorship programme. These are undergoing various levels of mentoring to grow their businesses. They have formed a peer Business Learning Group (BLG) which is yielding positive results. E.g. they have found cheaper and safer options of sourcing and transporting packaging materials for their products as a group, saving about 50% cost incurred from purchasing, breakages and delivery.

Gender Case studies

- i. Collaborating with the Knowledge Management and Communications team, the Gender case study: "Why Women make Business sense" has been published in [REDACTED] a website of [REDACTED], an organisation that seeks to incubate and accelerate agri-focused ventures in Sub-Saharan Africa.
- ii. The case study: "Gender and Productive Inputs usage in the MADE Rice Market Sector: Provision of inputs credit is a necessity for women rice out-growers" has also been published at the MADE website and the [REDACTED].
- iii. "From grain to seed: the success story of a female groundnut grain producer to seed producer". This case study of [REDACTED] a female groundnut out-grower and lead farmer of [REDACTED], a MADE partner aggregator in groundnut, has found opportunity in the limited supply of groundnut seed as against demand, and is now growing groundnut as seed which she supplies to other women and men farmers for production. The case study is being developed for publication at the MADE website by Year 4 Quarter 1. This would be one of the

positive strides of a woman moving from lower level of the value chain (grain producer) to higher level (seed producer), with the expectant increase in income.

Linking Women parboiled rice processors to partner aggregators

A number of women parboiled rice processors were linked up with some of MADE's rice partner aggregators. This resulted in one aggregator () supplying a total of about 40,000MT of Jasmin 85 perfumed rice paddy to , a female owned and ran mill in Tamale. This relationship will be closely monitored as it offers opportunities for addressing perceived risks that promoting perfumed rice cultivation will crowd out women parboiled rice processors. It may also hold lessons for promoting north-north market linkages.

Key lesson learnt for the reporting period: For aggregators to reap the maximum economic benefits of working with women as outgrowers, there is the need for them to provide complete inputs and other services support (seed, ploughing, fertilizer, and marketing) since women often do not have access to them either because of distance or lack of finance.

3.2 KNOWLEDGE MANAGEMENT AND COMMUNICATIONS

Improved branding and visibility: The communication team worked closely with the DFID communication team to improve branding and visibility in Year 3. A process for standardising and branding MADE documents to compliment key messages was successfully initiated. Communications is the main tool for promoting copying and achieving expansion. There will be a greater focus on managing and showcasing all the learning and evidence from MADE's work in Year 4.

Agricultural radio programming: A preliminary feasibility analysis and modelling for the radio programming to increase access to market actionable information across all programme markets for smallholder farmers and other key actors was developed. Radio programming is, however, being promoted as part of demand generation strategies to MADE's input dealer partners. Many of the partners opted to adopt it in Year 3 and will receive support to roll it out in a more concerted way in Year 4

Action Research efforts: At the beginning of Year 3, MADE set out to undertake 7 action research projects⁷. Two more were identified in the course of the year, bringing the total number of action research cases to nine (9). In collaboration with business partners and other stakeholders, MADE successfully rolled out 6 (66.6%) of the 9; and 3 of these (50%), have been successfully completed. Lessons learned from the three served as content for MADE's Newsletter and Case Studies and as input for design of yield increasing interventions which are, also, shared with the relevant MADE partners.

Effective dissemination strategies: MADE used its stakeholder engagement strategy to maximise the use of appropriate channels for the project's dissemination efforts. Engaging the media and effective newspaper publications through various channels were highly successful following a stepped up approach in visibility and public engagement.

The programme also disseminated illustrative case studies including: "Gender and productive Inputs usage in the MADE Rice Market Sector: Provision of inputs credit is a necessity for women rice out-growers" – see above; and "Working with women is good for your business". These case studies were directly forwarded to MADE's business aggregators; and also shared through MADE's website. SHFs also gain access to these information sheets through partners and aggregators as part of their private extension activities.

Communication supported workshops organised by the programme and aimed at attracting and stimulating investments through business models, such as the Produce Aggregation model have also been undertaken during Year 3.

⁷ For further details please refer to the MADE's Year 2 Quarter 4 Report

3.3 BUSINESS GROWTH ACCELERATOR (BGA)

The BGA model was rolled out in April 2016 with the execution of kick-off meetings with key stakeholders to build relationships and ensure alignment towards a single vision. Four international Growth Mentors (GM) were recruited from both [REDACTED] and [REDACTED] and these were joined by four local Growth Mentors recruited and trained to enable them meet the expectations of the job.

The Business Growth Accelerator (BGA), under [REDACTED], supported 35 direct MADE partners with mentored facilitation service aimed at helping them to define the type of business development support and finance they need to grow their businesses. The BGA provides services to improve local market actors' ability to access finance, grants and other business services in response to the weak business capacity in Northern Ghana. Feedback from the BGA model highlights the appreciation for business coaching (rather than training) and business to business (B2B) support and relationships between MADE market actors.

Coaching and signposting

The BGA programme uses the coaching approach instead of "teaching" in engagement with clients. As a result, clients are aware of and appreciate the value of the one-to-one services provided. Each coaching meeting is an opportunity for the clients to plan, practice and work towards and achieving tangible results and impact. For instance, [REDACTED], both aggregators of rice and groundnuts, have benefited from BGA support in compiling their loan applications to [REDACTED] Savings and the [REDACTED] facility. Successful financing of these BGA clients is expected to improve their working capital enabling them to procure more produce from SHFs and in turn increase their volume of sales through the marketing channels.

Business Learning Groups (BLGs)

Business Learning Groups (BLGs) were formed and meetings conducted to offer clients the opportunity to share business ideas and aspirations. There are three regional business learning groups located in each of the three regions of the North (Tamale, Bolgatanga and Wa) and a women-only group undertaking its BLG activities in Tamale.

Notably outcomes of these meetings are the finalization of plans to form an association comprising primarily of aggregators to achieve the following objectives:

- a. To synchronise data on input provision at the farmer level to prevent duplication and improve repayment by smallholder farmers.
- b. Help secure higher capital expenditure assets such as combine harvesters, which are in high demand during the peak harvest period.

Looking forward

The BGA was planned to take on a life of its own after the one-off support from MADE. [REDACTED] and its partners are currently working towards achieving this objective. The success of the [REDACTED] and its partners is expected to serve as proof of concept that will lead to other business service providers seeking to copy and adapt the BGA model.

Section 4. PROGRAMME SYSTEMS AND PROCEDURES

4.1 MONITORING AND RESULTS MEASUREMENT SYSTEMS

Consolidate Database of Smallholder Farmers (Table 9)

The M&E team developed an effective database that captures and documents the number of smallholder farmers adopting, accessing and using different services offered by the partners in year 3.

Table 9: Consolidated Number of Smallholder Farmers Reached in Year 3

Market	No. Females	No. Males	Total	% of women
Rice	7,979	10,576	18,555	43
Groundnut	9,453	6,569	16,022	59
Onions	2,024	3,036	5,060	40
Other Vegetables	4,107	5,020	9,127	45
Total	23,563	25,201	48,764	48

Development and Consolidation of Partners' Database

Analysis of the Partners' Database provide the following findings:

- Most of the businesses were only recently registered; with only 6 businesses established prior to the year 2000. Many partners completed an initial year of operation before registering.
- Most partners are small businesses with an average turnover of between ██████████ to ██████████. This suggests that it may be more accurate to apply the characterisation of micro and small enterprises (MSEs) to partner businesses in Northern Ghana rather than the standard characterisation of small and medium enterprises (SMEs);
- There is potential for mechanisation using tractors in Northern Ghana in Rice and Groundnut markets. 95% of all tractors owned by predominately Rice and Groundnuts partners with 78% in the Northern region and 17% in Upper West. Only 5% are in Upper East where most of MADE's Onions and Vegetables partners are located.

Annual Survey results

Sales changes have been positive for 55% of the rice and 90% of the onion smallholder farmers, but were below expectations in groundnuts and other vegetables with only 40% and 39% respectively. 66% of smallholder farmers surveyed reported an increase in yield, driven by a strong performance in the vegetable value chain of 93%. Women experienced the highest yield changes in the rice (105%), groundnut (56%) and onion (46.2%) value chains, with men seeing changes of 92%, 50% and 32% respectively. Relative changes are not unsurprising given the lower baseline for women, but they are now outperforming men in rice productivity and near parity in groundnuts and onions. Men significantly outperform women in other vegetables, seeing a 301% yield increase to women's 150%.⁸

Evidence is emerging of smallholder farmers reducing the area of land cultivated in favour of intensification over expansion of farm size in the selected crops. Over the lifetime of the programme, the area of rice cultivated has reduced by 20%, 9% in groundnuts, 46% in other

⁸ On average, men saw yield increases from 1.86MT/ha in 2014 to 7.46MT/ha in 2016, whilst women went from 2.10MT/ha to 5.25MT/ha over the same period.

vegetables, whilst a 14% (1% women and 19% men) increase was seen in onions. Despite this fall, farmers are seeing significant productivity improvements and income uplifts due to improved GAP, particularly for women who had stronger relative productivity gains in three of the four value chains. Of particular note was the gain in other vegetables which saw a net income uplift of 39% compared to men's 6%. However, men are still achieving higher yields on average across the board, but the gap is narrowing. Improved access to credit and greater use of mechanisation during planting and harvesting (reducing the level of manual work largely undertaken by women) should reduce this gap even further. Onions was the only value chain where men saw stronger improvements.

Data Quality Assessment

The M&E team conducted Data Quality Assurance (DQA) field visits to selected partners across the four markets in order to verify, validate, and confirm data and information submitted by partners. It also helps test programme assumptions on certain monitoring findings.

The field visits concluded that:

- There is an increased willingness by partners to adopt and adapt MADE facilitated models as reflected from partners knowledge and awareness of plans, acknowledgement of activities from the MoUs. However, the programme will encourage more and direct partner engagements as part of the scale up strategy in year especially for the new partners.
- A majority of businesses exceeded their smallholder target reach through MADE supported/facilitated services. This confirms partners capacity to sustain and increase own investment in the long run.
- Generally there is a gap among partners in record keeping and documentation. The programme will conduct a partner's workshop on record keeping and documentation as part of capacity building for partners in year 4. This is also ties in with MADE's emphasis on the development of SHF passbooks to improve record keeping and trust between market actors.

Qualitative Survey

The draft report concluded that MADE partners expressed satisfaction with the approach, models and innovations facilitated by the MADE programme team. The assessment also concluded that farmers expressed satisfaction with new technologies and techniques that have been introduced to them especially GAP, improved seeds, mechanization and inputs.

4.2 VALUE FOR MONEY (VFM)

MADE undertook a benchmarking exercise to compare its programme against similar market systems development initiatives focused on agriculture. The purpose was to see if MADE is delivering value for money given its progress to-date. When analysing indicators across spend, outreach, and market change, MADE is performing similarly to programmes such as ██████████ ██████████ in terms of spend. However MADE is slightly underachieving in its outreach but outperforms on market actor change relative to comparable programmes "Ghana MADE is progressing within the range of comparable programmes but with more significant achievements in market and system changes than in farmer outreach"

See Annex 3 for select VfM indicators and further detail on the benchmarking exercise

4.3 PROGRAMME MANAGEMENT

MADE attended the DFID Partners' Workshop during Year 3 and has taken on board the requirements relating to due diligence and reporting against fraud and anti-corruption. It, also, recognises the need for improved forecasting.

Deputy Team Leader

The Market Development Coordinator, [REDACTED], left the MADE team at the end of May. Given the strategy set for Year 3, more strategic support was required from the Team Leader (TL). Therefore, it was decided to expand the Market Development Coordinator role into a Deputy Team Leader (DTL) position. [REDACTED] was hired as MADE's DTL in January to free the TL to provide strategic guidance to the team, scout and prime engagements with prospective major players/partners, engage more with DFID in and other key stakeholders, and provide more visibility for the programme; etc.

M&E

[REDACTED], the M&E Expert who provides backstopping and short term technical assistance to the MADE M&E team, took a new full-time job in January. [REDACTED] Nathan's in-house staff and current MADE Knowledge Management Expert has filled the void during the final quarter as MADE began to search for a replacement.

Nathan Home Office Support

[REDACTED] has provided increased support in the past year to MADE to push forward the Cross market interventions, in particular irrigation and mechanisation.

ANNEX 1: LIST OF INFORMAL RULES AND NORMS

1. Introduction of nonbinding agreements between MADE and its partners as well as between MADE partners and their suppliers/clients, in the form of Memoranda of Understanding (MoUs) outlining the terms and details of the understanding, including each parties' requirements and responsibilities;
2. Introduction of performance contracts supported with work plans and payment by results between aggregators and sub-facilitators/AEAs thereby improving the quality of results delivered by the sub-facilitators/AEAs and raising general awareness in MADE focus markets about the need for client/market responsiveness;
3. Promotion and support to major seed companies to use contracts to minimise abuse of supplier's credit by input dealers enabling the seed companies to reward good performing input dealers with more supplier's credit and discounts.
4. Introduction of grades and standards related to aflatoxin contamination in groundnuts prompting SHFs to pay more attention to food safety and risk to their own health.
5. Introduction of grades and standards in rice value chain aimed at meeting [REDACTED] and other mills needs for paddy with the right moisture content. Fostering product differentiation by quality and price.
6. Introduction of customer/client (mostly smallholder farmers - SHFs - but also service providers) satisfaction surveys to aggregators and input dealers, reinforcing the need for market responsiveness.
7. Introduction of out-grower scheme management and SHF based produce aggregation models to improve commercial relationships and trust between SHFs and aggregators, i.e., moving them from transactional to longer-term relationships, increasing transparency and trust and minimising challenges such as side selling.
8. Supporting partners to raise awareness about and to address food safety (e.g., aflatoxins), concerns and risks associated with agro-chemical (pesticides) use/abuse particularly in the onion and vegetable markets, leading to the emergence of food safety and environmental hazards and health risk norms;
9. Promotion of self-regulation through peer influence/reviews through MADE created or induced platforms/networks, e.g., BGA business learning groups, aggregators workshops/networks, SHF groups/networks, etc.;
10. Encouraging partners who provide input credit, for instance, to leverage smallholder farmer networks/groups as cross/peer group collateral. This is beginning to reduce default rates/"bad debts";
11. Promoting increased awareness of and information in MADE focused markets on expected market actors' behaviours, GAP protocols including effects of agriculture on the environment and human health, prices and other market trends, product quality requirements, etc., leading to more open, transparent, trustful, etc., market systems;
12. Introduction of a weighted screening process during partner identification and selection to ensure MADE engagement/interventions with the private sector do not lead to market distortions, are equitable and deliver sustainable development outcomes.

ANNEX 2: UPDATED RISK MATRIX

Overview of programme risk: The trajectory of project risk has remained stable, although two new risks have materialised during implementation. One is the effect of the new government's Planting for Food and Jobs (PFJ) programme. The programme has a sizeable subsidy component which can contribute to market distortion and negatively affect the attitude of MADE's partners and smallholder farmers who were beginning to move away from a culture of entitlement and "free goods" as a result of MADE's facilitation. The second area of risk is the "absorptive" capacity of the bigger sub-facilitators especially [REDACTED] to manage MADE's resources and deliver good VfM.

Risk	Impact	Probability	Changes to risk and mitigation strategies
External Context			
Change in GoG attitudes towards private sector led inclusive growth	Severe	Major	<ul style="list-style-type: none"> Leveraging DFID's clout to influence government and other key stakeholder attitudes through high visibility events informed by programme learning and evidence Factoring in policy risks into ex-ante assessments of all interventions and developing mitigation strategies An assessment of risks and mitigation strategies specifically targeted at the effects of PFJ
Capacity and willingness of GoG to support market development	Severe	Major	<ul style="list-style-type: none"> Generating and deploying evidence of the impact of market development interventions to mobilise constituencies for reform. Engaging stakeholders through radio and television programmes Leveraging civil society support for pro-market reforms. Building in mitigation of effects of potential crowding-out into interventions.
Conflicts between traditional/local authorities and GoG	Major	Minor	<ul style="list-style-type: none"> Engaging with both to obtain buy-in to MADE Assessing interventions for potential sources of conflict. Building in mitigating strategies for interventions at risk. Continuing to update risk profiles for interventions
Lack of support and engagement from [REDACTED] in implementation	Major	Minor	<ul style="list-style-type: none"> Continuous knowledge sharing and capacity building to realise the potential impact and benefits of the programme, particularly utilising an M4P approach Continuing to involve [REDACTED] in MADE's public events such as workshops and investment fora
Economic Risks			
Macro conditions: crowding out, high inflation and interest rates, potential Dutch disease	Major	Minor	<ul style="list-style-type: none"> Factoring economic risk into ex-ante assessments of all interventions. Operating in sterling defrays the exchange rate risk as depreciation continues to be more of a factor than appreciation. Recent Brexit has resulted in uncertainty to the global market and European Union including a sharp decline in the value of the sterling pound; An attempt has been made to account for this in the Year 4 business plan and forecast. However, there could be a fallout from the Brexit negotiations. So, this will be monitored closely over the next quarter and mitigation strategies will be developed where needed Alternative solutions to partnership agreements to overcome the lack of capital
Fluctuations in local, regional, and world market demand for agricultural products	Major	Major	<ul style="list-style-type: none"> Monitoring economic trends in world and regional markets and helping partners implementing interventions to be aware of and take precautions against downside risks through spreading market risks across market and product segments. Conducting market analyses to predict demand in advance and, to the extent that the demand changes, reassessing and altering individual interventions Brexit negotiations may result in uncertainty to the global market and European Union; the fallout will be monitored closely over the next quarter and mitigation strategies will be developed where needed

Risk	Impact	Probability	Changes to risk and mitigation strategies
Lack of private sector capability, interest in core and related markets.	Major	Minor	<ul style="list-style-type: none"> • Flexible BDS partnership/BGA arrangement to mentor companies and to strengthen their capacity • Included in criteria for market selection, excluding those that do not have private sector capabilities or interest. • Effective outreach activities to incentivise businesses to innovate. • Programme team proactively targeting innovative businesses and developing appropriate risk sharing instruments • Monitoring systems in place to identify early risks of project incompleteness • Milestone payment schemes prevent moral hazard issues
Gender and Social Risks			
Social tensions create difficulty or inability to meet targeted 15% of MADE benefits reaching women	Major	Minor	<ul style="list-style-type: none"> • Constructive engagement with traditional and religious leaders • MADE has raised the target to 25% • MADE is recruiting a gender lead with evaluative expertise to help better mainstream gender in the programme through contribution knowledge management
Interventions focused on women that are successful draw in men who subsequently crowd out women	Major	Minor	<ul style="list-style-type: none"> • Selection of a portfolio of interventions involving a variety of activities that create opportunities for men and women
Environmental and Climate Change Risks			
Adverse effects of climate change, weather and disease. Rainfall varies throughout the North, generating a risk of floods and droughts plus negative impact of interventions on environment	Severe	Major	<ul style="list-style-type: none"> • Continued promotion of the use of climate resilient seed varieties combined with good agricultural practices to help mitigate the effects • More climate smart agricultural interventions such as small-scale irrigation and drainage systems • Supporting partners especially input dealers to continue to increase awareness of the health and food safety risks and environmental hazards posed by abuse of agro-chemicals and bad farming practices
Operational Risks			
Sub facilitators and grantees do not perform and/or deliver necessary results	High	Low	<ul style="list-style-type: none"> • Results based funding/reimbursement • Grant and financial management systems to track progress and expenditure and mitigate potential damage by identifying budding issues • Pro-active engagement and technical monitoring from MADE to prevent delays and ensure results are achieved
Programme not delivering outputs on time and in budget	High	Low	<ul style="list-style-type: none"> • Robust financial management systems including frequent expense reconciliations, evaluations and forecasting • Clear defined roles and accountability for all team members, experts, sub facilitators and grantees • Thorough programme management systems that merge and track financial and intervention progress and facilitate communication and transparency among team members as well as between the Programme Team and DFID • VfM indicators show which markets the programme has struggled to deliver on time – measures such as penalties to partners who delay milestones are being implemented

Risk	Impact	Probability	Changes to risk and mitigation strategies
Programme is overworked and understaffed to manage scaling up	Medium	Low	<ul style="list-style-type: none"> • Quick recruitment of replacement and new personnel to strengthen team • Additional support from London office to strengthen field team • Team members have better understanding of programme approach that is to facilitate and monitor the work of sub-facilitators • Monitoring and reporting systems help standardise information received and keep project risks under control • Engagement process is tried and tested, and also streamlined to prevent delays.
Fiduciary Risks			
Fraudulent applications receive funding	High	Low	<ul style="list-style-type: none"> • The solicitation process follows programme procurement rules. Tender evaluations include robust eligibility criteria and through the due diligence process, potential recipients of funds will need to provide proof of sound financial standing • Counter-fraud measures embedded in key stages of the project funding process, particularly at the initial application stage and then at the payment approval stage. Our approach recognises the risk profile of projects and incorporates appropriate checks at these key stages. • Our applicant risk assessment process during due diligence will check with the relevant authorities and databases to ensure that the organisation has not previously been involved in fraudulent activity.
Breaching of terms and conditions of the support	High	Low	<ul style="list-style-type: none"> • Rigorous and on-going management of contract and regular milestone assessment • Financial and technical supervision and support to bring projects "back on track" • Clear definition of breach outlined in the contract along with termination rights and recovery of funds spent • Review of annual audits by the Ghana MADE Team, management letters and follow-up measures taken as a result of adverse or qualified audit assessments.

ANNEX 3: VFM INDICATORS

Performance against business case (VfM metrics in BC). Please can you include evidence and narrative to support these metrics.

VfM will be assessed using the following key measures:

- a) Amount of additional resources leveraged from private-sector market actors within the markets being facilitated.

Markets	Partners (£)	MADE (£)	Total (£)	% Partners' contribution
Rice	██████	██████	██████	██████
Groundnut	██████	██████	██████	██████
Onion & Other Veg	██████	██████	██████	██████
Total	██████	██████	██████	██████

- b) How the additional services and resources are driving down costs of inputs and business services for poor producers, across selected sectors.

Cost per smallholder farmer accessing/using new or improved inputs and services	Definition	End of Year 2	End of Year 3
<i>Groundnuts market</i>	Total actual costs in market / number of farmers using new or improved inputs and services	██████	██████
<i>Rice market</i>		██████	██████
<i>Onions market</i>		██████	██████
<i>Vegetables market</i>		██████	██████
Average all markets		██████	██████

While there was significant reduction in cost in the onions and vegetables markets, cost increased marginally in the groundnuts and rice markets leading to the marginal reduction in cost across all four markets.

- c) The ability of the implementation structure to drive down implementation costs.

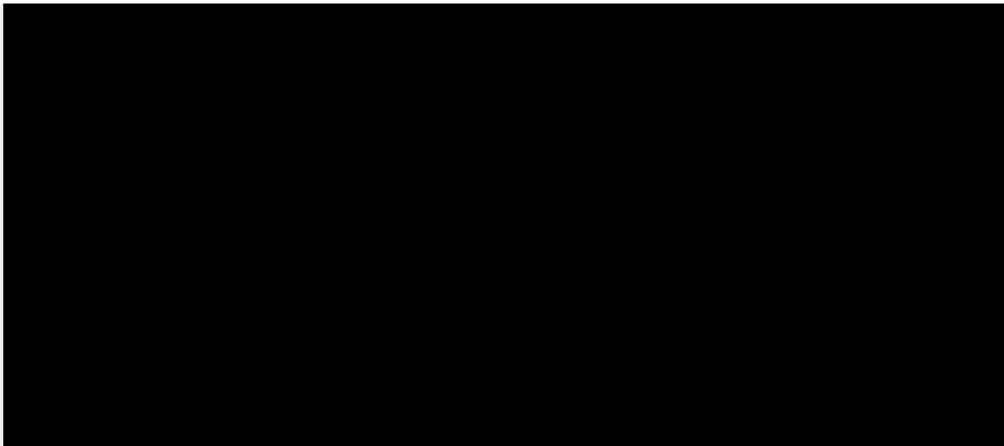
Economy indicators	Definition	End of Year 2	End of Year 3
<i>Average daily cost of international consultants</i>	Cumulative fees of international consultants in fee budget / budgeted number of days	██████	██████
<i>Average daily cost of national consultants</i>	Cumulative fees of national consultants in fee budget / budgeted number of days	██████	██████
<i>% expenditure on local consultants versus international consultants</i>	Total cumulative spending on fees for national consultants / Total cumulative spending on fees	██████	██████

- d) Management costs for the intervention (per producer with improved market access).

Definition	By end of Y2	By end of Y3
Total cumulative management fees / number of market actors changing business practices	██████	██████

MADE still represents VfM –

MADE undertook a benchmarking exercise to compare itself against similar market systems development programmes focused on agriculture. The results showed that MADE's performance is comparable to similar programmes such as [REDACTED] in terms of spend. MADE is slightly underachieving outreach (number of beneficiaries) but outperforms the comparator programme on market actor change. This means that MADE will have a higher return on investment (ROI) in the medium to long term, to be delivered from investments made by the market actors changing practices (as reflected already in private capital leveraged) than in the short-term. This is in line with and characteristic of the progression of M4P programmes. Therefore, MADE still represents VfM.

Spend vs. Outreach**Spend vs. Market/actor change**